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# Advancing Psychosomatic Medicine in a Challenging World

27th World Congress of the International College  
of Psychosomatic Medicine (ICPM)  
Tübingen, Germany, September 19-21, 2024

## Abstracts

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“The abstracts included in this supplement were reviewed and selected by the Local Organizing Committee of the 27<sup>th</sup> ICPM World Congress: Prof. Stephan Zipfel, Prof. Katrin Giel, Dr. Rebecca Erschens, Prof. Andreas Stengel. The committee has no conflicts of interest in connection with the congress and the selection of abstracts.”

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## Preface

Dear ICPM Community,

it is a great honor, but also a challenging task, to organize the 27th ICPM World Congress in Tübingen, Germany, from September 19 to 21, 2024. The success of the congress depends on the support of many stakeholders. First and foremost, the ICPM itself, the board, and the long tradition of the ICPM must be mentioned. Furthermore, we require the support of other partners, including the two German Societies for Psychosomatic Medicine (DGPM/DKPM), the two Swiss foundations (Carus and Ascona Foundation), the German Research Foundation (DFG), the Eberhard Karls University of Tübingen and its Medical Faculty, including the Ministry of Research of our state of Baden-Württemberg, and of course a very active local organizing team.

In addition to the keynote speakers, active participants are needed who have a strong interest and a particular expertise in psychosomatic and bio-psycho-social medicine. With contributions from five continents and 27 countries, we will be demonstrating the broad anchoring of our medical specialty in a globalized world. We are also delighted to receive numerous contributions from young colleagues who are still at the beginning of their careers – the future of our discipline depends not least on you. The abstracts will be presented in a short form in our scientific journal “Psychotherapy and Psychosomatics” on the following pages – special thanks also go to the two editors here.

In your contributions and discussions, you can help shape the relevance of our contribution to modern and patient-oriented medicine, both today and tomorrow. We are all convinced that psychosomatic medicine and the bio-psycho-social approach are already a highly timely approach to the challenges of modern medicine.

Your contributions are greatly appreciated, and we are confident that the 27th ICPM World Congress in Tübingen will be a success.

**Stephan Zipfel, congress president and the Tübingen ICPM organizing team.**

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# List of Topics

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## L-01

**ICPM-Lecture: Intrusive memories after trauma: Simple science-driven tools in a challenging world?***Emily A. Holmes*

Department of Women's and Children's Health, Uppsala University, Uppsala, Sweden

**Intrusive memories can “flash backwards” to past trauma.** Such memories take the form of mental imagery. Mental imagery has a powerful impact on our emotions, motivation and behaviour. Although images can seem fleeting and elusive, our research methods to investigate imagery have advanced. Better understanding mental imagery offers insights to improve interventions. **Reducing intrusive memories after trauma.** Our question is how do we change the mechanism so unwanted images stop coming to mind. Here we focus on creating a treatment for intrusive imagery as a single symptom (compared to studying a full heterogeneous mental health diagnosis like PTSD). This generated a novel intervention approach - the idea of working with intrusive mental images of trauma using concurrent tasks (including a computer game!), while moving ideas between the lab and the clinic. This experimental approach was used to develop a brief intervention to reduce the frequency of intrusive images. Intrusive memories after trauma are at their core mental images. An **imagery-competing task intervention (ICTI)** “preventing-and-treating” approach aims to (a) to help prevent the build-up of unwanted intrusive memories soon after a traumatic event; and (b) reduce the reoccurrence of intrusive memories at longer times interval, days, week and months after trauma. We discuss a recent clinical trial of a remotely delivered version of the intervention for healthcare staff who had repeated and ongoing trauma working with COVID-19 patients. The ICTI approach involves at least 3 steps (i) imagery recall, (ii) mental rotation and (iii) sustained visuospatial task such as Tetris computer game play. Short and long terms effects will be discussed. **Mental health science** is an umbrella term to cover the many different disciplines, including psychology, psychiatry, clinical medicine, social sciences, and neuroscience, that will need to work together to improve interventions. We will discuss a vision for science-informed psychological treatment innovation. More broadly, there is great potential for adaptations and innovations in psychological treatments. We will give examples in the imagery arena - mental imagery can “flash forwards” to the future, such as in suicidal thinking or goals in hypomania. More broadly, experimental therapeutics could help fuel disruptive innovations that are useful in new ways to more diverse groups, and globally – especially in a challenging world.

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## L-02

**DZPG-Lecture: Scaling up psychosocial interventions: from evidence to policy***Vikram Patel*

Global Health and Social Medicine, Harvard Medical School, Boston, USA

A mental health crisis is evident in many countries, regardless of their mental health human resources or spending. The crisis is not the result of the lack of political will, resources or knowledge but due to a narrow biomedical framing of mental health leading which privileges a particular type of provider, a particular type of intervention, a particular setting of care and a diagnosis centered, one size fits all approach. Drawing upon a series of recent syntheses, including three Lancet Commissions and the World Mental Health Report, we recommended a number of paradigm shifts to address this crisis<sup>1</sup>. This lecture will focus on one of these paradigm shifts. The current model is dominated by specialty care, siloed off from other components of the health care system. Most care is provided at the stages of clinically diagnosed disorders, neglecting early interventions and long-term recovery focused interventions. This model of care is associated with a range of demand side and supply side barriers, such as the reluctance to seek help from specialists until a condition is severe, the high cost of specialist training and clinical care, and the inequitable distribution of specialist providers. This paradigm of care must shift towards adopting a system-wide change with empowerment of front-line, community-based providers to deliver evidence based psychosocial interventions as the first step of mental health care.

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### L-03

#### Public engagement with climate change and societal transformations

*Christina Demski*

University of Bath, Bath, UK

Drastic and urgent action is needed across society to address climate change and meet sustainability goals. This includes major societal transformations across scales and sectors, and requires widespread adoption of low-carbon technologies and policies as well as significant lifestyle changes (e.g. changes to what we heat, how we heat our homes, what we buy and how we travel). Such transformations can only be achieved with people's active involvement. For this reason, the Centre for Climate Change and Social Transformation (CAST) advocates for a people-centred approach to achieve net zero effectively and rapidly while being alert to citizens' needs and concerns. Over the past five years, CAST has worked with governments, businesses, and communities to better understand how climate-friendly social transformations can be supported and facilitated. Using evidence and examples from the UK and internationally, the keynote will discuss how we can build support for climate policies and encourage behavioural change, how people can be involved in decision-making to ensure fair and inclusive policies, and how climate change intersects with other societal challenges (e.g. Health and wellbeing, cost-of-living) to motivate and drive action.

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### L-04

#### German Psychosomatic Medicine – future-oriented health care structures with role model character

*Hans-Christoph Friederich*

General Internal Medicine and Psychosomatics, Medical University Hospital Heidelberg, Heidelberg, Germany

Psychosomatic Medicine has a long and successful tradition in Germany, it was nonetheless a unique decision in 1992 by the medical association to introduce the specialist for Psychosomatic Medicine and Psychotherapy in Germany (initially referred to as Psychotherapeutic Medicine). At that time there were no comparable structures in the world that would have served as a model. This decision acknowledged that Psychosomatic Medicine and Psychotherapy at that time was already making a lasting and effective contribution to the care of mentally and psychosomatically ill people in Germany. It was a vote for psychotherapy on the one hand and for more integrated care in the sense of the bio-psycho-social model on the other. This decision laid the foundation for the further development of health care structures that are still unique in the world today. In the last 32 years, quality-assured, practicable and effective psychosomatic-psychotherapeutic therapy programs have been developed in outpatient, inpatient and rehabilitative care that are in high demand from patients. These well-established treatment programs center on multimodal and integrated care for psychosomatic and mental disorders. The

majority of psychosomatic hospitals are integrated into somatic and general hospitals to implement the bio-psycho-social model into clinical medicine either by integrated clinical-psychosomatic care and/or consultation/liaison service. The presentation will give an insight on basic principles of the specialization, the present situation of the medical subject in German health care as well as future strategies and perspective considerations.

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### L-05

#### Psychotherapy and Social Psychiatry, hand-in-hand, always

*Driss Moussaoui*

Faculty of Medicine of Casablanca, Casablanca, Morocco

No man is an island, being necessarily a social/political animal. Even in the face-to-face, apparently isolated duo with the psychotherapist, the patient comes always with his history in the community with its culture, values, religious background, family functioning as 'ghost witnesses'. Human history and anthropology have always impacted psychotherapy, not only with traditional healers all over the world, but also in the creation of psychoanalysis with all its branches, especially the Jungian one. This is probably why, more and more we see psychiatrists and psychotherapists turn to Social Psychiatry, not only as an associate discipline, but also as an essential part of psychotherapy. Clinical cases will be presented.

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### L-06

#### NCT-Lecture: Transforming treatment of depression in people with cancer

*Michael Sharpe, Jane Walker*

Psychological Medicine, University of Oxford, Oxford, UK

Depression is common in people with cancer but often inadequately treated. Professor Michael Sharpe and Dr Jane Walker will describe barriers to its accurate identification and effective treatment in this population, and a new multicomponent and integrated approach to overcoming these. They will take you on their fifteen-year journey from the initial development of the new approach, through its evaluation in clinical trials, to lessons learned from its implementation in routine cancer care.

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**L-07****Outpatient psychotherapy in Germany – an evaluation of the structural reform**

Johannes Kruse<sup>1</sup>, Hanna Kampling<sup>1</sup>, Soufiane F. Bouami<sup>3</sup>, Thomas G. Grobe<sup>3</sup>, Mechthild Hartmann<sup>2</sup>, Johanna Jedamzik<sup>6</sup>, Joachim Szecsenyi<sup>5</sup>, Samuel Werner<sup>1</sup>, Beate Wild<sup>2</sup>, Sandra Zara<sup>1</sup>, Ursula Marschall<sup>4</sup>, Gereon Heuft<sup>6</sup>, Hans-Christoph Friederich<sup>2</sup>, the ES-RIP Consortium

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**Background:** A structural reform of the German psychotherapy guideline in 2017 was intended to facilitate access to outpatient guideline psychotherapy. In the present study, we evaluate the effects of this reform in particular for patients a comorbidity of mental disorders and chronic physical conditions (cMP).

**Methods:** Pre-post analyses of the two primary endpoints “percentage of mentally ill persons who have made an initial contact with a psychotherapist” and “waiting time for guideline psychotherapy” were carried out employing population-based and weighted routine statutory health insurance data from the German BARMER. The secondary endpoints included evaluations from the patients’ perspective, based on a representative survey of patients in psychotherapy, and an overview of the health care situation based on data from the National Association of Statutory Health Insurance Physicians (Kassenärztliche Bundesvereinigung, KBV) (study registration number: DRKS00020344). **Results:** From 2015 to 2018, the percentage of mentally ill persons who had made an initial contact with a psychotherapist rose moderately, from 3.7% (95% confidence interval, [3.6; 3.7]) to 3.9% [3.8; 3.9] among persons with cMP and from 7.3% [7.2; 7.4] to 7.6% [7.5; 7.7] among those with mental disorders but without any chronic physical condition (MnoP). The new structural elements were integrated into patient care. The interval of time between the initial contact and the beginning of guideline psychotherapy became longer in both groups, from a mean of 80.6 [79.4; 81.8] to 114.8 [113.4; 116.2] days among persons with complex disease and from 80.2 [79.2; 81.3] to 109.6 [108.4; 111.0] days among persons with non-complex disease; most patients considered the waiting time. Approximately 8% of the patients who sought psychotherapy reported that they had not obtained access to a psychotherapist. **Conclusion:** Neither in general nor for patients with cMP did the introduction of the structural reform appreciably lower the access barriers to psychotherapy. Further steps are needed so that outpatient care can meet the needs of all patients and particularly those with cMP.

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**L-08****Digital tools for Patient Reported Outcomes**

Matthias Rose

Department of Psychosomatic Medicine, Charité University Medicine Berlin, Berlin, Germany

**Background:** In modern medicine, Patient Reported Outcomes (PROs) are gaining increasing significance. These health data reported directly by patients offer valuable insights into the subjective experience of illness and treatment effects. Traditionally, PROs were collected using paper questionnaires. The first electronic collections of PROs occurred as early in the 1990s but were limited to a few pioneers due to technological and infrastructural constraints. With the digitalization and technological advancements of the past 10-15 years, electronic collection of PROs has become the standard. **Status Quo:** Native apps and web-based platforms enable good accessibility and precise collection of PROs directly from patients. Recent studies show that digitally collected PROs can support clinical decision-making processes and lead to better treatment outcomes. Due to a lack of political incentives in Germany, the implementation of PROs into clinical routines is progressing slowly. The challenges for clinics lie mainly in selecting a suitable instrument and licensing requirements. Initiatives such as ICHOM and the Quality Medicine initiative support this process by providing standard outcome sets.

**Future Perspectives:** Advances in Artificial Intelligence (AI) and Machine Learning (ML) open new possibilities for analyzing large datasets and predicting individual disease courses. A significant trend in PRO collection is Computer Adaptive Testing (CAT), where questions are dynamically adjusted based on the patient’s responses to achieve more precise and individualized results. Integrating PROs into Electronic Health Records (EHRs) and networking various digital health platforms will further enhance its usability and value. **Discussion:** The implementation of digital tools for PROs offers numerous advantages but also raises important questions. What strategies need to be developed to bridge the digital divide and ensure all patient groups are equally reached? There is a multitude of instruments for collecting PROs, which complicates comparability and conducting meta-analyses. A central solution approach is to establish a uniform metric and calibrate established instruments to it. The acceptance and trust of patients and healthcare professionals are crucial for the success of PROs. Finally, it has to be discussed how regulation and standardization of digital tools can be designed to promote broad and sustainable application.

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## L-09

### Hilde Bruch Lecture: The brain and body basis of eating disorders

*Nadia Micali*

Center for Eating and Feeding Disorders Research (CEDaR),  
University of Copenhagen, Copenhagen, Denmark

Eating Disorders are disorders that affect physical health, and as such they are disorders of the brain and body. Prof Micali will firstly describe eating disorders, and their characteristics, she will then discuss the evidence highlighting the brain and body basis of eating disorders. She will talk about biological characteristics of eating disorders, and how integrating the body and the brain can allow a broader understanding of these disorders. She will also talk about physical and health outcomes of eating disorders.

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## L-10

### Possible contribution of gut dysbiosis to the pathology of anorexia nervosa

*Nobuyuki Sudo*

Department of Psychosomatic Medicine, Kyushu University,  
Fukuoka, Japan

Recent research has increasingly focused on the role of gut bacteria in influencing mental health and disorders. Our pioneering study in 2004 first demonstrated that gut microbes significantly affect the hypothalamic-pituitary-adrenal axis response (*J Physiol* 558:263, 2004). We observed that the response to restraint stress, measured by plasma ACTH and corticosterone levels, was markedly higher in germ-free (GF) mice compared to specific pathogen-free mice. This exaggerated HPA stress response in GF mice could be reversed by transplantation with gut microbes, suggesting a critical link between gut microorganisms and brain function. This finding has spurred the development of the *microbiota-gut-brain axis* as a significant research field, exploring the intricate interactions among the microbiota, gut, and brain. Furthermore, evidence increasingly supports the potential role of gut microbes in the pathology of stress-related disorders. Anorexia nervosa (AN) is a particularly devastating disorder with unclear pathophysiological mechanisms. Given the established role of gut microbiota in weight regulation, it is plausible that gut microorganisms could influence AN pathology. Our research began by comparing the fecal microbiota of female AN patients to that of age-matched healthy female controls using the Yakult Intestinal Flora-SCAN. The AN patients had lower amounts of total bacteria and obligate anaerobes including those from the *Clostridium coccooides* group, *Clostridium leptum* subgroup, and *Bacteroides fragilis* group than the age-matched healthy women (*PLoS One*. 2015;10:e0145274). Notably, this reduction in bacterial count persisted even after weight gain. Further, restricting type AN patients exhibited elevated levels of uremic toxins such as p-cresyl sulfate, indole-3-acetic acid, and phenyl sulfate, which correlated with the abundance of *Clostridium* species in their feces (*Physiol Behav* 2021;228:113204). Moreover, when GF mice were colonized with microbiota from

ANR patients, they showed reduced body weight gain and food efficiency ratios compared to those colonized with microbiota from healthy controls, along with increased anxiety-related behaviors (*Endocrinology* 2019;160:2441). These results suggest that AN-specific dysbiosis may contribute to AN-specific pathologies such as poor weight gain and neuropsychiatric abnormalities. In this lecture, I will discuss the possible role of gut microbiota in the pathology of AN, drawing from our research data.

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## L-11

### Effectiveness of patient-targeted feedback after depression screening in general practice (GET.FEEDBACK.GP): A multicentre randomised controlled trial

*Bernd Löwe, Martin Scherer, Sebastian Kohlmann, on behalf of the multicentre GET.FEEDBACK.GP study group*

University Medical Center Hamburg-Eppendorf, Hamburg, Germany

**Background:** Although depression screening in primary care is recommended by several clinical guidelines, its impact on improving patient outcomes is unclear. The GET.FEEDBACK.GP trial aimed to assess whether written feedback of depression screening results to both patients and general practitioners (GPs), compared with feedback to GPs alone or no feedback, could lead to greater reductions in depression severity [1]. **Methods:** This multicentre trial, conducted in 64 GP practices in Germany, included patients aged  $\geq 18$  years who screened positive for depression (Patient Health Questionnaire-9, PHQ-9 score  $\geq 10$ ). Patients were randomised (1:1:1) to receive no feedback on their depression screening result, feedback to GPs only, or feedback to both GPs and patients. Written feedback was given to each group before the consultation. The feedback intervention included the individual depression screening result, brief information about depression and its treatment. The primary outcome was depression severity as measured by the PHQ-9 6 months after randomisation. **Results:** Of the 8129 patients screened, 1030 (12.7%) screened positive for depression. 1027 patients were randomised to the 3 groups and 935 patients were included in the primary outcome analysis at 6 months. No significant difference in reduction of depression severity was observed between groups (global  $p=0.13$ ). No increase in suicidality was observed. **Interpretation:** Despite the comprehensive feedback approach, there was no significant reduction in depression severity by providing written feedback to both the GP and the patient after depression screening compared with feedback to the GP alone or no feedback. Further research is needed to investigate the effectiveness of systematic feedback for specific subgroups. Funding: German Innovation Fund

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## S01-01-A

### Chronic pain and related conditions: from epidemiology to psychological processes and brain organization

*Federica Galli*

Sapienza, Rome, Italy

Chronic pain (CP) is a substantial healthcare challenge with considerable economic costs. CP identifies a spectrum of medical conditions that includes chronic widespread pain, fibromyalgia (FM), migraine, chronic low back pain of unknown causes, chronic low back pain of unknown causes, irritable bowel syndrome, chronic primary bladder pain syndrome, and chronic primary pelvic pain syndrome. On the one hand, the causes of CP are still poorly understood. On the other hand, nociplastic pain (NP) has been recognized as one of the possible causal mechanisms at the base of CP and related conditions. It has been suggested that NP might be associated to a constellation of psychological and neurobiological processes involved in amplified processing or decreased inhibition of internal-external pain stimuli. Despite these suggestions, some questions are still unresolved. Accordingly, the current symposium will provide a comprehensive and critical view on CP and related conditions from different perspectives. Specifically, it will be shown an epidemiological picture of the phenomena and related psychosocial characteristics in order to better understand the phenotypic features of CP and related conditions. Furthermore, a clinical psychological approach will highlight and discuss the connection between specific psychological mechanisms and CP clinical manifestations, especially referring to FM. Finally, it will be discussed an evidence-based neurobiological model of FM grounded in levels of self organization. This allows to provide a robust conceptual framework for clarifying core mechanisms of this syndrome and laying the background for the study of neuro-mental processes linked to CP and related conditions.

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## S01-01-B

### Fibromyalgia and the nested hierarchical model of self: theoretical considerations based on a meta-analysis of resting-state functional connectivity studies

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**Background:** Fibromyalgia (FM) is a chronic syndrome characterized by widespread musculoskeletal pain associated with fatigue, nonrestorative sleep and cognitive deficits, together with psychopathological manifestations (e.g., anxiety, depression) and maladaptive regulatory mechanisms of affective states (e.g., alexithymia, dissociation). Neuroscience evidence has provisionally highlighted the neuro-functional underpinnings of FM, which include the role of default mode network (DMN), insula and periaqueductal gray (PAG). These brain regions also overlap

with networks relevant for the nested hierarchical model of the self. According to this framework, the self represents a reference for several psychological regulatory mechanisms and a neuro-mental baseline for psychopathological phenomena. Nevertheless, no studies have explored the implications of this neuroscience model of the self for FM. **Methods:** Consistently, a multi-level meta-analysis of resting-state functional connectivity studies was conducted, that compared FM patients with age- and gender-matched healthy controls (HCs). Thirteen studies were included for meta-analytic procedures. **Results:** The analysis showed that FM patients were characterized by an increased functional connectivity between the DMN and interoceptive ( $d = 2.08$  [.73 – 3.43];  $p < .01$ ) and exteroceptive network ( $d = 2.89$  [1.67 – 4.10];  $p < .001$ ). Whereas, the FM clinical group highlighted a significant reduction of functional connectivity between PAG and somatosensory areas ( $d = -1.37$  [-2.72 – -.02];  $p < .05$ ) compared to HCs. Four studies found that an increased functional connectivity between DMN and other self-related networks (e.g., interoceptive and somatosensory) was significantly associated ( $r = .60$  [.26 – .95];  $p < .01$ ) to higher subjective pain symptoms among patients with FM. **Conclusion:** These findings provisionally suggest viewing FM phenomenological manifestations in the light of an altered organization of brain networks linked to different hierarchical levels of self. Psychotherapeutic clinical implications will be discussed.

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## S01-01-C

### Metacognitive functioning and depressive symptoms in patients with fibromyalgia: is there a connection with pain?

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**Background:** Fibromyalgia is a chronic pain syndrome, often associated with psychological distress, especially depressive symptoms. Several evidence has shown the presence of significant relationships between metacognitive functioning and physical and mental well-being. However, limited data are available for fibromyalgia patients. Therefore, the aim of the present study was to further investigate the relationship between metacognitive functioning, depressive symptoms, and pain intensity in a sample of fibromyalgia patients. **Methods:** Sixty-one female fibromyalgia patients were recruited in an Italian hospital. Psychological measures administered included the pain intensity item of the Fibromyalgia Impact Questionnaire-Revised (FIQ-R), the Hospital Anxiety and Depression Scale (HADS), and the Metacognitive Functions Screening Scale (MFSS). **Results:** Most of the patients (70.5 %) reported clinically relevant depressive symptoms and a mean total score of 56.15 (SD = 11.91) at the MFSS. The ability to recognize emotions subscale of the MFSS was associated with both the depression subscale of the HADS and the pain intensity item of the FIQ-R. The mediation analysis showed that the depression subscale of the HADS partially mediated the relationship between the ability to recognize emotions subscale of the MFSS and the pain

intensity item of the FIQ-R. **Conclusion:** The current findings seem to suggest a role of depressive symptoms in mediating the effect of difficulties in the ability to recognize emotions on pain intensity in fibromyalgia patients. Considering that, as shown in the literature, patients with fibromyalgia and comorbid depressive symptoms could benefit from interventions aimed at improving metacognitive functioning.

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### S01-01-D

#### Chronic pain in European adult populations: a systematic review of prevalence and associated clinical features

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**Background:** Chronic pain (CP) is a complex condition that severely impacts individuals' lives worldwide, yet comprehensive epidemiological data within the European adult population remains scarce. This systematic review aims to systematically synthesize the prevalence of CP in Europe and examine associated socio-demographic and clinical features. **Methods:** According to PRISMA guidelines, a systematic literature search was conducted in PubMed and Web of Science up to February 2024, yielding 25,058 hits. Of these, 15 studies involving 1,080,065 participants with CP were selected based on inclusion criteria emphasizing CP prevalence. Quality assessment was done using the Joanna Briggs Institute's Critical Appraisal Checklist. **Results:** CP prevalence in Europe varied, with point prevalence rates between 14.3% to 47%, a 6-month prevalence of around 17.5%, a 12-month prevalence between 8.1% to 12.7%, and lifetime prevalence between 12.7% to 33.7%. Clinical associated features were found with socio-demographic factors (e.g. gender, age, marital status, education level, employment status) and clinical features (e.g. physical and mental health conditions, healthcare utilization, functional impairment). **Conclusion:** Heterogeneity in epidemiological data on CP underscores the need for standardized diagnostic criteria and assessment tools, like the ICD-11, to implement a standardized research methodology. The identified socio-demographic and clinical associations highlight the complex nature of CP and the necessity for a multidimensional care approach. These findings advocate for the integration of biopsychosocial models in managing CP, emphasizing personalized, multimodal treatment strategies to address the broad spectrum of influences on pain experiences.

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### S01-02-A

#### Exploring emotional processes and alexithymia in functional somatic syndromes: Advanced concepts, experimental studies and psychotherapeutic implications

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Perception, expression, and regulation of emotions play a significant role in the development and maintenance of functional somatic syndromes (FSS). Recent advancements in neurobiology, psychology and computational neuroscience have enhanced our understanding of the relationship of emotions and FSS and led to the development of new models. The aim of this symposium is to present advanced models of emotions and alexithymia, along with exemplary experimental studies on the role of non-conscious and conscious emotions in pain or FSS. Additionally, it will feature two studies investigating the effect of a brief affective mentalization intervention in these conditions. The first talk will introduce the "Three Process Model of Emotions" (Smith and Lane) and its implications for understanding alexithymia as a spectrum disorder. Moreover, it will discuss possible underlying mechanisms of alexithymia and rather specific psychotherapeutic strategies. The second talk summarizes two laboratory studies with healthy samples, utilizing a modified think/no-think paradigm (T/NT) along with neutral and negative IAPS images and intermediate heat pain stimuli. These studies revealed a significant increase in pain unpleasantness due to effectively forgotten (non-conscious) negative emotional memories. An additional study with healthy women and T/NT evaluated the ratings of pleasantness/unpleasantness of the neutral face anchor stimuli before and after the T/NT paradigm, showing preliminary evidence for an indeed non-conscious activation of negative affect as a mechanism of pain intensification. The third talk will delve into the social and embodied nature of emotions. It will share the findings of an experimental study examining changes in heart rate variability (HRV) coherence as an indicator of altered emotional coregulation between patients with FSS and their partners during their real-time emotional interactions. Results revealed a lower partner influence in HRV in couples with FSS compared to healthy couples during neutral and anger-eliciting discussions between partners. The last talk will present two randomized controlled trials investigating the effectiveness of a short affective mentalization intervention on somatic symptom severity in two convenience samples of online participants using Amazon's Mechanical Turk. Psychotherapies focusing on affective mentalization ability seem to target underlying mechanisms as supposed by the "Three Process Model of Emotions".

## S01-02-B

### Advanced concept of emotions and alexithymia and their relation to functional somatic syndromes.

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Difficulties in emotion recognition, expression, and regulation play an important role in a wide range of mental/psychosomatic disorders, especially in functional somatic syndromes / somatoform disorders. Based on recent research in neurobiology, psychology, and computational neuroscience a “three-process model” of implicit and explicit emotions has been developed (Smith 2020 [1]). This model encompasses the three distinct but intertwined processes: affective response generation, affective response representation, and conscious access. These processes could be described as follows. *Affective response generation*: Due to a real, remembered, or imagined event, changes occur in the body state (e.g. heart/breathing rate, facial expressions, muscle tension) and in the brain (e.g. perception, attention, memory, motivation, action control). The event is evaluated in terms of various dimensions (e.g. novelty, personal relevance, goal congruence, compatibility with norms & values, action control) in the sense of predictive processing, and the most likely corresponding affect is generated. *Affective response representation*: The changes in the body and brain triggered by affect generation are perceived and lead - against the background of learned expectations of what is most likely in the specific context - to perceptual and cognitive affect representations in the brain. *Conscious access*: Among the numerous simultaneously represented pieces of information in the brain, affect representations are likely to be selected based on various factors (including availability of attentional resources, relevance to one’s goals, estimated likely accuracy based on prior experience) and are experienced as perceptions, thoughts, or motivations. Only individual aspects of an affective response can be consciously recognized. Based on this model and various clinical observations, an advanced model of alexithymia was proposed (Lane 2020 [2]). Thereby, alexithymia is conceptualized as a spectrum disorder, varying in cause and severity, and as a phenotype of any combination of several individual mechanisms, related to *affect response generatio* and/or *affect representation* and/or *conscious access*. These mechanisms, along with possible consequences for more specific therapeutic strategies, will be discussed.

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## S01-02-C

### Experimental evidence for the mechanism of pain intensification due to genuine unconscious negative emotions.

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**Background:** To date, experimental evidence supporting that unconscious negative emotions might maintain and intensify pain experience is rare. In our two previous laboratory studies with healthy women (n=72) [1] and healthy men (n=70) [2] using an adapted think/no-think paradigm (T/NT) and intermediate heat pain stimuli we found a significantly higher pain unpleasantness if the pain stimulation was combined with effectively forgotten (unconscious) negative emotions. **Methods:** The study presented was conducted with healthy women (n=70) and the T/NT, using combinations of 72 neutral face images and 36 neutral or 36 negative IAPS images. Initially, participants rated the pleasantness/unpleasantness of only the 40 “no-think” neutral face images at baseline (+6 “extremely pleasant” to -6 “extremely unpleasant”). The “no-think” neutral face images, for which the originally paired neutral or negative IAPS image was successfully forgotten (T/NT Recall), were identified. Finally, participants re-evaluated the pleasantness/unpleasantness of the 40 “no-think” neutral face images across all conditions (whether the originally paired IAPS image was forgotten or remembered, neutral or negative). Specifically, participants reported their own emotional response (“self”) while viewing the image, as well as the perceived emotion of the person in the image (“other”). **Results:** In the forgotten condition, there were no significant differences in the “self” ratings regarding valence at baseline (negative -.34 [SD .99] vs. neutral -.52 [SD .78]; p=.23) and after T/NT (negative -.48 [SD 1.25] vs. neutral -.55 [SD 1.28]; p=.68). Similarly, “other” ratings showed no significant differences at baseline (negative -.27 [SD 1.12] vs. neutral -.19 [SD 1.10]; p=.23) and after T/NT (negative -.27 [SD 1.32] vs. neutral -.34 [SD 1.27]; p>.05). The additional Bayesian Analysis showing evidence for no difference in the affect ratings will also be provided. **Conclusions:** The study reported here suggests that the mechanism of pain intensification may involve the activation of unconscious emotional memories, whereby the anchor stimulus triggers an unconscious association with negative affect - rather than evaluative conditioning. The results underscore the complexity of emotional processing. Further research elucidating the underlying mechanisms involved in the modulation of pain by unconscious emotions could provide valuable insights for therapeutic interventions targeting pain.

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### S01-02-D

#### Effectiveness of a short affective mentalization intervention in reducing somatic symptom severity: Evidence from two randomized controlled pilot trials

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**Background:** Maladaptive emotion regulation has been reported to be related to higher levels of symptoms in somatic symptom disorders. The objective of this study was to investigate whether a short affective mentalization intervention (i.e., feelings about one's own feelings) could influence state somatic symptom severity. **Methods:** We conducted two randomized controlled trials with online participants using Amazon's Mechanical Turk ( $N_{\text{Study1}} = 593$ ,  $N_{\text{Study2}} = 807$ ) each employing a randomized, four-group-between-subjects-design. In both studies, participants were randomly assigned to one of four conditions: (1) a no-treatment control condition (no treatment), (2) a somatic-symptom-stress condition (somatic stress), (3) the somatic-symptom-stress condition with an interoceptive, mindfulness body-scan intervention (somatic-stress+body-scan), (4) the somatic-symptom-stress condition with an affective mentalization intervention (somatic-stress+affective mentalization). We then examined the effects on state-reported symptom severity of somatic symptoms assessed with an adapted state-formulated Patient Health Questionnaire (PHQ-15). **Results:** In both studies, participants in the somatic-stress-only condition reported significantly elevated state symptom severity in comparison to those in the no-treatment condition ( $d_{\text{Study1}} = 0.34$ ,  $d_{\text{Study2}} = 0.35$ ). Importantly, participants in the somatic-stress+affective mentalization condition showed significantly reduced state-symptom severity compared to the somatic-stress-only condition ( $d_{\text{Study1}} = 0.51$ ,  $d_{\text{Study2}} = 0.38$ ) with no difference to the no treatment condition. Additionally, participants in the somatic-stress+body-scan condition differed from the somatic-stress-only condition in terms of state reported symptom severity ( $d_{\text{Study1}} = 0.20$ ,  $d_{\text{Study2}} = 0.29$ ), but not from the somatic-stress+affective mentalization condition. **Conclusion:** The observed results of our preregistered and replicated RCT indicate that employing affective mentalization in psychotherapy

might be a helpful intervention for improving somatic symptom disorder outcomes and warrants exploration in clinical samples in further research.

### S01-02-E

#### Coherence of heart rate variability as a marker of altered emotional coregulation between patients with somatic symptom disorders and their partners: A dyadic experimental study

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**Background/Aim:** Emotion regulation disturbances are commonly observed in patients with Somatic Symptom Disorders (SSD). Despite emotions usually emerging in social interactions, we know little about interpersonal emotional regulation in SSD. Emotional coregulation is one specific form of interpersonal emotion regulation and refers to the bidirectional connection of affect, physiology, and behavior, fostering greater emotional stability for both partners (Butler & Randall, 2013). This study aimed to investigate the coherence, i.e. covariation, of Heart Rate Variability (HRV) indices, as an indication of emotional coregulation, between patients with SSD and their partners, and healthy control couples. We tested whether 1) coherence amplitude in HRV, as indexed by High Frequency (HF) of the cardiac signals, 2) in-phase patterning of HF, as a proxy of high partner influence in emotion regulation (Reed et al., 2013), and 3) anti-phase patterning of Low Frequency (LF), as an indication of down-regulation of stress between patients and their partners is poorer than that in healthy couples, particularly during anger-inducing condition compared to neutral and relaxing conditions. **Methods:** Twenty-nine romantic couples (16 healthy and 13 SSD patient-couples) participated in a dyadic discussion involving neutral and anger-inducing subjects, succeeded by a guided relaxation, while their cardiovascular physiology was recorded. **Results:** Pain reports increased significantly from baseline ( $M=4.16$ ,  $SD=2.33$ ) to anger ( $M=5.33$ ,  $SD=2.06$ ),  $t(11)=-3.19$ ,  $p=.009$ ,  $d=0.92$ , 95%  $CI=[-1.59, -.22]$ . Wavelet coherence analysis was conducted followed by mixed-model ANOVAs revealing 1) a non-significant trend of lower HF coherence amplitude,  $F(1, 26)=2.01$ ,  $p=.17$ ,  $\eta^2=.07$ , and 2) a significantly lower in-phase patterning of HF,  $F(1,26)=6.40$ ,  $p=.018$ ,  $\eta^2=.20$  in SSD couples compared to healthy couples regardless of conditions, 3) a condition effect on anti-phase patterning of LF in healthy and SSD patient-couples,  $F(2,52)=3.63$ ,  $p=.03$ ,  $\eta^2=.08$ . Post-hoc tests showed that anti-phase

patterning of LF significantly increased from baseline to anger, MD=3.50, SE=1.32,  $t=2.64$ ,  $d=.49$ ,  $p_{\text{bonf}}=.04$ . **Conclusion:** Patients with SSD and their partners exhibited indicators altered emotional coregulation. Interventions should acknowledge the role of interpersonal emotional processes in close relationships in precipitating and sustaining somatic symptoms.

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## S02-01-A

### Occupational burnout: a bio-psycho-social perspective

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The ICD-11 (International Classification of Diseases, eleventh revision) characterizes occupational burnout as a result of inadequately managed work stress, described by emotional exhaustion, depersonalization, and reduced personal accomplishment. Burnout is not classified as a disease but rather as a condition associated with a heightened risk of developing mental and physical health issues. Furthermore, it is recognized that external factors, beyond the workplace, can influence the risk and health outcomes related to burnout. Traditionally addressed within the domains of occupational and organizational psychology, adopting a biopsychosocial approach enables a more comprehensive understanding of burnout onset, its risk factors and health implications, and strategies for prevention and treatment. In this symposium, four presentations will demonstrate the advantages of applying a biopsychosocial perspective to burnout. They will include data from systematic reviews and meta-analyses, covering the definition of burnout established through Delphi consensus among experts, and the risk factors linked to both work and social environments. Discussions will address physical health outcomes associated with burnout, specifically changes in cardiovascular function and biological stress reactivity in physicians—a group at twice the risk of burnout compared to the general working population. Furthermore, the results from a multimodal intervention study aimed at treating patients with burnout in a hospital setting,

conditional on psychological characteristics, will underscore the importance of the biopsychosocial perspective in both the research and clinical management of occupational burnout.

## S02-01-B

### The role of social factors in occupational burnout: results from the Dresden Burnout Study

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**Background:** The stress-buffering effect of social factors (e.g., social support, positive social interactions) has repeatedly been demonstrated, whereas less is known about their role in occupational burnout. **Methods:** The Dresden Burnout Study (DBS) was initiated in 2015. It combines German-wide, annual online surveys with different biopsychological sub-studies conducted within Dresden and the surrounding area. Results regarding the cross-sectional and longitudinal associations between self-reported social support and burnout symptoms from the online surveys ( $N_{t1} = 1797$ ; 66.9% females;  $M_{\text{age}}[SD]_{\text{age}} = 44.33$  [11.29], range 18 – 70 yrs), as well as findings regarding burnout-associated changes in observable social behavior ( $n = 70$ ; only males;  $M_{\text{age}}[SD]_{\text{age}} = 38.49$  [11.39], range 22 – 67 yrs) will be presented. **Results:** Simple correlation analyses revealed negative cross-sectional associations between social support and burnout symptoms ( $r = -.42$ ,  $p < .001$ ). A cross-lagged panel analysis ( $N_{t1/2} = 946$ ) revealed that greater social support was meaningfully predictive of lower burnout symptoms one year later ( $b = -.09$ ;  $p = .003$ ). Burnout symptoms were meaningfully predictive of social support, too, yet with a smaller effect size ( $b = -.03$ ;  $p = .02$ ). Results of a social decision-making paradigm conducted during a stress and control condition of the Trier Social Stress Test for Groups (TSST-G) revealed significant negative correlations between prosocial behavior and Occupational Burnout symptoms ( $r_s$  between  $-.26$  and  $-.36$ ;  $p_s$  between  $.03$  and  $.003$ ) independently of the respective TSST-G condition. **Conclusion:** Our findings provide evidence for a negative link between occupational burnout and social factors. The implications of our findings for biopsychosocial etiological models of occupational burnout, as well as for the development of prevention and intervention programs targeting occupational burnout will be discussed.

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## S02-01-C

### Definition, assessment and risk factors of occupational burnout

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**Background:** Burnout has a 60-yearlong research history. Yet, in practice, it is still unclear whether burnout is a risk factor (i.e., exposure) or a health condition. The current state of the debate about burnout screening, diagnosis, treatment, and recognition is presented. **Methods:** In 2018, occupational burnout was classified a priority outcome by the EU COST Action OMEGA-NET dedicated to the harmonization of occupational cohorts and research protocols in occupational health in Europe. To guide this harmonization effort, several systematic reviews have been conducted. **Results:** In the first systematic review, 88 unique definitions of burnout were identified. The semantic analysis of their content yielded a first definition proposal, reformulated according to SNOMED-CT and experts' comments. This proposal was approved by a panel of 50 experts (researchers and healthcare professionals) from 29 countries at the second round of the Delphi process. Since its publication in 2021, this definition was cited 175 times. The second review was focused on the burnout measurement and psychometric validity assessment of available measures: Maslach Burnout Inventory (MBI), Pines' Burnout Measure (BM), Psychologist Burnout Inventory (PBI), Shirom-Melamed Burnout Measure (SMBM), Oldenburg Burnout Inventory (OLBI) et Copenhagen Burnout Inventory (CBI), Burnout Assessment Tool (BAT). Following the Consensus-based Standards for the selection of health Measurement Instruments, BAT obtained the most complete validation, followed by CBI, MBI, SMBM, BM and PBI. The third review included 85 studies examining 261 predictors grouped in 13 subfamilies of homogenous constructs. A moderate quality of evidence was found for the harmful effect of the job demands subfamily (6 predictors), and negative job attitudes, with effect sizes from small to medium. A moderate quality of evidence was found for the protective effect of adaptive coping (small effect sizes) and leisure (small to medium effect sizes). In meta-analysis of longitudinal studies focused on exhaustion, mostly weak associations were highlighted. For six predictors—job control, job resources, interactions at work, communication and leadership, job attitudes, and work-family interface—longer length of follow-up involved weaker associations with exhaustion. **Conclusion:** The quality of the evidence available is generally low. Thus, higher-quality cohort studies are needed to better understand the etiology and course of burnout.

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## S02-01-D

### Reduced interleukin-6 stress reactivity in male physicians with occupational burnout

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**Background:** Occupational burnout is associated with an elevated risk of cardiovascular events, but the mechanisms underlying this connection have rarely been studied. Low grade inflammation with interleukin (IL)-6 as a key player has been postulated as a possible link between low-grade inflammation and cardiovascular events. Another possibility could be attenuated inflammatory responses to stress reflecting a dysregulated innate immune response. The aim of this study was to examine the relationship between burnout and IL-6 reactivity to acute stress in physicians with burnout. **Methods:** 60 male physicians were recruited, 30 with burnout, assessed with the Maslach Burnout Inventory, and 30 without burnout. Participants underwent the Trier Social Stress Test, inflicting uncontrollability and social evaluative threat. Blood samples for IL-6 measurements were taken five times at predefined intervals during stress. Repeated measures analysis of covariance was conducted across the five time points, adjusting for age. **Results:** IL-6 reactivity over time was significantly lower in physicians with burnout compared to their matched healthy counterparts ( $F(1.90, 108.10) = 4.88, p = 0.010$ ) during stress. Confirming this results, there was also a significantly lower area under the curve with respect to increase in physicians with burnout compared to those without burnout ( $F(1, 57) = 4.99, p = 0.029$ ). **Conclusion:** The study suggests that burnout is associated with lowered IL-6 reactivity in male physicians with burnout. An attenuated innate immune response in burnout complies with increased allostatic load such that dysfunctional stress responses might increase the risk of cardiovascular events in the long term.

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## S02-01-E

### Cardiovascular risk in physicians with occupational burnout and job stress

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**Background:** Occupational burnout has been associated with an increased risk of cardiovascular disease, though the underlying mechanisms remain unclear. The prevalence of burnout in physicians is about 50% with male physicians facing a higher risk of coronary heart disease than their female counterparts. We examined the relationships between burnout, work stress, and coronary microvascular function—a predictor of major adverse cardiovascular events—and the potential moderating effects of poor sleep quality and adverse childhood experiences (ACEs) in physicians across three studies. **Methods:** The Cardiovascular Risk in

Physician Burnout Study included 60 practicing male physicians without known cardiovascular disease: 30 with clinical burnout, defined by the Maslach Burnout Inventory (MBI), and 30 non-burnout controls. In addition to the MBI, participants completed the Effort-Reward Imbalance Questionnaire to assess work stress, the Pittsburgh Sleep Quality Index, and the Adverse Childhood Experiences (ACE) Questionnaire. We applied the cold pressor test to activate the sympathetic nervous system while measuring endothelium-dependent coronary microvascular function using positron emission tomography-computed tomography. Multivariable analyses were performed, adjusting for covariates. **Results:** In the first study, burnout was associated with increased coronary flow reserve (CFR), myocardial blood flow (MBF) response, and hyperemic MBF ( $r$  partial=0.28 to 0.35;  $p=0.008$  to 0.035). Participants with greater work stress in terms of higher effort-reward ratio ( $r$  partial=- 0.32 to - 0.38;  $p=0.004$  to 0.015) and overcommitment ( $r$  partial=- 0.30 to - 0.37;  $p=0.005$  to 0.022) showed a decrease in these measures. The second study showed that poor global sleep quality was associated with lower CFR ( $r$  partial=-.26,  $p=.062$ ), MBF response ( $r$  partial=-.30,  $p=.028$ ), and hyperemic MBF ( $r$  partial=-.34,  $p=.012$ ) in the burnout group relative to the control group. In the third study, a higher number of ACEs was associated with lower CFR ( $r$  partial=-.35,  $p=.010$ ) in both burnout and control physicians. **Conclusion:** Burnout and high job stress exhibited opposite associations with coronary microvascular endothelial function. Poor global sleep quality could be a mechanism by which burnout adversely affects cardiovascular health, while early-life stress may have a detrimental effect on physicians' cardiovascular health in adulthood, irrespective of burnout.

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## S02-01-F

### The impact of psychological characteristics of patients with occupational burnout on treatment response and longterm course

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**Background:** In a study on the longterm effectiveness at follow-up (3-12 months) of a multimodal treatment program for hospitalised patients with occupational burnout we found a significant reduction of depressive and burnout symptoms. However, patients differed in their treatment responses according to psychological characteristics. **Methods:** The patients were empirically examined based on self-reported data on various aspects of psychological functioning such as social support, coping styles, emotional regulation, interpersonal difficulties and motivational congruence. Cluster analysis of these data yielded four groups of patients. We called them Functionals, Dysfunctionals, Straightforward Pragmatists and Unhappy Altruist. **Results:** Functionals showed the most favourable outcomes while Dysfunctionals presented the least favourable results. Straightforward Pragmatists and Unhappy Altruists demonstrated an intermediate course. An analogous study of the same multimodal treatment program with a more thorough evaluation with standardised instruments at intake,

discharge and follow-up after three months of 96 hospitalised patients with occupational burnout replicated the findings of the first study, while providing some further information. At intake the majority of the patients fulfilled the ICD-10 criteria of a major depression and showed improvement of their condition by the end of their hospital treatment. The Functionals at intake were less symptomatic and presented with few other comorbidities or little evidence of personality dysfunction. They showed the most favourable treatment response and longterm course. The Dysfunctionals, however, presented at intake with rather pronounced symptoms of depression and burnout and more comorbidities and personality dysfunction. They showed the least favourable treatment responses and longterm follow-up conditions. At intake the Straightforward Pragmatists and Unhappy Altruists were more affected than Functionals, but less affected than Dysfunctionals and presented again an intermediate treatment response and long term outcome. **Conclusion:** This replicated and more thorough characterisation of patients with occupational burnout points to the importance of a comprehensive evaluation of the patients including an assessment of psychological functioning and may help to better tailor the treatment to the specific needs of highly affected patients.

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## S02-02-A

### Is there an afterlife? (i.e., life after retirement)

*Hoyle Leigh*

Psychiatry, University of California, San Francisco, San Francisco, USA

**Presenters:** Hoyle Leigh (Chair, San Francisco), Jon Streltzer (Co-Chair, Hawaii), Wolfram Schuffel (Germany), Barbara McGee (Fresno/Dallas), Ulrich Malt (Norway), Beena Nair (Fresno) Retirement is another stage of life and, fortunately, this stage is becoming longer with the increase in life expectancy. Health professionals like us who practice psychosomatic medicine and consultation-liaison psychiatry are particularly familiar with the stress and adaptational demand of life change in patients, but what about in ourselves? Are there any unique challenges, opportunities, and experiences for us post-retirement? For many of us, medical practice has been life itself, demanding every ounce of dedication such that the possibility of not having such demands in retirement may be an anomic "afterlife" which may lead to depression and despair as well as stress-related physical disorders. To avert such despair, some turn away from psychiatry/medicine entirely, some others deny any departure from earlier practice, while still others find a balance between psychiatry/medicine and other endeavors including volunteerism. Even before actual retirement, anticipation and planning for it can be an ongoing stress for our profession. There is much material concerning financial planning for retirement, but not enough for professional/career planning after retirement. Five presenters of this symposium will discuss their own varied experiences post-retirement, rewarding as well as saddening, and above all what they learned in adapting to this life period. One presenter who is pre-retirement will discuss her views and experiences projecting life after retirement and planning for it. The audience of this session will likely comprise of medical professionals who are retired or contemplating retirement, as well as some with a long view of the future.

There will be active audience participation in sharing their own expectations, plans, and experiences. Together with the audience, we will contemplate some psychosomatically successful models of attaining fulfilling life in retirement.

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## S02-02-B

### Reflections on 50 years of practice

*Jon Streltzer*

Department of Psychiatry, John A. Burns School of Medicine, University of Hawaii, Honolulu, USA

After completing my psychiatric training in 1974, I joined the International College of Psychosomatic Medicine, serving as an officer including president for many years. I worked for 40 years as an academic psychiatrist, seeing patients, teaching, and publishing. My outside interests were family, squash, golf, and travel. I retired at age 70 from my tenured position. I had always enjoyed my work, and I felt I still had a lot to offer, particularly with my years of experience. I then sought and was fortunate enough to receive a 35% appointment with my department, specializing in the treatment of chronic pain and opioid dependence, something I had been increasingly engaged in for two decades. This worked out very well, even through the COVID pandemic, because I saw patients and taught through televideo. I now find it increasingly hard to keep up with the medical literature beyond my narrowed field of interest, and it keeps getting harder to keep up with the technical changes related to computerized records and documentation. I find myself often mentioning how we used to do it in the old days and that has helped me decide to fully retire from my paid appointment at age 80. I plan to continue to do some voluntary teaching, but no more direct patient care. My goal is now to “shoot my age” in golf.

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## S02-02-C

### The moving seminar – all is scenic

*Wolfram Schueffel*

Deutsches Kollegium Psychosomatische Medizin (DKPM); Deutsche Balintgesellschaft, Marburg, Germany

I was born and brought up in Dresden/Germany in 1938. I married a British girl in 1964. We got two children and four grandchildren. I was made Professor of Psychosomatic Medicine of Marburg Medical School, Philipps-University in 1976 after having been trained as an internist and psychotherapist. I became an Emeritus in 2005. I went on teaching “Relationship Medicine Transgenerational/Transcultural” to medical undergraduates as well as to experienced physicians and psychological psychotherapist until today. This was done in a special format called “Moving Seminar”(MOSE). I stopped seeing patients in 2019. Being a physician and a citizen there have been two life events I was confronted with both as a Dresdener and as a German: in 1980 a very good Jewish friend told me she had been so pleased when having been liberated from KZ in 1945 and when passing Dresden just seeing the Germans in midst ruins and bodies. The other event: In 2022 I attended the

ICPM conference in Rochester / NY. I was going to present the Moving Seminar (MOSE) which was welcomed by the former Head of the famous Rochester Medical School of Nursing. She told me: “You must be a German Jew”. I was not, I have no Jewish ancestors. In my opinion a worldwide splitting process is going on which deserves to be followed up under various aspects or in front of “horizons” as seen within phenomenological framework. It took me a long time to discover it. This was possible by relying on basic experience as a physician and psychotherapist who believes first of all in perinatal and preverbal attachment to be followed up in the shape of primary love within the frame of afterlife. Retirement and old age combined with memesis may form a special kind of enlightenment.

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## S02-02-D

### Happy as a clam, leaving medicine behind

*Barbara McGee*

Department of Psychiatry, formerly UCSF, Dallas, USA

The continuity of my medical career in a public mental health center was interrupted when I decided to be a hands on parent and left practice completely. I was out of medicine for 7 years, a semiretirement of sorts, but I actively tended to my continuing education during this time. At a chance meeting with an old colleague on the ski slopes in Canada, I was recruited to a 100% hospital based consultation-liaison position of a major university. I found a renewed sense of identity as a psychiatrist and was extremely challenged and invigorated by this position and was especially surprised by how much I enjoyed teaching medical students and mentoring residents. Though it was incredibly difficult to rejoin the work force after being out so long, I was fortunate to have extraordinarily supportive colleagues who freely gave their time and support, allowing me to grow. After about 6 or 7 years, however, I became increasingly annoyed with the politics, administration, and constraints of the health care system. I had always taken great pride in providing compassionate, quality care, and putting the patient first, but at age 59, I realized that all of this was taking more out of me and perhaps this was the time I had to go. I started a calendar countdown and walked out of the hospital in June of 2020. A few years before leaving, in anticipation of aging in general, I took up several new activities; I joined a choir, took tennis and piano lessons. I anticipated that I would miss the comradery of the workplace and was afraid of becoming seriously isolated. Covid caused all of these carefully laid plans to fall apart, freeing me from self-imposed expectations of retirement. I found an internal sense of pride and satisfaction with how I have lived my life and how I perceive myself. I now gravitate to things that bring me joy – exercise, gardening, cooking, books. I am highly involved with my family, donate my time as long as it is not on too structured, and travel when able. I find that I am alone much of the time but actually feel quite busy and fulfilled. I have embraced that I quite enjoy being alone when I choose to. That has been absolutely liberating. Letting go can be a challenge. I have found that it is indeed okay to let it go and appreciate the more intimate successes in life. I have had zero second thoughts that leaving medicine when I did was the right thing to do for myself. I am very happily retired.



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## S02-02-E

### Happy afterlife? It is a joint enterprise, stupid!

*Ulrik Malt*

Division of Clinical Neuroscience, Faculty of Medicine, University of Oslo, Norway, Oslo, Norway

After working my whole life in the field of medicine, my personal identity was closely linked to being a psychiatrist. Becoming a pensioner was therefore a challenge. With my wife, I discussed 1) what would be important to be able to continue if possible; 2) what would I want to do that I had not had enough time for up until now and 3) how I should compensate for the likely loss of social network to some extent. But just as important were 4) what wishes and dreams she had for us for the rest of our remaining lives. Together we came up with the following solution. Do not immediately stop all professional activity, but gradually reduce it until you are 80. This means being on the offer side to colleagues who need professional advice; still participate to some extent in professional debates; participate in some national and international conferences, and gradually reduce research and textbook activities. On the private side, emphasize more joint activities, i.e. bridge, golf; cultural trips, grandchildren, and become an active member of a social club where the members share my interests in art, history, literature, social issues and good conversations. And not least: continue to be physically active (training center; long walks with the dog in the woods). My most important advice: Always discuss your plans about the future with your spouse / significant other. Only a solution that covers the wishes, needs and dreams of both parties will make the last years of one's life the best of one's life.

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## S02-02-F

### Should I be stressed pre-retirement to be un-stressed in retirement?

*Beena Nair*

Department of Psychiatry, Kaiser Permanente, UCSF, Fresno, USA

As a full-time CL psychiatrist, I find contemplating retirement is accompanied by significant anxiety in both anticipation and planning for the next stage in life. It involves lifestyle considerations, financial planning, focus on emotional wellbeing, and establishing new social connections, figuring out new goals and purposes in life. The life stage experienced commonly prior to retirement is the "midlife crisis" in which self-reflection, identity crisis, and regrets may occur. Then, the anticipation of the next stage, retirement, may promise new-found freedom but also separation anxiety, loss of identity, relationship dynamics and social isolation as well as financial concerns. I will discuss some of my experiences in planning for this challenging stage of life.

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## S02-03-A

### Biopsychosocial health in extreme situations

*Joel Dimsdale<sup>1</sup>, Stephan Zipfel<sup>2,4</sup>, Willem Kop<sup>3</sup>, Jana Denking<sup>2</sup>*

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Extraordinarily challenging, intense, and life-threatening environments create unexplored demands on clinicians and researchers in biobehavioral and psychosomatic medicine. These demands differ from those commonly encountered in health care settings. This symposium describes 3 uniquely challenging contexts concerning extreme situations encountered by researchers and clinicians. Refugees commonly encounter rape, torture, and severe treatment before and even after their escape from their home countries. They bring with them a host of illnesses and attitudes toward health care, which challenge well-meaning clinicians. When the first wave of COVID hit, healthcare workers did not know how to protect themselves from infection and hospitals lacked necessary preventive equipment. Doctors and nurses faced high infection rates and mortality, while struggling to deliver care in the context of their own exhaustion and fear. Meta-analysis of the general population shows that people with pre-existing psychological disorders developed relatively fewer increases in mental health problems than people without mental disorders. In contrast, people with physical disorders tended to report poorer mental health than healthy individuals during the pandemic. COVID care was complicated by failures in communication about a new contagion. However, there are models for communicating research and clinical information, even in extreme and unusual situations. Early leaders in psychosomatic medicine were at the forefront of communicating and influencing public policy in the turmoil of the final days of World War II. Adopting their approach may improve biopsychosocial communications in future extreme situations.

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## S02-03-B

### The short-term and long-term biopsychosocial challenges of the COVID-19 pandemic

*Willem Kop*

Tilburg University, Tilburg, Netherlands

Estimates of the morbidity and mortality resulting from the COVID-19 pandemic vary substantially, but COVID-19-related deaths probably exceed 7,000,000 people worldwide (as of 1/10/2023). Substantial regional and sociodemographic differences exist in the prevalence and adverse consequences of COVID-19, but many subgroup estimates are difficult to interpret because of "reporting without a denominator". Health care workers have been at high risk of COVID-19 infection, particularly in the first wave of the pandemic, when access to protective clothing and vaccinations was limited. The WHO reports that between 80,000- 180,000 health care workers died because of COVID-19

(between January 2020 and May 2021). These numbers do not take into account the total number of health care workers involved in responding to the pandemic, but certainly reflect the high fatality in this group. In addition to the direct consequences of virus exposure, work demands were exceptionally high, resulting in exhaustion and disorders such as anxiety, depression, and PTSD. Psychosomatic medicine and related disciplines have contributed to the knowledge base of short-term and long-term consequences of the COVID-19 pandemic. It is estimated that research on psychological and social factors is 74% higher in COVID-19-related articles as compared to all other health-related scientific articles published in the first years of the pandemic (between 1/1/2020 and 4/18/2021). We recently conducted a meta-analytic review of 111 studies that assessed psychological measures prior to the pandemic and again during the pandemic and found a significant decrease in mental health, but heterogeneity across studies was high ( $i^2 = 66.7$ ) and not all components of mental health decreased equally. In addition, people with pre-existing psychological disorders developed relatively fewer increases in mental health problems than people without mental disorders, whereas people with physical disorders tended to report poorer mental health than healthy individuals during the pandemic. For everyone, the COVID-19 pandemic resulted in trauma with varying degrees of intensity. As the etiology of long-COVID remains elusive, a biopsychosocial approach will be needed to identify high-risk individuals, personalized treatments, and paradigms to minimize future short-term and long-term consequences of pandemics and other large-scale natural or human caused disasters.

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### S02-03-C

#### Addressing barriers to psychosomatic and mental health services for refugees: a German perspective

*Jana Denkinger, Stephan Zipfel*

Psychosomatic Medicine and Psychotherapy, University of Tuebingen, Tuebingen, Germany

Mental disorders such as post-traumatic stress disorder (PTSD), associated with a variety of chronic pain-related symptoms, affect numerous refugees. As part of a special project with the support of the Prime Minister of our State, 1100 Yazidi women from northern Iraq who had suffered extreme violence at the hands of the so-called Islamic State (IS) were brought to Germany for specialized treatment. In the first part of this presentation, we will summarize the results of a study that aimed to investigate the psychological distress and trauma-related symptoms of these female Islamic State victims from the perspective of their care providers. Female Yazidi refugees being kept in IS captivity mainly suffer from pain, which is attributed to an explanatory psychological model. Despite the high prevalence of mental illness among the forcibly displaced, they tend to be underrepresented in mental health services. One of the main barriers to accessing mental health services is self-stigma. To address this issue, the psycho-educational short film 'Coping with Flight and Trauma' was developed as a short online intervention, and the results of the evaluation will be presented. Finally, we

will report on a recent project to develop support tools for Ukrainian children who had to leave their country with their mothers due to the Russian invasion.

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### S02-03-D

#### Influencing biopsychosocial policy in times of crisis: the challenge of communication

*Joel Dimsdale*

Psychiatry, University of California, San Diego, San Diego, USA

When the first wave of COVID hit, there was considerable uncertainty about the nature of the contagion and mode of transmission. Inconsistent messages were spread and near panic followed. Enormous efforts were deployed to develop novel vaccines, and these heroic efforts were amazingly successful. Regrettably, few resources were devoted to studying how to persuade people to accept the vaccines. Failures were particularly evident in communicating risk and probability—tough enough concepts to convey when times are calm and extremely tough concepts to convey during a time of calamity. It is instructive to compare these contemporary failures in health communication with the surprising success of early leaders of the American Psychosomatic Society (APS), who persuaded government officials to adopt a controversial policy during the waning days of World War II. This time was one of utter catastrophe—the long, devastating war killed millions of soldiers and non-combatants, led to economic collapse, and devastated Europe. As the war wound down, there were calls for an International Military Tribunal to try former Nazi leaders in Nuremberg. From the outset, the plan was for a speedy trial and sentencing, and there was no interest in studying the war criminals. The early leaders of the APS were singularly effective in communicating the importance of biopsychosocial research in this unusual context, and persuaded governments to study the war criminals with the best tools available. The APS efforts featured a multidisciplinary push, succinct communication, and a consultative stance rather than expert instruction.

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### S02-04-A

#### Brain imaging studies in treating stress-related disorders

*Kazufumi Yoshihara<sup>1,2</sup>*

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<sup>2</sup>Department of Psychosomatic Medicine, Kyushu University Hospital, Fukuoka, Japan

This symposium will explore the role of brain imaging in understanding and treating stress-related disorders. As treatment varies depending on the specific symptoms, ongoing research aims to tailor approaches to the unique pathophysiology of each disorder. Brain imaging is pivotal in revealing the underlying mechanisms of these disorders and the transformative effects of treatment. This

symposium aims to highlight the latest advances in brain imaging research, focusing on its application in both elucidating pathophysiology and evaluating treatment efficacy. In addition, we will discuss its potential for providing biomarkers and predictive prognosis, particularly in the field of communication-based psychotherapy.

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## S02-04-B

### Neuroimaging advances in eating disorders: from pathophysiology to treatment innovation

*Yasuhiro Sato*

Department of Psychosomatic Medicine, Tohoku University, Sendai, Japan

Eating disorders have a significant impact on both physical and mental well-being, and are characterized by abnormal eating behaviors. Recent brain imaging studies have illuminated their origins, workings, and responses to treatments. These disorders involve two key neural systems: the cognitive control system, which includes the prefrontal cortex, parietal lobe, and dorsolateral striatum, responsible for rational decision-making, and the reward system, comprising the orbitofrontal cortex, amygdala, ventral striatum, and insular cortex, which manages reward evaluation and emotions. Dysfunction in these systems is central to understanding eating disorders. For instance, patients with anorexia nervosa (AN) show heightened activity in the dorsolateral prefrontal cortex of the cognitive control system and in the orbitofrontal cortex of the reward system. Conversely, obesity is associated with reduced activity in these areas. Binge eating disorder (BED) patients exhibit weaker connectivity in the reward system, while AN patients have shown increased connectivity in areas involving the dorsolateral prefrontal cortex. The orbitofrontal cortex's size positively correlates with AN symptom severity. Brain imaging is also promising for predicting treatment outcomes. In AN, the ability to change behavior, or set-shifting, is linked to activity in the right dorsolateral and ventrolateral prefrontal cortices. Lower pre-treatment activity in the ventrolateral prefrontal cortex and insula indicates greater post-treatment improvements in set-shifting. Cognitive remediation therapy increases dorsolateral prefrontal cortex activity in AN patients, aiding in suppressing inappropriate responses. Mindfulness therapy reduces activity in the amygdala and orbitofrontal cortex during body shape-related anxiety tasks in AN patients. In BED patients, impulsivity treatment enhances dorsolateral prefrontal cortex activity, while treatments targeting reward evaluation decrease ventral striatum activity and increase activity in the ventromedial prefrontal cortex. Body image therapy in AN patients improves body shape concerns and activity in the extrastriate body area. Emerging brain-targeted treatments like transcranial magnetic stimulation and vagal nerve stimulation offer new possibilities. The development of non-invasive brain imaging technologies continues to deepen our understanding of eating disorders, paving the way for novel approaches in psychosomatic medicine.

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## S02-04-C

### Advancing anorexia nervosa diagnosis and understanding through comprehensive neuroimaging and machine learning: insights from the Eating Disorder Neuroimaging Initiative (EDNI)

*Atsushi Sekiguchi<sup>1</sup>, Tsunehiko Takamura<sup>1</sup>, Keima Tose<sup>2</sup>, Yusuke Sudo<sup>3</sup>, Ritu B. Chhatkul<sup>3</sup>, Masanori Isobe<sup>2</sup>, Yoshiyuki Hirano<sup>3</sup>, Kazuhiro Yoshiuchi<sup>4</sup>, Yasuhiro Sato<sup>5</sup>, Naoki Kodama<sup>6</sup>, Kazufumi Yoshihara<sup>7</sup>, Yoshiya Moriguchi<sup>1</sup>*

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**Background:** Anorexia Nervosa (AN), a severe eating disorder, is characterized by an excessive preoccupation with body weight and shape. Despite significant genetic discoveries in 2019, pinpointing effective brain imaging biomarkers for AN has remained elusive. The comprehensive analysis by the ENIGMA Eating Disorders Working Group in 2022, though broad, fell short in its regional specificity, underscoring the necessity for more detailed investigations. **Methods:** To bridge this research gap, the Eating Disorder Neuroimaging Initiative (EDNI) embarked on a study, gathering and scrutinizing MRI scans from over 100 individuals diagnosed with AN, compared against a control group of matched participants. This study, leveraging a sizable cohort across multiple centers, was designed to enhance the precision of correlations and minimize biases. We refined our investigative techniques by examining both T1-weighted and functional MRI scans, and by applying machine learning algorithms to develop diagnostic classifiers for AN, inclusive of its subtypes. **Results:** Our analysis revealed pronounced differences in the gray matter volume (GMV) within the cerebellum and the frontal and temporal lobes, between those with AN and the control group. A notable discovery was the association of GMV in the posterior insula and the orbitofrontal cortex (OFC) with AN symptom severity, a relationship previously unobserved in meta-analytic studies. Furthermore, our machine learning approach successfully identified AN subtypes, marking a pioneering achievement in the domain, and reliably distinguished AN patients from healthy individuals. **Conclusion:** The EDNI's efforts mark a pivotal leap in our neuroanatomical comprehension of AN, heralding novel diagnostic and therapeutic avenues, especially within the realm of cognitive-behavioral therapy (CBT). Our research highlights the importance of extensive, detailed neuroimaging studies and the application of machine learning to reveal intricate links between brain alterations and clinical

manifestations, surpassing the capabilities of meta-analyses. Supported by AMED with Grant Number JP19dm0307104, our work lays the groundwork for a comprehensive neuroimaging database, propelling forward the research landscape of eating disorders.

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## S02-04-D

### Neural correlates of psychotherapy: focusing on perspective-taking

*Satoshi Izuno*<sup>1,2</sup>, *Takahiko Koike*<sup>3</sup>, *Shohei Tsuchimoto*<sup>4</sup>, *Kanae Ogasawara*<sup>3</sup>, *Maho Hashiguchi*<sup>4</sup>, *Ayumi Yoshioka*<sup>2,5</sup>, *Kazufumi Yoshihara*<sup>1,6</sup>, *Nobuyuki Sudo*<sup>1</sup>, *Masaki Fukunaga*<sup>2</sup>, *Norihiro Sadato*<sup>2,5</sup>

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**Background:** Perspective-taking is moving one's perspective to another position and speculating on the thoughts and feelings the person in that position would have or the view they would see. Improvement in perspective-taking ability has been reported as an effect of various psychotherapies. In this study, we used functional magnetic resonance imaging (fMRI) to investigate the effects of perspective-taking on emotion regulation and its related neural correlates. **Methods:** Thirty-eight healthy participants (29 females) were given a series of mental simulations involving perspective-taking in social interaction situations. In the simulations, the participants set up their perspectives from themselves, a partner communicating with them, and a third person viewing the situation. They were instructed to first simulate the presented happy or unhappy situation from their perspective, then take one of the three perspectives and simulate the situation from their perspective again. We examined the changes in emotions and task-related brain activity in the self-perspective before and after the perspective-taking. **Results:** Behavioral data showed that alleviating negative emotions in the unhappy situation was significantly greater when taking the partner's perspective than when taking the third person's perspective ( $p = 0.0007$ ). fMRI data analyses revealed no differences in brain activity changes before and after taking the partner's perspective and before and after taking the third person's perspective. In the unhappy situation, there was a negative correlation at the right temporoparietal junction (rTPJ) between the difference in brain activity changes subtracting the third person's perspective from the partner's perspective and the difference in the amount of change in emotions ( $p_{\text{FWE}} = 0.01$ ). **Conclusion:** In unhappy situations, negative emotions are more likely to be alleviated

by taking the partner's perspective than the third person's perspective. Given the functional role of the rTPJ in the reciprocal social attention system, the rTPJ may be related to emotion regulation through perspective-taking of the partner with whom communication evokes the negative emotion.

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## S02-04-E

### Common brain regions associated with stress-related symptoms and altered by psychotherapy

*Kazufumi Yoshihara*

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**Background:** Brain imaging research is conducted by visualizing the brain to understand the relationship between changes in neural activity in different regions of the brain and their specific functions. **Methods:** Among these, brain imaging research using functional magnetic resonance imaging, which has excellent properties, has been widely carried out. In our previous study of sympathetic activity, we identified the anterior cingulate and insular cortices as brain regions associated with emotion-induced sympathetic activity. Previous studies have also reported that the anterior cingulate and insular cortices are associated with stress-related symptoms such as psychiatric symptoms, irritable bowel syndrome symptoms, pain symptoms, unpleasant emotions and distress. On the other hand, the mechanism of symptom improvement with psychotherapy has remained largely unknown, but recent human brain imaging studies are gradually elucidating it. **Results:** In our previous study of psychotherapy, we found increased activity in the insular cortex during active listening (actively and interested listening to the other person), which is the basis of psychotherapy, and changes in functional connectivity in the anterior cingulate cortex during cognitive reappraisal (changing one's perspective and thinking to evaluate a situation). In addition, mindfulness (paying attention to one's experience in the present moment and accepting reality as it is) has been reported to induce structural and functional changes in the anterior cingulate and insular cortices. Therefore, these results, together with previous reports of brain regions associated with stress-related symptoms, suggest that the anterior cingulate and insular cortices play an important role in the mechanism by which stress-related symptoms are improved by psychotherapy. **Conclusion:** In the future, brain imaging data may be used as biomarkers for treatment by examining the relationship between abnormalities in brain structure and function, stress-related symptoms and traits, and physiological data. In addition, cluster classification of stress-related disorders based on brain imaging data, stress-related symptoms and traits, and physiological data will lead to the development of more effective treatment and prevention methods for each group.

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## S02-05-A

### Emerging research trends on demoralization: epidemiology and clinical practice

*John M. de Figueiredo*<sup>1</sup>, *Chiara Rafanelli*<sup>2</sup>

<sup>1</sup>Department of Psychiatry, Yale University School of Medicine, Cheshire, USA

<sup>2</sup>Department of Psychology, University of Bologna, Bologna, Italy

This symposium will present current research on demoralization as it relates to psychopathology and medical illness in various clinical settings. Dr. Sara Gostoli will present on demoralization in patients with inflammatory bowel disease. Dr. Luigi Grassi will review his research on the dimensions of demoralization as portrayed by assessments done with two scales, the “DCPR demoralization scale (DCPR-DS)” and the “Demoralization Scale 2 (DS-II)” in various clinical settings. Dr. Damien Miran will describe demoralization in patients suffering from neurological deficits due to brain tumors and other CNS pathology. Dr. Katiuska Ramirez will report on distinguishing demoralization from depression in patients requiring prolonged medical hospitalizations.

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## S02-05-B

### Depression and demoralization trajectories in outpatients with inflammatory bowel disease

*Sara Gostoli*, *Graziano Gigante*, *Regina Subach*, *Chiara Rafanelli*

Department of Psychology, University of Bologna, Bologna, Italy

**Background:** Research on the psychological characteristics of patients with Inflammatory Bowel Disease (IBD) focused mainly on psychiatric disorders, somatization or alexithymia, showing a higher risk of persistent anxiety and depression for years after IBD diagnosis. However, studies on qualitatively different forms of mood disturbances, such as demoralization, which has been shown to be a vulnerability factor also in the long term, are lacking. The present study aimed at assessing the 4-year trajectories of DSM-5 clinical/subclinical depression and demoralization according to the revised Diagnostic Criteria for Psychosomatic Research (DCPR-R), and the impact of these diagnoses on self-perceived psychological distress and well-being in IBD patients. **Methods:** 66 IBD outpatients (females= 63.6%; mean age= 45.3±14.1 years) were assessed with semi-structured clinical interviews on DSM-5 major/minor depression, DCPR-R demoralization and self-report measures on psychological distress (i.e., anxiety, depression, somatization, hostility) and well-being, at baseline and 4-year follow-up. **Results:** At baseline, only 3% of the patients presented with DSM-5 depression (i.e., major depression), 13.6% with DCPR-R demoralization. Half of the depressed patients also presented demoralization, whereas only 6.7% of demoralized were also depressed. After 4 years, one depressed patient remitted, 6.1% of the sample developed major depression and 15.2% minor depression. 20% of the depressed patients at follow-up were demoralized at baseline. About DCPR-R, 44.4% of the patients with baseline demoralization were no more demoralized at follow-up, whereas 9 new cases (13.6%) were diagnosed. At follow-up, 9 patients (13.6%) presented with depression

only, 8 (12.1%) demoralization only, 6 (9.1%) both diagnoses. Depression-demoralization comorbidity, rather than the 2 diagnoses separately, was associated with more severe self-perceived psychological distress and impairments in specific dimensions of psychological well-being (i.e., environmental mastery, personal growth, self-acceptance). **Conclusion:** A DCPR-R-based assessment, beyond traditional psychiatric nosography, allowed the identification of a psychosomatic burden that would not have been detected otherwise, suggesting its clinical utility. Moreover, since demoralization could represent a vulnerability factor for mental and physical illnesses, further studies should investigate how it could affect prognosis in the context of IBD.

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## S02-05-C

### Dimensions of demoralization and its relationship to individual and psychosocial variables in different clinical settings

*Luigi Grassi*

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**Background:** Demoralization has been defined as a combination of distress and subjective (incompetence, loss of meaning and purpose in life, cognitive attitudes of pessimism, hopelessness/helplessness, sense of being trapped, personal failure, with associated features of social alienation or isolation and lack of support. **Methods:** We examined the Demoralization Scale through a semi-structured interview the Demoralization module of the Diagnostic Criteria for Psychosomatic Research (DCPR) and the Demoralization Scale (DS-II) proposed by Robinson, Kissane et al. in a sample of patients affected by serious mental illness (SMI) (e.g., schizophrenia spectrum disorders, bipolar disorders) (n=170), together with other dimensions, i.e. hopelessness (MINI-Coping hopelessness scale), dignity (Patient Dignity Inventory), and depression (Patient Health Questionnaire PHQ-9). **Results:** Through factorial analysis, demoralization as examined by the DS-II had dimensions similar to the original DS scale when applied in medical settings (e.g., oncology, chronic somatic disorders): Loss of Meaning/Purpose, Sense of Failure, Disheartenment, although with items loading in different dimensions in comparison with the original DS. DS cut-off total score  $\geq 35$  optimizes sensitivity and specificity when explored in comparison with the DCPR, while demoralization was confirmed not to be the expression of major depression or a classical depression condition. **Conclusion:** Demoralization should be considered as a further dimension to be explored in psychiatric settings, as a condition that could influence treatment, especially recovery-oriented rehabilitation intervention. Specific treatment interventions should be also implemented to address demoralization among people with SMI.

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## S02-05-D

### Evaluating the relationship between depression, demoralization, and neurological deficits in neuro-oncology

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**Background:** Demoralization is a common clinical phenomenon experienced by patients living with cancer. These patients often describe a sense of loss of control, hopelessness for the future, and feelings of subjective incompetence and lack of agency. These feelings may be amplified in patients suffering from neurological deficits due to primary or metastatic brain tumors or associated central nervous system pathology. Such deficits may include motor dysfunction or new cognitive symptoms and often require additional social support. These factors can place great strain on the patient and their support system, further contributing to demoralization in this population. **Methods:** This case series will include oncology patients suffering either primary or secondary brain tumors and who underwent psychiatric consultation in either inpatient medical settings or outpatient consultation. **Results:** Data collection is currently in progress and will be completed by August 2024. The Demoralization Scale-II and Hospital Anxiety and Depression Scale will be used to measure symptoms. It is anticipated that patients with more significant neurological deficits will experience higher rates of demoralization as well as depression, with a higher rate of change in demoralization. **Conclusion:** Patients living with cancer often experience demoralization during their treatment course. While patients with primary or secondary brain tumors face similar risk factors for demoralization compared to other oncologic populations, they also experience the added burden related to neurological deficits due to their malignancy or associated treatments. This case series will aim to identify risk factors for the development of demoralization in this population, to better clarify the impact of neurological symptoms on the development of demoralization and depression, and to improve methods of differentiating demoralization and depression.

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## S02-05-E

### Distinguishing depression and demoralization during prolonged medical admissions

*Katiuska Ramirez*

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**Background:** Patients who require prolonged medical admissions frequently experience significant psychosocial distress due to severe physical symptoms, unexpected setbacks in their treatment and recovery, feelings of loss of control and subjective incompetence, and a loss of dignity related to all of these factors. In the midst of these stressors, patients frequently develop demoralization. Differentiating between demoralization and depression is critical in the management of these patients; however, it frequently poses a

challenge given overlapping symptoms. This study aims to evaluate differences in depression and demoralization among patients with prolonged medical admissions. **Methods:** This case series will include patients admitted to inpatient medical services at a large academic medical center. They were evaluated by the psychiatric consultation liaison service at the request of their primary inpatient treatment teams. Indications for consultation vary and include requests for assistance in evaluating and managing depression, anxiety, and confusion. Timing of consultation during the patient's admission varied and was determined by the patients' primary treatment teams. The symptom profiles experienced by the patients will be reviewed, including indications for admission, physical symptoms reported by patients, and relevant factors including prior history of psychiatric illness and specific contributors to the development of demoralization or other psychiatric illnesses experienced by the patient during their admission. **Results:** Data collection is ongoing and will be completed by August 2024. To measure depression and demoralization, the Demoralization Scale-II and Hospital Anxiety and Depression Scale will be used. It is anticipated that patients with prolonged medical admissions will experience increased rates of both depressive symptoms and symptoms consistent with demoralization, with a greater frequency of symptoms consistent as the length of admission increases. **Conclusion:** This care series will review risk factors for the development of demoralization in patients with prolonged medical admissions, methods to differentiate demoralization from depression and other psychiatric conditions, and potential strategies to manage demoralization during the patient's medical admission.

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## S02-06-A

### Coping wisely with stress

*Luigi Grassi<sup>3</sup>, Michael Linden<sup>1</sup>, Beate Muschalla<sup>2</sup>, Moujan Tofighi<sup>1</sup>*

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In the context of life span psychology, a substantial body of empirical research on wisdom is available. Wisdom has been defined as capacity, which is given to everybody, to cope with severe and often unsolvable problems in life. B. Muschalla will report representative data from the general population on wisdom in persons with and without mental disorders. As wisdom is of special interest in persons, who have to cope with increased burdens in life, M. Tofighi will present data from a study, which was done with refugees, who got a wisdom training with the aim to reduce distress. Wisdom is also of interest in clinical contexts. L. Grassi will report on studies with oncological patients who have to cope with impairing illnesses. M. Linden will show results from a controlled clinical trial which was done in a psychosomatic hospital, where patients with adjustment disorders were treated with wisdom psychotherapy. In summary, the symposium will give an introduction in wisdom psychology and psychotherapy, a promising field in psychosomatic medicine.

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## S02-06-B

### Searching for wisdom: meaning and dignity in clinical settings

*Luigi Grassi*

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**Background:** Dignity is a basic dimension for a comprehensive patient-centered approach aimed at promoting a state of physical, mental, social and spiritual wellbeing. It consists of three main dimensions (illness-related concerns, dignity-conserving perspectives and practices, social aspects of dignity). **Methods:** We examined dignity by using the Patient Dignity Inventory, a 24-item tool, to examine the aforesaid dimensions in a sample of patients affected by serious mental illness (n=170), chronic somatic disorders (n=205) or cancer (n=212), together with a series of other tools to explore the sense of meaning (e.g. FACIT to measure spirituality, the IBQ - illness representation of illness; psychological well-being PWB; personal functioning HONOS). **Results:** The PDI showed to have similar dimensions according to the factorial analysis performed in the different samples (psychological distress, somatic/functional distress, existential distress). There were significant association between these dimension and the PDI total score and the examined psychosocial dimensions, mainly function (HONOS) and spirituality (FAICT) ( $p < 0.01$ ). **Conclusion:** The PDI results to be a tool favoring (i) to understand the dimensions of dignity (and the lack of dignity) experience among people with different conditions, including somatic and psychiatric disorders; (ii) to examine the mutual association between significant psychosocial variables, including meaning, values and psychological well-being.

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## S02-06-C

### Wisdom capacities in people with and without chronic mental health problems – a German general population representative survey

*Beate Muschalla*

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**Background:** Wisdom capacities are important for coping with difficult and ambiguous life situations. People with chronic mental health problems often have problems in coping with life problems. Until now, there are no comparative and representative data on the distribution of wisdom capacities in people with and without chronic mental health problems. Identifying strengths and limitations in wisdom capacities in both groups will give a basis for specific focus in wisdom trainings in clinical settings and public health. **Methods:** The cross-sectional observation study examined a German population-representative sample of 2505 persons aged 16–95 years in 2019. Socio-demographic data, presence of chronic and mental illnesses were assessed, and wisdom capacities by the 12-WD Wisdom Scale. The surveys were carried out by means of interviews and self-report questionnaires at the respondents'

homes, done by an experienced social research company. **Results:** The wisdom capacities value and problem relativization, as well as emotion acceptance, were scored the highest by people with and without chronic mental health problems. Uncertainty tolerance, sustainability and perspective change received the lowest scores. People with chronic mental health problems had slightly lower overall wisdom affinity ( $M=7.00$ ,  $SD=1.41$  on scale 0–10) as compared to mentally healthy ( $M=7.7$ ,  $SD=1.38$ ). Specifically, persons with chronic mental health problems report the lowest ratings on those wisdom capacities which require active cognitive reflections (sustainability, perspective change, uncertainty tolerance). **Conclusion:** Since there are rather small quantitative differences between persons with and without chronic mental health problems, the wisdom concept seems appropriate to be applied to all. Wisdom promotion, e.g., in terms of wisdom trainings, may be done with focus on those wisdom capacities which were rated comparably low: perspective change, uncertainty tolerance and sustainability.

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## S02-06-D

### Wisdom training and coping with burdens among refugees: a cluster randomized controlled trial

*Moujan Tofighi*

Research Group Psychosomatic Rehabilitation, Charité University Medicine Berlin, Berlin, Germany

**Background:** Refugees are confronted with a variety of stressors. Wisdom capacities can help to cope with distress. Wisdom can be both taught and learned. The aim of an intervention trial was to assess the effectiveness of wisdom training among refugees on their ability to manage their problems in life. **Method:** There were 59 Farsi-speaking refugees, aged 18 years or older, who were recruited in refugee shelters in Berlin, Germany. Participants were randomly assigned to either wisdom training or language training. Participants answered scales on wellbeing (PWB), multidimensional wisdom competencies (MWC), adjustment problems (ADNM-8), general distress (SCL-R-90), discrimination, quality of life (EUROHIS\_QOL), and embitterment pre- and post-intervention. **Results:** A mixed effect linear model showed significant time by group interactions for the MWC ( $F = 4.121$ ,  $p=0.047$ ), ADNM8 ( $F = 6.327$ ,  $p = 0.015$ ), PWB ( $F=5.017$ ,  $p=0.029$ ), and a trend for EUROHIS-QOL ( $F=3.528$ ,  $p = 0.065$ ), with no significant differences for the SCL-R-90 ( $F=1.153$ ,  $p=0.287$ ), the EDS ( $F=1.137$ ,  $p = 0.291$ ), and embitterment ( $F=2.632$ ,  $p = 0.110$ ). **Conclusion:** Wisdom training, in comparison to language training, improved wisdom capacities, adjustment, and psychological well-being. These findings give evidence that wisdom is trainable and can help individuals in coping with stressors. This has implications for the integration of wisdom therapy in the psychosomatic-psychotherapeutic practice.

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## S02-06-E

### Improvement of wisdom skills in patients with severe adjustment disorders: Results of a randomized controlled study

Michael Linden

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**Background:** Wisdom is a capacity which is needed to cope with difficult situations in life. Wisdom can be trained like other capacities. Wisdom psychotherapy has been developed as a method of cognitive behavior therapy to help patients who are stuck in negative life experiences, or confronted with unsolvable dilemmas.

**Methods:** To test the efficacy of wisdom psychotherapy in patients with adjustment disorders, a randomized controlled clinical trial was done in a psychosomatic rehabilitation hospital. Included were patients with a score of >18 on the ADN8 scale, which indicates adjustment disorders. They were then randomly assigned to group wisdom therapy (WT: N=114), or group behavioral activation therapy (BA: N=109). Additionally, a matched group of patients was built, which were not included in any study procedures but underwent routine treatment only (RT: N=114). Wisdom was measured with the Wisdom Competency Scale (WCS). **Results:** There was an increase on the WCS of 5.3 in the wisdom group as compared to 0.4 in the activation group and 0.2 in the routine group. This is statically significant in the pre-post comparison and in the time/goup interaction (F4,42, p=0,13). The ADN8 score, the SCL90 GSI, the BDI score decreased, with a trend for more side effects in the wisdom than the activity group.

**Conclusion:** The results confirm that wisdom psychotherapy can make a difference in the improvement of wisdom capacities, although all patients were treated in a psychosomatic hospital with a comprehensive psychotherapeutic routine treatment. Wisdom therapy, different from other psychotherapies, does not aim at increasing hedonic or symptom free wellbeing but rather eudaimonic wellbeing in order to teach patients to live a decent and successful life.

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## S03-01-A

### Persistent somatic symptoms – advancements in understanding and prospects for research and patient care

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This symposium brings together leading experts in the field of psychosomatic medicine to present cutting-edge research and innovative approaches to understanding and treating persistent somatic symptoms. The presentations will explore various aspects of persistent somatic symptoms, ranging from their definition and aetiology to novel classification systems, neurophysiological

mechanisms, and patient-centred interventions. **a) Bernd Löwe, Hamburg, Germany: Advancements in understanding and managing persistent somatic symptoms: A comprehensive review** Löwe synthesises current knowledge and provides a comprehensive overview of the interplay between psychological, social and biological factors contributing to the persistence of somatic symptoms, with practical implications for patient care. **b) Victor Pitron, Paris, France: Association between climate-change anxiety and physical symptoms** Pitron explores how climate change anxiety manifests as physical symptoms, emphasising the bidirectional relationship between environmental stress and bodily experience, and implications for public health interventions. **c) Anne Toussaint, Hamburg, Germany: Functional somatic disorders: applicability of a new classification for persistent somatic symptoms in the Lifelines Cohort Study** Toussaint evaluates the utility of the EURONET-SOMA classification in identifying distinct phenotypic profiles and predictors of functional somatic disorders using data from the Lifelines cohort study. **d) Wei-Lieh Huang, Taipei, Taiwan: Neurophysiological and neuropsychological aspects of persistent somatic symptoms** Huang investigates neurophysiological and neuropsychological aspects of persistent somatic symptoms, elucidating underlying neural correlates and cognitive processes, paving the way for novel therapeutic interventions. **e) Sebastian Kohlmann, Heidelberg, Germany: Public and patient involvement in the development and evaluation of an internet-based guide for persistent somatic symptoms (GUIDE.PSS)** Kohlmann highlights the importance of public and patient involvement in the development of self-management resources, demonstrating the effectiveness of a user-centred approach. In conclusion, this symposium offers interdisciplinary perspectives and innovative approaches to advance the understanding and management of persistent somatic symptoms, with the aim of informing future research directions and improving patient care in psychosomatic medicine.

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## S03-01-B

### Advancements in understanding and managing persistent somatic symptoms: a comprehensive review

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**Background and aims:** Persistent somatic symptoms, an umbrella term for distressing physical complaints lasting several months or longer, regardless of their aetiology, represent a considerable burden for patients, healthcare providers and society. The aim of this comprehensive review is to examine the current scientific evidence on the aetiology and treatment of persistent somatic symptoms and to draw conclusions for further research. Persistent somatic symptoms can occur after precipitating events such as infections, injuries, medical conditions, stressful life events or spontaneously. Typically, the association between the original trigger and an identifiable pathophysiology weakens over time, making diagnosis and treatment more difficult. Studies have identified several biological,



psychological and social factors that maintain and perpetuate symptoms. These include, for example, chronic inflammation, genetic predispositions, immunological factors, but also early adverse childhood experiences, depression, disease-related anxiety and dysfunctional symptom expectations. Some perpetuating or exacerbating factors are potentially modifiable and thus offer targets for treatment. Because of the biopsychosocial aetiology of persistent somatic symptoms, treatment must also be multifactorial. Basic care includes treatment of the underlying pathophysiology and the use of person-centred communication techniques aimed at providing people with a biopsychosocial explanation for their symptoms and a realistic assessment of their seriousness. However, if these measures prove inadequate, targeted psychological and pharmacological interventions may also be useful. A proper understanding of persistent somatic symptoms may also help to reduce the harmful stigma often associated with these symptoms. **Conclusion:** In conclusion, the multifactorial nature of persistent somatic symptoms presents complex challenges for diagnosis and treatment. By understanding the different mechanisms underlying their persistence, more targeted treatment strategies may be developed in the future, ultimately reducing the burden on patients and society. Collaboration between clinicians, researchers and patients is essential to making progress in this area and improving patient outcomes. A psychosomatic approach that gives equal weight to biological, psychological, and social factors may be the key to comprehensive care for people with persistent somatic symptoms.

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### S03-01-C

#### Functional somatic disorders: applicability of a new classification for persistent somatic symptoms in the Lifelines Cohort Study

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**Background:** Persistent somatic symptoms (PSS) are a medically challenging phenomenon that causes suffering for those affected and results in high health care costs. Depending on the respective medical specialty, different diagnoses are given for PSS, which makes stringent treatment difficult. The EURONET-SOMA classification proposal of Functional Somatic Disorder (FSD) aims to standardize diagnostic criteria across medical specialties. It was the aim of this study to operationalize and evaluate the FSD criteria in a large population-based sample. **Methods:** We analyzed 88,952 participants (mean age = 48.3 years, 52.5% female) from the Dutch prospective cohort study Lifelines, which collects extensive data on somatic and mental health issues. In a cross-sectional study, we determined frequencies of FSD and its subcategories, investigated differences in sociodemographic and psychopathological characteristics between the groups, explored its clinical relevance in terms of impairment and health care utilization, and determined predictors of FSD. **Results:** 59% of all participants fulfilled the FSD diagnosis, i.e. reported at least one persistent and troublesome

symptom. Of those, 31% reported one symptom only, 17% reported two or more symptoms from the same organ system, and 52% reported symptoms from more than one organ system. 32% met criteria for an accompanying same-system physical disease such as Crohns disease, and 19% met criteria for a specialty-specific related disorder such as fibromyalgia. FSD cases reported significantly higher psychological burden, lower health-related quality of life and more health care utilization than no cases. A concurrent functional disorder and chronic musculoskeletal condition were, amongst others, significant predictors of FSD. **Conclusion:** Based on our results, FSD diagnosis with a single persistent somatic symptom seems over-inclusive. The diagnostic threshold of two or more symptoms from one or more organ systems allows for a more realistic description of symptom burden in the population. The impact of the diagnosis on quality of life and medical utilization is evident in the data and the fact that FSD allows for somatic and functional comorbidities seems to reflect the actual reality of the sample. The FSD criteria are an important step towards standardizing the diagnosis and treatment of PSS. Future research must evaluate its acceptance by patients, researchers and clinicians from various medical specialities.

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### S03-01-D

#### Climate change anxiety and its association with somatic symptom distress and idiopathic environmental intolerances: a cross-sectional study

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**Background:** Individuals need greater climate change awareness in order to mitigate and adapt to climate changes but this awareness can also lead to negative health outcomes. **Aims:** To explore the associations between climate change anxiety and both idiopathic environmental intolerances and somatic symptom distress, after accounting for modern health worries and symptoms of anxiety and depression. **Methods:** A non-representative sample of healthy volunteers completed a cross-sectional online survey that included the Climate Change Anxiety scale (CCA-13), single questions about idiopathic intolerance to five environmental agents, the Somatic Symptoms scale (SSS-8), the short version of the Modern Health Worries scale (MHW-12), and the Patient Health Questionnaire for symptoms of anxiety and depression (PHQ-4). Participants also reported their gender, age and subjective socioeconomic status. Bivariate analyses investigated associations between variables and path analyses explored potential moderating factors. **Results:** 432 participants completed the questionnaire, 421 of whom were included in analyses (67% women, mean age: 32.7 standard deviation: 12.4). Climate change anxiety, idiopathic environmental intolerances, somatic symptom distress, modern health worries, and symptoms of anxiety and depression were positively correlated in bivariate analyses (Pearson's ranging

from 0.22 to 0.57, all  $p < 0.001$ ). In path analyses, modern health worries ( $R^2 = 15.4\%$ ) partially mediated the relation between climate change anxiety ( $R^2 = 22.3\%$ ) and two correlated outcome variables, idiopathic environmental intolerances ( $R^2 = 37.6\%$ ) and somatic symptom distress ( $R^2 = 34.2\%$ ). **Conclusion:** Climate change anxiety may negatively affect subjective physical health. Stakeholders should aim at promoting climate change awareness while addressing modern health worries to avoid negative health outcomes.

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### S03-01-E

#### Neurophysiological and neuropsychological aspects of persistent somatic symptoms

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**Background:** The biological basis of persistent somatic symptoms is an intriguing topic. Research focused on somatic symptom disorder (SSD) and functional somatic syndromes (FSS) has yielded some findings. Heart rate variability (HRV) and skin conductance (SC) have been applied to investigate the activity of the autonomic nervous system in this group of disorders. **Methods:** A meta-analysis indicated that resting-state HRV (indices predominantly reflecting parasympathetic activity) was significantly lower in SSD/FSS patients compared to healthy individuals, but the effect size was only small to medium. Therefore, in small sample sizes, significant intergroup differences might not be found. Among various FSS, a larger effect size was observed in the HRV difference between fibromyalgia patients and healthy individuals. **Results:** However, these observed resting-state HRV patterns were similar to those found in anxiety disorders and depressive disorders, making it insufficient for effective differentiation between disorders. Even when considering HRV and SC simultaneously, the accurate diagnosis of SSD was comparable to the performance of scales only when individuals comorbid with depression or anxiety were excluded. HRV reactivity could further distinguish SSD patients from healthy individuals. During reading the chronic pain-themed script and performing the emotional Stroop task, there were larger HRV differences between individuals with and without SSD than in the resting state, but this amplification was significant only in women. Results from the emotional Stroop task and other neuropsychological tests indicated that individuals with SSD exhibited weak selective attention and regulating abilities for negative information. **Conclusion:** This suggests a potential functional impairment in brain regions such as the anterior cingulate cortex. In this review, explanations for this series of research findings will be provided.

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### S03-01-F

#### Development of an internet-based guide for individuals with persistent somatic symptoms (GUIDE.PSS): a proof-of-concept study together people with lived experience

*Sebastian Kohlmann*

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**Aims:** Although the duration of untreated illness for persistent somatic symptoms (PSS) ranges around 25 years, there are no evidence-based services to guide patients to guideline-recommended care at an early stage. Using qualitative and experimental research methods, this study aimed to develop an internet-based guide with people with lived experience of PSS. **Methods:** The qualitative and quantitative evaluations included individuals with lived experience of PSS for at least six months. Additionally, a participatory research team, including three individuals with lived experiences, consulted and commented regularly on the research. Initially, a qualitative workshop series was conducted; participants contributed to the content, language, and design of the prototype of GUIDE.PSS. The workshops were recorded, transcribed verbatim, and coded using thematic analysis. Development followed an iterative process with feedback loops to incorporate patient needs. Then, we tested in a randomised within subject study whether the GUIDE.PSS prototype increases the intention to seek further information about PSS. Participants were presented with samples of the GUIDE.PSS prototype and corresponding content from patient information material from the national guideline on functional syndromes. After reading the short text samples, the likelihood of seeking further information on PSS was assessed from 0 (“very low probability”) to 10 (“very high probability”). **Results:** In total, 12 people with lived experience of PSS (8 females, ages 22–66 years, duration of symptoms 1–43 years) participated in four workshops. We derived four content-related themes as relevant for GUIDE.PSS: Social support, self-help, contact addresses and education. The majority of participants (>90%) indicated that their views were heard, their input would be used by the research team and they experienced the collaboration with researchers as worthwhile. The experimental study included 89 individuals with PSS. The intention to seek further information was significantly higher for GUIDE.PSS ( $M=7.32$ ;  $SD=1.73$ ) compared to the existing information material ( $M=5.91$ ;  $SD=2.43$ );  $t(88) = 5.77$ ,  $p < .001$ . **Conclusion:** The final prototype of GUIDE.PSS represents the first internet-based intervention designed by and evaluated with people with lived experience of PSS. Its potential to effectively guide people to evidence-based care for PSS needs further testing.

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## S04-01-A

### Enhanced Cognitive Behavior Therapy

*Shu Takakura*

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This symposium will focus on the implementation and efficacy of Enhanced Cognitive Behavioral Therapy (CBT-E) for eating disorders in Japan. Recognized globally for its effectiveness, CBT-E is a tailored, time-sensitive treatment method. We aim to examine its application in the Japanese healthcare system, assessing treatment results and discussing the unique challenges and potential advancements in its implementation

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## S04-01-B

### Enhanced cognitive behavior therapy (CBT-E): an overview

*Shu Takakura*

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Enhanced cognitive behavior therapy (CBT-E) was originally developed by Fairburn et al. in the UK. This therapy is based on the understanding that eating disorders (EDs) such as anorexia nervosa (AN) and bulimia nervosa (BN) are cognitive disorders that share a common core psychopathology. Consequently, CBT-E is a versatile form of cognitive-behavioral therapy designed to be effective across various ED subtypes. Results from various randomized controlled trials (RCTs) have demonstrated its efficacy in treating both AN and BN, with reports predominantly emerging from groups within European countries. Multicenter RCTs are currently underway in Japan. Additionally, since the fiscal year 2018, CBT-E has been included in the Japanese insurance coverage as a treatment method for BN, and training sessions are currently conducted nationwide. CBT-E is generally conducted on an outpatient basis, spanning 20–40 sessions. Many patients with EDs present with resistance to treatment upon attending the clinic. Thus, a pivotal aspect of the therapy is engaging the patient in the treatment process. To accomplish this, therapists must first empathize with the patients' anxieties, demonstrate an understanding of their current issues, and instill hope for change throughout the course of treatment. To address the perpetuating factors of EDs, a case formulation is developed in collaboration with patients. Patients are encouraged to monitor their eating behaviors at home and to strive toward establishing regular eating patterns. The therapy actively engages with cognitive issues such as the self-evaluation of weight and shape and the excessive value placed on controlling these factors, in accordance with specific modules. The therapy is concluded with measures designed to prevent relapse. Maintaining fidelity to the original methodology is crucial to achieving favorable therapeutic outcomes with CBT-E, which suggests that CBT-E practitioners should have a comprehensive understanding of the structure and techniques of therapy, which is typically gained by [A1] participating in training sessions and receiving supervision. This presentation will provide an overview of the evidence and content of CBT-E.

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## S04-01-C

### Enhanced Cognitive Behavioral Therapy (CBT-E) in Japan: current status and challenges

*Keisuke Kawai*

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In Japan, the billing for Cognitive Behavioral Therapy (CBT) for depression was enabled in 2010, followed by the allowance for billing "Enhanced Cognitive Behavioral Therapy (CBT-E)" for the treatment of bulimia nervosa from 2018. Sessions can be billed at approximately €30 each, up to a maximum of 16 sessions per case. Our analysis of session numbers from the National Database of Health Insurance Claims and Specific Health Checkups database from fiscal year 2014 to 2020 showed a decrease in the annual number of CBT sessions from 44,999 in 2014 to 35,470 in 2020. Time constraints of psychological interview and the low level of reimbursement are presumed to be inhibiting factors. Despite this, the inclusion of insurance has influenced both medical institutions' clinical practices and patients' treatment-seeking behaviors. We have already held 10 training courses with the aim of spreading the use of CBT-E, producing approximately 800 participants. Since 2018, symposiums on CBT-E have become commonplace at national psychiatric and psychosomatic medicine conferences. Concurrently, from the fiscal year 2015, we have been receiving bi-weekly group supervision for one hour from CBT-E developer, Professor Zafra Cooper. Each participant presents 20 times before completion, and while language barriers exist for Japanese therapists receiving supervision in English, it's considered crucial for mastering the therapy. Clinically, setting the target weight cut-off for anorexia nervosa at BMI 18.5 remains a challenge, as Japanese body types are generally leaner compared to Western standards. It is considered more important to reduce the patient's rigidity towards their body image rather than focusing solely on weight gain, and this approach is being flexibly applied. In conclusion: The introduction of CBT-E in Japan has progressed, yet time constraints for psychological interview and the low reimbursement level pose ongoing challenges.

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## S04-01-D

### Current status and issues of CBT-E in the treatment of bulimia nervosa in Japan

*Tetsuya Ando*

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The effectiveness of psychotherapeutic interventions for eating disorders (ED's) is widely studied in Europe, North America, and Australia/New Zealand. However, few controlled studies and no randomized controlled trials (RCTs) have been conducted in Japan despite the relatively high prevalence of ED's in the Japanese population. A multicenter RCT to evaluate the effect of enhanced cognitive behavior therapy (CBT-E) for the treatment of bulimia nervosa (BN) is now underway in Japan. The study protocol and

progress will be introduced. CBT-E for BN patients has been covered by health insurance since 2018 in Japan. However, according to a recent survey, only a few facilities still offer CBT-E for BN. Factors hindering the spread of CBT-E include a lack of therapists, difficulty in following protocols, and low reimbursement, which are issues surrounding CBT in Japan that are not limited to CBT-E or eating disorders. Possible solutions to these problems will be discussed.

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#### S04-01-E

### The current situation in CBT-E in treating anorexia nervosa in Japan.

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In Japan, Enhanced Cognitive Behavioral Therapy (CBT-E) has been introduced and regular workshops on CBT-E for bulimia nervosa (BN) has been conducted for medical doctors by Japanese Society of Psychosomatic Medicine, Japanese Society of Psychosomatic Internal Medicine, and Japan Society for Eating Disorders since CBT-E for BN has been covered by the universal health insurance system in Japan. However, CBT-E for anorexia nervosa (AN) has not been included by the universal health insurance system in Japan yet. Therefore, patients with AN have little chance to receive CBT-E in Japan now. In order to include CBT-E for AN in the universal health insurance system in Japan, evidence about the efficacy of CBT-E for AN has to be provided. Therefore, a randomized controlled trial of CBT-E in patients with AN is now in progress in the Department of Psychosomatic Medicine of Kyushu University Hospital, Department of Psychosomatic Medicine of Kohnodai Hospital National Center for Global Health Medicine, and the Department of Psychosomatic Medicine of The University of Tokyo Hospital. I would like to introduce the protocol and progress of the trial, and discuss problems to be solved for including CBT-E for AN in the universal health insurance system in Japan.

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#### S04-02-A

### Innovations in the treatment of binge eating and obesity

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Binge-eating and obesity have a high impact on quality of life, morbidity, mortality and cause high economic costs. Though several attempts have been made to treat binge-eating and obesity, cognitive-behavioural therapy and weight loss programmes still do not lead to substantial weight loss and yield to remission of binge-eating only in about 50 % of cases. Therefore, the investigation of

innovative and potentially effective treatments regarding treatment of binge-eating and obesity is substantially important. In this symposium, we will give an update of research regarding innovative treatment options, including neuromodulation, virtual reality, emotion-related treatments and investigate potential underlying treatment mechanisms. First, Stephanie Kullmann (Diabetes Research Center, Tübingen) will present data from a network targeted neuromodulation study in a sample with obesity. Then, Sarah Rösch (Psychosomatic Medicine and Psychotherapy, Magdeburg) will present a study regarding an inhibitory control training assisted by neuromodulation in post-bariatric patients. Next, Tatjana Korbanka (Psychosomatic Medicine and Psychotherapy, Tübingen) will present results regarding a virtual reality-supported reflection exercise where individuals with obesity are exposed to a body avatar. Danielle Schewe (Center of Adiposity Diseases, Leipzig) will present results regarding over-valuation of shape and weight and dietary restraint as potential mechanisms of change in a cognitive-behavioral treatment of binge-eating disorder. Lastly, Kathrin Schag (Psychosomatic Medicine and Psychotherapy, Tübingen) will present data from a systematic review and meta-analysis regarding psychotherapeutic treatments focusing on emotions in patients with binge-eating behaviour.

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#### S04-02-B

### Network-targeted brain stimulation improves response inhibition and reduces sweet food consumption in people with overweight or obesity

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**Background:** Poor inhibitory control is involved in the development and maintenance of obesity and neuroimaging studies indicate that a diminished prefrontal cortex activity affects response inhibition. The hypothalamus is the key regulator for energy homeostasis and is functionally connected to prefrontal regions vital for the inhibitory control of appetite. Here, we tested a novel method for network-targeted transcranial direct current stimulation (net-tDCS) to influence the excitability of brain regions involved in the control of appetite. **Methods:** In a randomized and double-blind study approach, 44 subjects with overweight or obesity (36.3 years; BMI 30.6; 21 men) received either active (i.e., excitatory or inhibitory) or sham network targeted stimulation for 25 minutes on three consecutive days. Based on the resting-state

functional connectivity map of the hypothalamus, a 12-channel net-tDCS protocol was generated (Neuroelectronics Starstim system). Response inhibition was assessed using a Stop-Signal Task (SST) during stimulation. After stimulation, participants received a standardized buffet *ad libitum* to measure total caloric intake as well as caloric intake from desserts. **Results:** The stop-signal reaction time of the SST was shorter in the excitatory and inhibitory stimulated group compared to the sham group (excitatory vs. sham: estimates = -0.12, 95% CI [-0.19, -0.04],  $p = 0.004$ ; inhibitory vs. sham: estimates = -0.12, 95% CI [-0.20, -0.04],  $p = 0.005$ ), indicating better response inhibition. There was no significant difference in total calorie intake between the sham and the excitatory or inhibitory stimulation ( $p > 0.05$ ). Calorie intake during buffet averaged 1349 (SD  $\pm$  686) kcal in the sham treatment, 1230 (SD  $\pm$  632) in the excitatory stimulated group and 1440 (SD  $\pm$  797) kcal in the inhibitory stimulated group. Caloric intake of sweet foods was lower in the excitatory stimulated group compared to the sham group (estimates = -8.29, 95% CI [-16.14, - -0.44],  $p = 0.039$ ). No differences were shown between the inhibitory stimulated group and the sham treatment ( $p > 0.05$ ). **Conclusion:** The present results show that active network-targeted brain stimulation to appetite related brain areas can reduce caloric intake from food, particularly those associated with hedonic hunger, and enhance inhibitory control in individuals with overweight or obesity. Whether net-tDCS stimulation influences peripheral metabolism is subject of future research.

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#### S04-02-C

### Enhancing bariatric surgery through an inhibitory control training, electrical brain stimulation and a structured aftercare: study protocol and preliminary results

*Sarah Rösch*<sup>1,2</sup>, *Therese Reinstaller*<sup>3</sup>, *Kathrin Schag*<sup>4,2</sup>, *Katrin E. Giel*<sup>4,2</sup>, *Susanne Vogt*<sup>1</sup>, *Christian Plewnia*<sup>5,2</sup>, *Johann Steiner*<sup>6,2</sup>, *Florian Junne*<sup>1,2</sup>

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**Background:** Bariatric surgery as the standard treatment for morbid obesity yields short- and long-term weight loss and remission of obesity-related physical and mental diseases. However, a significant proportion of patients does not show the desired improvement in quality of life or weight loss or returns to maladaptive eating patterns. This insufficient success was linked to impairments in inhibitory control and hypoactivity in the prefrontal

cortex (PFC). Transcranial direct current stimulation (tDCS) is a promising neuromodulatory treatment to target aberrant PFC activity and obesity-specific neurobiological and neurobehavioral peculiarities, which remain hitherto unaddressed by bariatric surgery and aftercare. The current study firstly aims to evaluate the application of tDCS delivered in conjunction with inhibitory control training and a structured psychosocial and nutritional intervention for patients after sleeve gastrectomy. **Methods:** After an initial assessment 2 weeks prior to sleeve gastrectomy (t-1),  $N = 20$  patients will be randomized to 6 sessions of 2mA verum or sham tDCS over the right DLPFC along with an individualized food-specific inhibitory control training and receive 6 sessions of a structured intervention after the surgery (t0). Primary outcomes quality of life, food-specific impulsivity and eating disorder psychopathology and secondary outcomes general impulsivity and psychopathology, weight trajectory and hormonal markers assessed after the tDCS intervention (3 months after surgery; t1) and after the intervention (1 year after surgery; t2) will be compared to t0 and t-1. Acceptability, feasibility and satisfaction with the intervention will be evaluated. **Results:** Preliminary results will be presented at the conference, informing the debate surrounding tDCS as a brain-based treatment option combined with an inhibitory control training and a structured postoperative intervention to enhance bariatric surgery outcomes. Results will also provide information on the benefits of a postoperative psychosocial and nutritional intervention as a treatment adjunct after bariatric surgery. **Conclusion:** The present design provides a first step towards neuromodulation as additional interventions tailored to the specific needs of patients after bariatric surgery. Results may assist in the optimization of subsequent randomized-controlled postoperative intervention trials in larger samples of patients after bariatric surgery.

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#### S04-02-D

### Reflection of therapy progress in virtual reality for individuals affected by obesity: a pilot study (VR-Reflect)

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**Background:** Obesity is one of the biggest health problems of our time. As such, it is imperative to (further) develop effective interventions for multimodal treatment. During the critical phase of weight maintenance, conscious reflection on the progress already made and progress yet to be achieved can serve as a starting point for improvement. This can be challenging for individuals with obesity, but virtual reality (VR) can be used to promote this reflection. This study is the first to integrate a VR-supported reflection exercise with a psychotherapeutic approach into the therapy process of individuals with obesity. **Methods:** By doing so,  $N=23$  individuals with obesity were presented with an animated avatar of their body size from both first-person and mirror perspectives in

VR. Body avatars are the latest trend in VR research and have already been shown to create new bodily experiences. The body avatar presents the weight at the start of the weight loss programme (baseline weight) and a realistic target weight (minus 10% from baseline weight). Throughout the exercise, participants were asked questions about their general and health-related well-being, daily life, and eating and exercise habits while having this body. Given the proof-of-concept nature of the study, the focus was on feasibility and identifying relevant target criteria. The study found that the VR-based reflection exercise was well-received and feasible. **Results:** However, no short- or medium-term changes in the target variables were identified. This lack of effect may be explained by the participants' multimorbidity, average degree of obesity (III), and pronounced psychological stress. These findings might imply that a higher dosage of VR-supported reflection exercises is appropriate and necessary. Additionally, the sessions should be integrated individually into the weight reduction program, offered early in the therapy process, and accompanied by therapeutic support. The implications of this study's results and limitations are relevant to the iterative user-centered development of VR interventions. **Conclusion:** The study indicates that a VR environment of this nature is generally suitable for individuals with obesity. However, for VR interventions of this type, individual settings and psychoeducation are crucial, and a more precisely adapted design of the body avatar is desirable.

#### S04-02-E

##### Mechanisms of change in cognitive-behavioral therapy for patients with binge-eating disorder

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**Background:** Although cognitive-behavioral therapy (CBT) is the most well-established treatment for binge-eating disorder (BED), the mechanisms of change remain poorly understood. Main targets of CBT for BED are, among others, to decrease overvaluation of shape and weight (OSW) and dietary restraint (DR). The **Research question was:** How do changes in OSW and DR affect subsequent objective binge-eating episodes (OBEs) during CBT

for BED? **Methods:** The analysis included 84 patients (85.71% female,  $M_{age} = 42.55$ ;  $SD = 12.11$ ), with a body mass index (BMI) between 27.3 and 40.0 kg/m<sup>2</sup> ( $M = 34.33$ ;  $SD = 3.95$ ), diagnosed with BED or subsyndromal BED. They received 20 sessions of individual CBT and completed selected items from the Eating Disorder Examination-Questionnaire (EDE-Q) at each session. Within-patient effects of OSW and DR on OBEs were analyzed using dynamic structural equation modeling (DSEM). **Results:** There was a significant decrease in OSW, DR, and OBEs between the first and last therapy session. DSEM revealed significant within-patient cross-lagged effects of OSW, but not DR, on subsequent OBEs. **Conclusion:** The findings suggest that improving OSW leads to a reduction in binge-eating among patients with BED who undergo CBT. Therefore, prioritizing OSW improvement could potentially enhance the efficacy of CBT.

#### S04-02-F

##### Emotion-related treatments in patients with binge-eating episodes – a systematic review and meta-analysis

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**Background:** Negative emotions represent potential triggers for binge-eating (BE) and BE can serve as a dysfunctional emotion regulation (ER) strategy. Therefore, we examined the current state of research with regard to emotion-related treatments (ET) in patients with BE. **Methods:** This systematic review and meta-analysis is registered at PROSPERO (CRD42023361863).

A database search of PubMed, PsychInfo and Cochrane Trials and a manual search were carried out. The eligibility of articles was assessed by two independent reviewers. ET studies in people of all ages with regular BE or “loss of control eating” were included. Changes in BE were the primary outcome, and eating disorder (ED) pathology and emotion-related outcomes were secondary outcomes. Study quality was assessed according to the EPHPP criteria. A meta-analysis was computed regarding the primary outcome and potential influencing factors, i.e. ED diagnosis, treatment type, age, sex and BMI. **Results:** 1086 potentially eligible articles were identified. Finally, 38 articles were included, 31 within the meta-analysis, and 20 were randomized controlled trials. The sample size varied strongly (10–189) with a high proportion of women (mostly >80%). Data quality was rated as weak in 18 studies, moderate in nine studies and as strong in 11 studies. Patients with BE disorder were examined most frequently in 18 studies. Only five studies examined adolescents. Dialectical behavioural therapy was most frequently investigated (16 studies), other treatments mostly included more classical cognitive behavioural interventions or combined approaches. Results from the systematic review and from the meta-analysis show significant reductions of BE after treatment. Additionally, the systematic review indicates superiority compared to waitlist control groups and comparability with active control groups in terms of reduction in BE, ED pathology and ER. The effects appear to be stable at follow-up analyses from one up to 12 months. Potential influencing factors did not influence efficacy of ET. **Conclusion:** Results indicate that ET holds promise in treating BE. ER might represent a potential transdiagnostic mechanism of change. However, due to moderate study quality and mostly adult samples, the results have to be interpreted with caution. Future studies have to reveal in more details which components of ET are responsible for the positive effects on ED symptomatology. Moreover, there is a need for a reliable definition of ET.

#### S04-03-A

##### Treating eating disorders across different illness stages

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**Background:** Eating disorders (ED) frequently go undetected and many people affected enter health care after several years of suffering. Patients often struggle with treatment ambivalence, hence, EDs are often seen as disorders that are challenging to treat. In addition, even after successful treatment, relapse rates are high. All of these aspects might add to often long-standing courses of EDs, limiting the prognosis especially in adult patients. **Aims:** The symposium aims to highlight novel treatment and care concepts implemented in different European countries that tackle illness stages or processes which have been identified as specifically critical in care for EDs: (a) early detection and intervention, (b) treatment for

long-standing illness and (c) post-inpatient care and relapse prevention. In her key note lecture, **Ulrike Schmidt** will outline treatment and care strategies as well as experiences from implementation from her work in the UK to reduce duration of untreated illness for people with EDs. In his talk, **Fernando Fernandez-Aranda** will introduce the initial phase of a novel inpatient program for patients with long-lasting EDs in Catalonia. In the final presentation, **Katrin Giel** gives an update on evidence for treatment approaches in post-inpatient care for anorexia nervosa and presents ongoing work on a psychotherapy for sustained recovery in anorexia nervosa.

#### S04-03-B

##### “Getting it right first time” in the treatment of early stage eating disorders: The FREED service model and care pathway

*Ulrike Schmidt*

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There is a clear rationale and growing research evidence supporting the need for and effectiveness of early intervention for eating disorders. There is also enthusiastic support from people with lived experience, clinicians, researchers and policy-makers alike for the idea. Furthermore, a useful blueprint for early intervention research, policy and practice has been provided by the psychosis field. During the last 10 years we have developed FREED (first episode, rapid early intervention for eating disorders) (FREED) a service model and care pathway providing developmentally tailored and personalised care. We have tested and nationally rolled out this model in the UK. Based on our experience, here I describe the rationale, evidence base, facilitators and barriers to early intervention for eating disorders and will present ideas for what needs to happen to move the field further forward.

#### S04-03-C

##### Long-lasting eating disorders and predictors of poor response: is there anything we can do to help?

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Eating disorders are severe mental disorders with a high mortality rate – suicidality – and a high incidence in adolescence and early adulthood, especially in women. The course of these disorders is uncertain, and treatment outcomes are limited, with successful outcomes in 50-70% of cases. For bulimia nervosa (BN) and

binge-eating disorder (BED), several factors, such as duration of the disorder, eating and general psychopathology, dysfunctional personality traits and cognitive impairment, have been found to be associated with treatment adherence and response. In anorexia nervosa (AN) and atypical ED (OSFED), treatment response is poorer, with higher dropout rates and longer duration and chronicity. In this presentation, we will describe recent prospective observational studies in large samples of EDs analysing clinical, personality and cognitive predictors of treatment response in eating disorders, as well as potential associated neurobiomarkers. Optimization of health care resources and transitions, as well as early and effective personalized treatments, can change the trajectory of EDs. New approaches and models for working with primary care will be discussed in this presentation.

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### S04-03-D

#### **Relapse prevention and post-inpatient care for anorexia nervosa – an update on current evidence and novel treatment approaches**

*Katrin Giel*

Psychosomatic Medicine & Psychotherapy, University Tübingen, Tübingen, Germany

Early relapse after intensive inpatient treatment is one of the main clinical challenges in the management of anorexia nervosa. Hence, specific treatment and care approaches have been developed to address the vulnerable post-inpatient stage and to support bridging between different treatment settings. Recently, we have synthesized available evidence on the efficacy of specialized interventions for post-inpatient care in anorexia nervosa. Approaches cover psychopharmacology, guided self-help and specific psychotherapy, including digital dissemination strategies. While there is up to now no clear evidence for the superiority of a single relapse prevention strategy in post-inpatient care for anorexia nervosa, the talk will give an overview on various approaches and preliminary evidence. Moreover, the design and concept of the ongoing SUSTAIN trial will be presented which probes the efficacy of a novel specialized psychotherapy after inpatient or day patient care for anorexia nervosa delivered via videoconference with the aim to support sustained recovery in seriously ill patients.

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### S05-01-A

#### **Integrative insights: symptoms and treatment response in panic disorder with comorbidities and the effectiveness of a digital app**

*Sun Mi Kim<sup>1</sup>, Hong Jun Jeon<sup>2</sup>, Kristina Fuhr<sup>3</sup>, Doug Hyun Han<sup>1</sup>, Ji Hyun Ha<sup>2</sup>, Joel Dimsdale<sup>4</sup>*

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Panic disorder frequently co-occurs with various psychiatric and medical conditions, with an estimated 91% of individuals diagnosed with panic disorder also experiencing another psychiatric disorder, most commonly agoraphobia. Although agoraphobia often arises as a consequence of panic disorder, it can also manifest independently of panic attacks. Additionally, other comorbid psychiatric disorders include major depressive disorder, social anxiety disorder, post-traumatic stress disorder, obsessive-compulsive disorder, illness anxiety disorder, personality disorders, and substance-related disorders. Unique among anxiety disorders, panic disorder primarily manifests through physical symptoms, emphasizing its potential comorbidity with diverse medical conditions. Particularly, individuals with panic disorder are prone to encountering various medical issues spanning cardiovascular, respiratory, gastrointestinal, and other physiological domains over their lifetime. This symposium aims to delve into the intricate connections between panic disorder and its comorbid psychiatric and physical illnesses. Specifically, it seeks to identify shared pathophysiologic mechanisms between panic disorder and comorbid disorders, elucidating their symptomatic characteristics. Furthermore, the symposium will offer a comprehensive review of research findings concerning treatment response in panic disorder concurrent with various medical conditions. A thorough comprehension of interventions for panic disorder and associated medical problems, along with their outcomes, is crucial for refining treatment approaches and enhancing patient outcomes. Moreover, the discussion will extend to modern mental health interventions, with a focus on the emerging role of digital applications in managing panic disorder. Exploring the impact of these digital tools on clinical symptoms and investigating the correlation between changes in clinical symptoms and activity in specific brain regions will be key topics. Ultimately, this symposium represents a multidimensional exploration aimed at deepening understanding of the intricate relationship between panic disorder and psychiatric and medical comorbidities. It also aims to shed light on novel approaches for integrated treatment strategies and advancements in mental health care.



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### S05-01-B

#### Understanding panic disorder: A physiological reaction to stress in the context of comorbidity and psychological profiles

*Hong Jun Jeon*

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**Background:** Panic disorder (PD) is a multifaceted condition characterized by intense episodes of fear and physical symptoms that can arise unexpectedly. This presentation explores the intricacies of PD, particularly its high comorbidity rate with other mental disorders, which is frequently overlooked in clinical settings. It will discuss PD as a potential window into the fundamental causes of such disorders, providing unique insights into underlying psychopathological processes. This talk will consider the role of PD as a possible general stress reaction, similar to other psychosomatic illnesses. By exploring this perspective, the presentation aims to foster a broader understanding of PD and suggest a more cohesive approach to patient care. **Aims:** The goal is to initiate a dialogue about the complexities of PD and encourage consideration of how stress reactions may influence its management, aiming to enhance the therapeutic approaches used in treating this disorder.

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### S05-01-C

#### Hypnotherapy compared to a wait-list control group as treatment for agoraphobia – efficacy, safety and feasibility investigated in a pilot study

*Kristina Fuhr*

Department of Psychiatry and Psychotherapy, University Hospital Tuebingen, Tuebingen, Germany

**Background:** This talk will present the results of a pilot study of the efficacy of a novel manualized hypnotherapy (HT) for the treatment of agoraphobia. The treatment combines traditional elements of hypnosis such as formal trance induction, metaphors, ideomotor signals, the safe place, activation of personal resources and new elements such as a hypnotic symptom regression technique to reframe autobiographically challenging situations associated with the anxiety symptoms similar to imagery rescripting. HT also included psychoeducation about hypnosis and agoraphobia using a psychophysiological model and was embedded in a cognitive-behavioral framework. In vivo exposure was not used. The aim of this randomized controlled trial was to investigate whether HT is superior to a wait-list control group (WL) in reducing agoraphobic symptoms. Other aims were to report on feasibility, completion rates, and satisfaction with treatment. **Methods:** A total of 36 patients with agoraphobia were randomized to either HT or WL. Patients in HT received immediate individual outpatient treatment with hypnotherapy for three months, including 8 to 12 sessions. Patients in WL received HT after a three-month waiting period. **Results:** As expected, HT was superior to WL in the symptom reduction based on a clinician-rating, but only in the intention-to-treat sample, not in the per-protocol sample. The dropout

rate was low and satisfaction with the treatment was high. **Conclusion:** This is the first study to show that hypnotherapy was superior to a wait-list control group in reducing of the agoraphobic symptoms in an RCT. Future studies should compare HT with a standard treatment, including in vivo exposure in a larger trial.

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### S05-01-D

#### Treatment response in panic disorder comorbid with medical conditions

*Sun Mi Kim*

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**Background:** Panic disorder is a costly mental health condition that leads to the highest number of healthcare visits among anxiety disorders. Individuals with panic disorder experience a significantly higher incidence of cardiovascular, respiratory, gastrointestinal, and other medical issues compared to the general population. Recent studies have shown that the prevalence of physical symptoms or physical comorbidity associated with panic disorder varies based on racial and ethnic characteristics. Extensive research also explores the connection between panic disorder and other comorbid physical conditions, as well as the reciprocal impact of anxiety disorders on other conditions. The association between panic disorder and physical illness, and the risk of exacerbating each other's symptoms, has been well-established, potentially influencing treatment outcomes for panic disorder. **Aims:** This presentation will review and discuss research findings regarding the impact of comorbidity with physical illness on the burden of panic disorder, treatment options, and particularly patient outcomes. A comprehensive understanding of interventions for panic disorder and related medical conditions, along with their outcomes, is crucial for improving treatment strategies and optimizing patient outcomes.

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### S05-01-E

#### Effects of digital apps and neurobiological changes in panic disorder

*Doug Hyun Han*

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**Background:** Panic disorder is a common and important disease in clinical practice. It causes a reduction in individual productivity and an increase in health care use. It can be treated with several medications and cognitive behavioral therapy. However, because of adverse medication effects and poor treatment compliance, new therapeutic modules will be needed. We hypothesized that digital therapy for panic disorder may improve panic disorder symptoms. Treatment response would be associated with changes in brain activities assessed via functional near-infrared spectroscopy (fNIRS). **Methods:** A cohort of individuals (n=50) with a history

of panic attacks were recruited. Symptoms were assessed before and after the application of Restee<sup>®</sup>, which is a smartphone-based program for treating the clinical symptoms of panic disorder, panic symptoms, depressive symptoms, and anxiety were assessed. The hemodynamics in the frontal cortex during the resting state were measured via fNIRS. Restee<sup>®</sup> consists of four categories: diary, education, quest, and serious games. **Results:** The number (n=20, 80%) of participants with improved panic symptoms in the Restee group was greater than that in the control group (n=6, 28.6%;  $\chi^2 = 12.3, p < 0.01$ ). During the treatment, the improvement in the panic disorder severity scale (PDSS) scores in the Restee group was greater than that in the control group (F=7.03, p=0.01). In the Restee group, 42.5% of the PDSS score (14.3±6.5 at baseline and 7.2±3.6 after intervention) improved, whereas 14.6% of the PDSS score (12.4±5.2 at baseline and 9.8±7.9 after intervention) improved in the control group. During the treatment, the reduction in accHbO<sub>2</sub> within the right VLPFC (F=8.22, p=0.006) and the right OFC (F=8.88, p=0.005) was greater in the Restee group than in the control group. In the Restee group, changes in PDSS scores and accHbO<sub>2</sub> in the right VLPFC were positively correlated (r=0.42, p=0.04). **Conclusion:** Restee<sup>®</sup> would effectively reduce the symptoms and brain activities in the ventrolateral prefrontal and orbitofrontal cortices of patients with panic disorder. The improvement of panic disorder symptoms was positively correlated with decreased brain activities in ventrolateral prefrontal and orbitofrontal cortices at the resting state.

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### S06-01-A

#### Diagnosis and treatment of mood disorders in China: techniques and practice

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**Background:** Depression and anxiety are most common in psychosomatic diseases, and are accompanied or co-morbid with many neurological disorders such as stroke, Alzheimer's disease, etc. Despite extensive researches, the diagnosis and treatment of the above mood disorders still face significant difficulties. Researchers have found that cultural background plays an important role in the cause of psychosomatic diseases. In recent years, we develop balance psychotherapy(BPT) based on traditional Chinese culture. Thus, to treat patients with psychosomatic diseases more effectively, we have done a lot of work on the epidemiology of mood disorders, from the perspective of brain imaging to explore its pathogenesis, and the application of BPT in the Chinese population to explore the preliminary effect. **Articulation of the symposium:** China's traditional cultural system has a long history, with independence and integrity, which has an influence on the Chinese people profoundly. Prof. Zhi Xu applied balance psychotherapy(BPT) which is a psychotherapy based on traditional Chinese culture on the patients with major depressive disorder

(MDD). BPT emphasis on balance and harmony, suggests that culturally adapted therapies can improve engagement and efficacy in psychosomatic disease interventions. Mood disorders in neurological diseases make the diagnosis and treatment of the disease more difficult, can induce or aggravate neurological diseases, significantly affect the prognosis, seriously reduce the quality of life of patients, and significantly increase the social burden of the disease. Prof. Wenjing Jiang discuss the epidemiology and mechanism of mood disorders that are commonly associated with neurological diseases. Also, will talk about the diagnosis and treatment of various neurological diseases such as stroke and neurodegenerative diseases. This will help doctors to better understand, diagnose and treat mood disorders associated with neurological diseases, leading to improved patient care. Dr. Xiaoyun Liu studied on depression, a serious and common psychosomatic disease, and focused not only on static brain function but also on dynamic brain function from the perspective of brain function impairment. The results showed that the combination of dynamic and static indicators can better predict the occurrence of depression than either dynamic or static brain function only.

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### S06-01-B

#### Diagnosis and treatment of mood disorders happened in neurological diseases in China

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**Background:** Neurologic disorders are common and frequent, with high rates of disability and mortality, and are a major threat to human health. Mood disorders, also referred to as affective disorders, are a group of psychiatric conditions characterized by emotional disturbances as their primary feature. These disorders encompass a broad range of mental health conditions, such as depressive disorders, anxiety disorders, and bidirectional disorders. Many neurological disorders such as stroke, Alzheimer's disease, vascular dementia, Parkinson's disease, multiple sclerosis, epilepsy, etc. are accompanied or co-morbid with mood disorders such as anxiety and depression. A study in China showed that the prevalence of depression and anxiety symptoms among stroke, PD, and epilepsy patients hospitalized in urban hospitals was 19.5%, 24.1%, and 21.9%, respectively. Mood disorders in neurological diseases make the diagnosis and treatment of the disease more difficult, can induce or aggravate neurological diseases, significantly affect the prognosis, seriously reduce the quality of life of patients, and significantly increase the social burden of the disease. **Conclusion:** Let's discuss the epidemiology and mechanism of mood disorders that are commonly associated with neurological diseases. We will also talk about the diagnosis and treatment of various neurological diseases such as stroke and neurodegenerative diseases. This will help doctors to better understand, diagnose and treat mood disorders associated with neurological diseases, leading to improved patient care.

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## S06-01-C

### Default mode network static-dynamic functional signatures in first-episode drug-naive major depressive disorder

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Default mode network (DMN) is most closely related to major depressive disorder (MDD). In recent years, the previously neglected brain dynamic function has been analyzed. It is a powerful complement to static functional changes in the pathogenesis of neuropsychiatric diseases. To elucidate the pathogenesis of MDD, we focused on the dynamic functions of DMN and the synergistic effect with static functions. 47 patients with first-episode drug-naive MDD (FEND) and 64 healthy controls (HCs) were recruited in current study, we also collected 49 patients with recurrent MDD (rMDD) as disease controls. DPAS software was used to calculate DMN the common used indicator of dynamic functional connectivity (dFC), the temporal variability (TV) and the static functional connectivity (sFC). The results showed that comparing with the HC group, the TV of dMPPFC in FEND are significantly increased ( $P=0.037$ , corrected with Bonferroni correction), while no difference was found between rMDD and HCs. The DMN FCs are generally decreased in FEND comparing with HC. The static-dynamic functional characteristics that differ between disease and HC groups were regarded as predictors to forecast the symptoms by receiver operating characteristics (ROC) curve. The ROC analyses demonstrate that the combination of dynamic and static functions is more accurate (78.5%) than either dynamic (62.8%) or static indicator (77.0%) alone. The results present new evidence that the altered dynamic DMN function can provide distinct complementary effect for static brain function on the physiological mechanisms of MDD.

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## S06-01-D

### The application of balance psychotherapy based on Chinese traditional culture on patients with major depressive disorder: a randomized controlled trial

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**Background:** Depressive symptoms are common in psychosomatic diseases. Cultural background plays an important role in the cause of psychosomatic diseases. China's traditional cultural system has a long history, with independence and integrity, which has an influence on the Chinese people profoundly. To treat patients with psychosomatic diseases more effectively, we develop balance psychotherapy(BPT) based on traditional Chinese culture. The ideological basis of balance psychotherapy is the balance theory of Eastern philosophy, which emphasizes the mastery of "degree" and

the coordination of "relationship". Balance psychotherapy will be applied on the patients with major depressive Disorder (MDD). **Methods:** A randomized controlled trial was conducted with 60 participants diagnosed with MDD, divided into a treatment group receiving conventional medication plus group BPT and a control group receiving conventional medication with psychological lectures. Assessments were made using GAD-7, PHQ-9, PSSS and DJGLS scales at baseline and after 8 weeks. **Results:** After eight weeks of treatment, patients with depressive disorder showed significant changes in emotional experience in the combined treatment group (conventional medication + balanced psychotherapy) and significant differences in the reduction rate of PHQ-9 and GAD-7 compared with the control group treated with conventional medication alone. In addition, compared with the conventional medication treatment group, Patients who received the combination therapy were better able to adjust their cognitive structure and improve their understanding of social support and loneliness. **Conclusion:** BPT significantly enhances outcomes for patients with MDD when combined with conventional treatments. Its emphasis on balance and harmony, suggests that culturally adapted therapies can improve engagement and efficacy in psychosomatic disease interventions.

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## S07-01-A

### Innovative psychotherapeutic care approaches in psycho-oncology

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Psycho-oncological interventions should be adapted to the different needs of the heterogeneous patient group and the respective course of the disease. Therefore, it is important that a wide range of psycho-oncological services as well as a screening of the subjective needs are available to enable personalized and adaptive disease management for those affected. The symposium aims to provide an insight into the personalized screening process and various treatment options offered by the psycho-oncology section at the University Hospital of Tübingen. First, an overview of a need-oriented psycho-oncological screening (Schäffeler) process will be given. Further, an eHealth intervention with a focus on mindfulness and skills-based training (Graf) and innovative mindfulness training with virtual reality (Hofinga) will be presented. In addition, three group concepts for different needs during the course of the illness will be presented. An interpersonal group therapy (Laing), which focuses on the course of depressive illnesses and thus on conflicts during oncological treatment, will be presented. Finally, an insight is given into a specially developed group program for cancer survivors (Bach).

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## S07-01-B

### Can psycho-oncological distress screening contribute to patients' informed decisions regarding psycho-oncological treatment?

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The national S3 guideline on psycho-oncology calls for the assessment of distress in all patients with cancer in routine clinical practice. Accordingly, a screening quota was defined for the certification of organ cancer centers in Germany. In particular, the guideline discusses the selection of the most appropriate screening instrument and evaluates existing instruments with regard to quality criteria and suitability. If patients express a subjective need, initial psycho-oncological contact should always be made. In the logic of the treatment pathway, the subjective need therefore takes precedence over the assessment of distress in screening instruments. Nevertheless, little attention has been paid to its assessment in both the recommendations and the studies to date. In our studies, we were able to show that the precise formulation for assessing subjective need produces a clear difference in the positive response rate. With the further development of the static screening "ePOS-react", we were also able to gain initial experience in computer-based interactive distress diagnostics and steering psychooncological pathways.

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## S07-01-C

### A web-based mindfulness and skills training for oncological patients

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Many patients with cancer are heavily burdened. However, due to various barriers, only a few receive psycho-oncological and needs-based support. eHealth approaches can help those affected to overcome this barrier and provide support in dealing with disease-related stress. The Make It Training (Mindfulness- and Skills-Based Distress Reduction in Oncology) is a web-based and self-guided (without treatment contacts) intervention that is based on methods of cognitive behavioral therapy, acceptance and commitment therapy (ACT) and mindfulness theory. The Make It Training consists of 16 modules (8 main and 8 additional modules) on illness-related topics. The modules contain various interactive exercises, expert videos psychoeducational exercises/videos and audios. With the help of gamification and notifications, the aim is to promote patient adherence. This presentation will illustrate the content and approach of the Make It Training and show how it is a valuable addition to psycho-oncological care.

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## S07-01-D

### Virtual reality-supported mindfulness training in psycho-oncological care. State of research and practical implications - a scoping review.

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**Background:** Mindfulness-based approaches are increasingly used in psycho-oncology and have been shown to improve quality of life and reduce anxiety, depression and fatigue. Virtual reality (VR) is an innovative technology that enables immersive and interactive experiences in a three-dimensional environment. Recent studies suggest that the combination of mindfulness and VR could lead to better outcomes than traditional mindfulness interventions. While some VR-based mindfulness training for non-clinical as well as clinical populations already exists, interventions specifically designed for oncology patients are rare to date. The aim of this review is to obtain an overview of the current state of research on VR-based mindfulness training for people with cancer, to identify research gaps and to derive practical implications from VR-based mindfulness training for other clinical patient groups to be used for the design of training specifically for oncology patients. **Methods:** For the review, a systematic literature search will be conducted in the PubMed, PsycNet, PubPsych and Cochrane Library databases. Studies that include VR-supported mindfulness training specifically for oncology patients as well as for patients with physical and mental illnesses will be included. The studies were conducted in accordance with the PRISMA guidelines for scoping reviews (PRISMA-ScR) and screened by two independent reviewers. **Results and conclusion:** The reviewed studies will be presented at the congress and possible implications for the development of a VR-based mindfulness intervention for people with cancer will be presented and discussed.

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## S07-01-E

### Development and evaluation of an interpersonal psychotherapy group program for patients with cancer and comorbid depression: a study protocol

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**Background:** Cancer patients experience significant psychosocial distress associated with cancer diagnosis, treatment, and subsequent life changes. Comorbid depression and anxiety affect a sizeable subset of cancer patients. Psychosocial stressors include interpersonal difficulties such as loneliness, isolation, thwarted belongingness, communication impediments, and conflicts with relatives and the medical team. Interpersonal psychotherapy (IPT) is a highly promising concept for the treatment of depression in cancer patients because it addresses relevant interactions and role transformations within the patients' social network. Previous studies have shown that IPT can be adapted to the

oncology setting and yields benefits for female patients with breast cancer and comorbid depression. The aim of the study is to develop, manualize and evaluate an IPT group program for patients of all cancer sites with a comorbid diagnosis of depression. **Methods:** Participants will be recruited in oncological facilities of the University Hospital Tübingen, Germany (UKT). Patients must be of age, experience significant distress related to their cancer diagnosis or treatment, and must give informed consent. Stage one of the study will be a longitudinal quantitative assessment of interpersonal distress in depressed cancer patients including measures of quality of life, distress, symptoms of anxiety and depression, loneliness, perceived social support, perceived burdensomeness, and thwarted belongingness. Stage two of the study will be the development and subsequent implementation and evaluation of a structured IPT group program addressing the interpersonal needs as quantified in the survey of stage one. Results of the program evaluation will be compared to results of the longitudinal assessment of stage one to provide a treatment-as-usual control condition. **Conclusion:** To our knowledge, this is the first German trial of IPT in cancer and the first trial worldwide of group IPT in cancer. It is also unique and highly relevant for clinical practice in providing IPT treatment to groups of patients of different cancer sites. If successful, the new intervention will aid in ameliorating psychosocial distress and psychiatric comorbidity in patients with cancer.

### S07-01-F

#### The development and evaluation of a hybrid cancer survivor program

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**Background:** People with cancer often experience a state of emergency after treatment. It has been shown, that more than 10 years after treatment, former cancer patients report an elevated level of distress compared to the standard population. A variety of psychological group programs can be helpful to prevent development of clinical levels of psychological symptoms. So far, most group programs have focused on either one psychological topic (e.g., fear of recurrence) or included more than six therapy sessions. These designs limit survivor inclusivity and could be too intense of a time commitment. We designed a group program to include a broader scope of topics and to limit the number of sessions to six. Our design provides greater access to survivors with variable topics and enables them to complete the entire program. **Methods:** We contacted people who received treatment or were diagnosed with cancer at least one year prior. The program consisted of six sessions. The first and last sessions were one-on-one video calls with each participant. The four sessions in between were in-person group sessions with up to six participants. Online questionnaires were filled out at the following time points: after the first video call and before the first group session (T0), after the last video call (T1), and three months after finishing the program (T2). The questionnaires included the distress thermometer (DT), Hornheider Screening

Instrument (HSI), and several others. The primary readout is the change in distress as measured by DT and HSI. The secondary readout is the subjective experience of change after the program, measured by a set of custom evaluation questions. **Results and conclusion:** The results of the study will be analyzed over the next months and presented in detail during the conference.

### S07-02-A

#### Evaluating a web-based mindfulness and skills training for oncological patients – the REDUCT trial

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Many patients with cancer experience significant psychological distress. However, as a result of various barriers, few of them receive psycho-oncological support. E-mental health interventions try to overcome some of these barriers and have the potential to help patients with cancer better cope with psychological distress. The currently ongoing REDUCT trial is aimed at assessing the efficacy and cost-effectiveness of the e-mental health intervention Make It Training- Mindfulness-Based and Skills-Based Distress Reduction in Oncology. On this year's ICPM we would like to give an insight into the trial and the reception of the intervention to this date. The REDUCT Trial is registered at the German Clinical Trials Register (DRKS-ID: DRKS00025213). It is funded by the German Ministry of Education and Research.

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## S07-02-B

### Web-based mindfulness and skills-based distress reduction for patients with cancer: study protocol of the multicentre, randomised, controlled confirmatory intervention trial REDUCT

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**Background:** The REDUCT trial comprises a multicentre, prospective, randomised controlled confirmatory interventional trial with two parallel arms: Make It vs Treatment-as-usual-optimized. The trial involves four measurement time points: the baseline assessment (T0), a post-treatment assessment (T1) and a 3- and 6-month follow-up assessment (T2 and T3). Patients are included if (1) they have received a cancer diagnosis in the past 12 months, (2) are in a curative treatment setting, (3) 18–65 years old, (4) have given informed consent and (5) experience high perceived psychological distress (Hospital Anxiety and Depression Scale  $\geq 13$ ) for at least 1 week. The primary endpoint constitutes distress at T1. We expect the Make It Training to be superior to treatment as usual optimised (TAU-O) in terms of reducing psychological distress after completing the intervention (WT1, primary endpoint). **Aims:** The aim is to allocate 600 patients with cancer and include 556 into the intention to treat analysis. **Methods:** The primary endpoint, distress, will be analysed using a baseline-adjusted ANCOVA for distress measurement once the intervention (T1) has been completed, with study arm as a binary factor, baseline as continuous measurement and study centre as an additional categorical covariate.

## S07-02-C

### Developing a patient-centered e-mental health intervention in psycho-oncology – intervention protocol of the Make It Training optimized

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In this contribution, the process and results of developing the patient-oriented intervention Make It Training optimized is described. The web-based Training was developed by a multidisciplinary team in six steps: A patient need and demand assessment, development and acceptability analysis of a prototype, the formation of a patient advisory council, the revision of the training, the implementation into a web app, and the development of a motivation and evaluation plan. The development was furthermore informed by an exchange with patient representatives. The optimized version of the training consists of 16 self-guided modules, which can be completed by patients over the course of 16 weeks. The modules are based on cognitive behavioral therapy integrated with Acceptance and Commitment Therapy (ACT) and mindfulness-based stress reduction (MBSR). Intervention protocols can increase transparency and increase the likelihood of developing effective web-based interventions. Future research should focus on the further personalization of web-based psycho-oncological interventions and the potential benefits of combining multiple psychotherapeutic approaches.

## S07-02-D

### Developing patient centered e-mental health applications in psycho-oncology – an exploration of benefits and barriers of digital patient involvement in the REDUCT Trial

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This study examines digital collaboration between patient representatives' and researchers in psycho-oncological research, focusing on the perspectives of patient representatives. The study involved expert interviews with all five patient representatives from the Reduct study. With the central research question aimed at qualitatively analyzing their experiences, the study explores the benefits and challenges perceived by the patient representatives. Several benefits of digital collaboration are highlighted, including

a significant reduction in travel costs and effort, reduced health burden, personal acceptance and preference for digital methods, enhanced flexibility and accessibility, and increased efficiency and scalability. On the other hand, challenges such as technical barriers and concerns about the quality and security of communication as well as social impacts due to less face-to-face interaction and socioeconomic barriers and cognitive demands are also evident. To optimize digital collaboration a series of strategic recommendations have been identified. These recommendations range from maintaining consistent communication and utilizing multiple channels to providing targeted training and support to patient advocates. In essence, this study not only answers the research question by shedding light on the perceptions of patient advocates, but also provides valuable insight into the intricacies of digital collaboration in psycho-oncology research. By shedding light on both the benefits and challenges, it paves the way for improving patient-centered approaches in the digital age.

### S07-02-E

#### Utilization of a web-based psycho-oncological intervention: which patients make use of the Make-it-Training? – preliminary data

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**Background:** Despite facing psychosocial issues and emotional distress, many cancer patients lack sufficient psycho-oncological support. This study investigates the accessibility of an e-mental health intervention (The Make-it Training), for cancer patients in need of psycho-oncological support. **Methods:** To assess the reach of the Make it Training, we descriptively displayed sociodemographic, psychosocial, and medical data of participants at baseline (T0). We further analyzed subgroups, comparing age, gender, and disease type of participants for distress, depression, and anxiety symptoms. **Results:** Out of a total of 468 patients eligible for study participation after screening, 429 (91.67%) filled the baseline questionnaire and were randomized for the Reduct Trial. Participants had a mean age of 49.56 years and the majority (346, 73.9%) were female. App. one quarter (95, 22.2%) of all patients was living in a village (<5.000 inhabitants). Nearly half of the patients (187, 43.6%) had breast cancer. The distress thermometer showed a mean of 6.76 (1.86, range: 1-10), while 199 (46.7%) and 207 (48.8%) had clinically significant depressive and anxiety symptoms, respectively. Most of the participants were frequent users of technologies: 146 (57.6%), 159 (36.3%) and 414 (96.9%) used their PC/laptop, tablet and smartphone on a daily basis, respectively. Female and male patients did not differ significantly in depressive ( $p=.294$ ) and anxiety symptoms ( $p=.231$ ). However, female patients reported more fatigue than male patients ( $p=.026$ ). Younger patients reported better handling ( $r=-.256$ ,  $p<.001$ ) and openness ( $r=-.199$ ,  $p<.001$ ) for digital media than older patients. **Discussion:** The

Make-it Training seems to reach a broad range of cancer patients of different ages, foremost female breast cancer patients and technically affine patients, regardless of their place of residence, including underserved areas lacking psycho-oncological services, making it a low-threshold intervention in psycho-oncological care.

### S07-02-F

#### Made it-evaluation of the e-Mental health intervention Make It Training from patients' perspectives: qualitative analysis within the REDUCT trial

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**Background:** The Make It Training was designed to accompany patients with cancer and equip them with skills to regulate their psychological distress and disease-related coping strategies. This qualitative study evaluated the perceived usefulness and usability of the Make It Training. **Methods:** Semi-structured interviews were conducted with participants at different cancer stages and with different cancer entities. All participants had previously completed the Make It Training within the Reduct Trial. The data were coded deductively and independently by two researchers and analyzed iteratively using thematic codebook analysis. **Results:** The analysis of the perceived usefulness resulted in four themes: developing coping strategies to reduce psychological distress, improvement in quality of life, Make It Training vs traditional psychotherapy, and integration into daily life. Eleven subthemes were identified. The analysis of the experienced usability resulted in three themes: efficiency and accessibility, user-friendliness, and recommendations to design the Make It Training intervention to be more appealing. There were six subthemes. The Make It Training was evaluated as a user-friendly intervention. It was perceived as helpful for developing functional coping strategies and to reduce psychological distress and improve quality of life. The consensus regarding the Make It Training was that it was described as a daily companion that integrates well into daily life. **Conclusion:** e-Mental health interventions such as the Make It Training can help prevent mental health issues and reduce mental distress. It has the potential to be routinely implemented within oncological health care, either as a stand-alone intervention or in addition to psychotherapy.

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## S08-01-A

### Research on multidisciplinary approaches to post-COVID-19 syndrome: insights into physical and mental post-COVID-19 symptoms, initial explanatory models and the use and effectiveness of currently available treatment options for post-COVID-19 syndrome

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Post-COVID syndrome is a specific form of post-viral fatigue, but in its intensity and progression it exceeds the symptoms typically seen in other post-viral illnesses, such as Ebbstein-Barr virus infection. In addition to common manifestations such as dyspnoea, fatigue and cognitive impairment, a subgroup of post-COVID patients also suffer from mental health problems such as anxiety, depression and symptoms suggestive of PTSD. To date, there is no clear underlying causal pathogenesis and no biomarker for diagnosis, so symptomatic treatment is the main approach. This symposium aims to provide a comprehensive insight into the physical and psychological manifestations of post-COVID-19 syndrome, exploring initial findings on perpetuating factors in post-COVID fatigue and available treatment options, with a particular focus on psychotherapeutic interventions in inpatient psychosomatic treatment and the effects of rehabilitation. Prof. Erim's research group will open the symposium and present a detailed analysis of neurocognitive impairment in 110 post-COVID-19 patients treated at the Post-COVID Centre of the University Hospital Erlangen, examining neuropsychological profiles, mental health status and risk factors for cognitive impairment. Subsequently, the research group of Prof. Volker Köllner from Berlin will present a first explanatory model for the maintenance of post-COVID fatigue, investigating the influence of cognitive-behavioral responses on post-COVID fatigue in patients. For a holistic view of post-COVID-19 syndrome, results on the effectiveness of rehabilitation for physical symptoms, especially cardiopulmonary performance impairments, will be discussed by Prof. Sütfels. In addition, a study conducted by Prof. Erim's research group will be presented, looking at the use and patient-reported symptom improvement associated with different treatments for Post-COVID syndrome. Finally, a non-randomised controlled trial evaluating the efficacy of a five-week inpatient psychosomatic treatment programme for individuals with post-COVID-19 syndrome and comorbid psychological disorders, conducted at the University Hospital Erlangen will be presented. By attending this symposium, participants will gain valuable insights into the latest advances in the diagnosis and treatment of post-COVID syndrome, with a focus on multidisciplinary approaches, promoting interdisciplinary collaboration and enhancing clinical psychotherapeutic practice across diverse contexts.

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## S08-01-B

### A cross-sectional study on cognitive impairments in post-COVID-19 patients and mental health

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**Background:** Persistent cognitive impairments belong to the most frequent symptoms after COVID-19. The aim of the study was to examine the cognitive impairments and risk factors for these in post-COVID-19 patients. **Methods:** Between December 2022 and May 2023 110 patients were recruited consecutively in the Post COVID Center of the University Hospital of Erlangen. They underwent an extensive neuropsychological assessment, which involved a battery of tests including the Verbal Learning Memory Test (VLMT), the digit span backwards from the Wechsler Memory Scale-Revised (WMS-R), the Trail Making Test (TMT) Part A and B, the d2 Test of Attention and the Regensburger Verbal Fluency Test (RWT). For each cognitive domain, the frequency of age-adjusted scores below the measure-specific norms was calculated. In addition, depressive symptoms were evaluated using the Patient-Health-Questionnaire-9 (PHQ-9). **Results:** The 110 patients had a mean age of 42.5 years ( $\pm 11.9$  years) and 68.2% were women. The most frequent cognitive impairments were observed for verbal fluency, working speed, delayed recall and attention. Higher educational attainment correlated with reduced risk of cognitive impairment across nearly all cognitive domains, while advanced age posed a risk for processing speed and delayed recall but acted protectively for verbal fluency. Clinically relevant depressive symptoms were linked to heightened risk of impairment in certain cognitive functions. **Conclusion:** Cognitive impairments were common among the post-COVID-19 patients, emphasizing the need for a nuanced investigation to accurately define the post-COVID-19 syndrome. Future studies should correlate cognitive impairment parameters with changes in biological markers of the disease, such as immunological and microcirculatory alterations, to further understand its pathogenesis.



## S08-01-C

### The anxious avoider or the cheerful endurer? Do dysfunctional patterns of avoidance and endurance play a role in the maintenance of post-COVID fatigue?

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**Background:** After a SARS-CoV-2 infection, around 10 percent of patients develop post-COVID symptoms, with fatigue occurring in around 30% of cases and leading to a significant reduction in quality of life and a high level of sick leave. One factor that can contribute to the maintenance of symptoms is the response to the illness on a cognitive-behavioral level. This exploratory observational study investigates the hypothesis that post-COVID fatigue patients sustain symptoms through maladaptive fear-avoidance or endurance strategies, leaning on the concepts outlined in the Avoidance-Endurance Model (Hasenbring, 1993). **Methods:** The sample comprised 97 patients with post-COVID fatigue from a rehabilitation center. Self-questionnaires were used to assess level of fatigue (FSMC), avoidance endurance behavior (AEQ) and a range of psychological, physiological and work-related variables. **Results:** Patients could be categorized into three reaction patterns: fear-avoidance (29%), distress-endurance (67%), eustress-endurance (3%). None showed an adaptive (healthy) pattern. The fear-avoidance response pattern was able to significantly explain variance in the expression of fatigue ( $F(3, 88) = 17.072$ ,  $p < .001$ ;  $R^2 = .368$ ). Correlations were also observed with depression, anxiety, and reduced resilience. Avoidance of physical activity was associated with increased sick leave. **Conclusion:** The results support the assumption that maladaptive coping patterns contribute to the chronification of post-COVID symptoms. Implementing a screening test to identify these patterns could enable more targeted and individualized treatment.

## S08-01-D

### PoCoRe-Study: cardiopulmonary performance in post-Covid-syndrome and effects of rehabilitation

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**Background:** Post-Covid syndrome (PCS) is associated with various physical symptoms and reduced cardiopulmonary performance. This can be seen in motor fatigue, reduced performance in the six-minute walk test (6MWT), in lung function (LF) and in blood gas analyses (BGA) before, during and after moderate aerobic exercise. Our study investigated the efficacy of rehabilitation in PCS patients on these issues. In one rehabilitation center, we specifically investigated deconditioning (indicated by an early increase in lactate during exercise) and dysfunctional breathing (DB) (indicated by respiratory alkalosis and an increase in pO<sub>2</sub> during exercise) in PCS as possible significant factors for the performance impairment. **Methods:** PCS patients admitted to an inpatient rehabilitation were included in this prospective, observational cohort study. Several measures of exercise performance, respiratory parameters and questionnaires were assessed on admission and at discharge of rehabilitation. **Results:** 1030 patients were included in the PoCoRe study. The experience of physical symptoms measured in several questionnaires were significantly reduced by multimodal rehabilitation. On admission, the patients had a reduced walking distance in the 6MWT (mean: 493 m). They improved their walking distance by an average of 30 metres. BGA before exercise showed mild alkalosis, a still normal pO<sub>2</sub>, a still normal pCO<sub>2</sub> and normal oxygen saturation. At a rehabilitation centre with a focus on pneumology, significant improvements in BGA were demonstrated for pO<sub>2</sub> before exercise, pH after 4 minutes lasting exercise at 25W and decreasing lactate values during and after exercise. Respiratory parameters in the PoCoRe study improved from 93% to 107% for VC, from 89% to 92% for FVC and from 92% to 96% for FEV<sub>1</sub>. The most significant increase of the respiratory parameters was detected in PEF. Rehabilitation with a focus on breathing physiotherapy and moderate exercise therapy postponed the lactate increase under moderate exercise with a high effect size (ES) and reduced exercise-induced dyspnoea with a medium ES. **Conclusions:** PoCoRe-study shows that PCS is associated with reduced exercise performance, and inpatient rehabilitation is an effective therapeutic option to recover physical capacity in patients with PCS. DB and deconditioning appear to be factors in reduced physical performance. Physical exercise training should be combined with breathing therapy.

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**S08-01-E****Utilization frequency and patient-reported effectiveness of symptomatic therapies in Post-COVID Syndrome – results from a retrospective analysis**

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**Background:** Due to the lack of a causal therapy for post-Covid-19 syndrome, symptomatic therapies are currently the most important treatment approaches. However, the practical implementation and effectiveness of these interventions are not well understood. The aim of this study was to investigate the frequency of utilization and patient-reported effectiveness of symptomatic therapies across different treatment modalities. **Methods:** Conducting a retrospective analysis, we investigated the utilization frequency of symptomatic therapies among post-COVID patients at the Post-COVID Center of the University Hospital of Erlangen from December 2022 to July 2023. Additionally, we administered a follow-up questionnaire to assess patient-reported symptom improvement attributable to these therapies, at least 3 months post-initial presentation. **Results:** Among 200 patients (mean age: 44.6±12.6 years; 69.0% women; mean duration since acute infection: 15.3±8.3 months), pharmacotherapy emerged as the predominant symptomatic treatment (79.5%), with psychotropic drugs (32.5%) and analgesics (31.5%) most commonly prescribed. Hospital admission rates to acute care were 35.5%, while 33.0% underwent inpatient rehabilitation. Cardiologists (76.5%), pulmonologists (67.5%), and neurologists (65.5%) were the most consulted specialists. More than half of the patients (55.5%) utilized vitamins and nutritional supplements, while instrumental procedures were infrequently employed (12.0%). In the follow-up questionnaire (response rate: 82.5%, 6.3±2.2 months post-baseline), beta-blockers were reported as the most effective pharmacological intervention, with 31.5% experiencing significant symptom improvement, followed by antibiotics (29.6%). Additionally, 33.0% of the patients perceived plasmapheresis to be highly effective in alleviating symptoms. **Conclusion:** This study offers initial insights into the utilization and patient-reported effectiveness of symptomatic therapies in post-COVID Syndrome. Further investigation into symptom clusters and interdisciplinary collaboration is essential for a comprehensive approach to address the multifaceted symptomatology.

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**S08-01-F****A prospective non-randomized controlled trial testing the efficacy of psychotherapeutic inpatient treatment of Post-COVID-19 syndrome**

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**Background:** Alongside to physical symptoms such as dyspnea, fatigue and cognitive impairment, a subgroup of post-COVID-19 patients suffer from mental illnesses such as anxiety and depression. To date there are no causal treatments available for post-COVID-19 symptoms. While initial studies show psychotherapy improves psychological symptoms, post-COVID-19 related fatigue, and psychosocial functioning [1-3], further research on the effectiveness of psychotherapeutic treatment for post-COVID-19 syndrome needs to be done. **Methods:** This study presents a non-randomized controlled trial aimed at evaluating the effectiveness of a five-week inpatient psychosomatic treatment program for individuals experiencing post-COVID-19 symptoms and comorbid mental illness. A total of 60 patients presented at the Post-Covid Center at the University Hospital Erlangen will be allocated to the intervention group receiving inpatient psychotherapeutic treatment or the control group receiving treatment as usual. Inclusion criteria for the intervention group is a post-COVID-19 diagnosis and at least one condition of mental distress as well as problems of coping with illness. The primary objective of the intervention is to reduce post-COVID-19 related neuropsychiatric manifestations, including depression and anxiety as well as neurocognitive deficits, and to address post-COVID-19 symptoms such as fatigue and pain. The core elements of the treatment are individual and psychoeducational group therapy sessions, which address illness-related stress, coping with illness and e.g. work-related problems and perpetuating factors such as a high performance motive. Psychotherapeutic interventions are complemented by neurocognitive training via Neuronation and physical therapy adapted to individual's capacity and oriented at concepts of PACING. After enrollment, participants in the treatment group will undergo a 6-month follow-up to evaluate long-term outcomes and sustainability of intervention effects. **Discussion:** This study is the first to examine the effectiveness of inpatient psychotherapeutic treatment in post-COVID-19 patients with comorbid mental illness and to compare it with a control group based on patient's choice. Thus, the results of the study can contribute to the development of evidence-based interventions to address the complex needs of people with post-COVID-19 syndrome and associated mental health symptoms.

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## S09-01-A

### Facing the climate crisis in psychosomatics and psychotherapy – challenges in treatment and the need for transformation

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With the year 2023 experiencing record-breaking heat, an increasing number of people express concern, grief, hopelessness, guilt, or frustration about climate change. This trend is particularly affecting younger people and those with pre-existing mental health conditions, making them more susceptible to mental health challenges. In this symposium, we will outline the psychological impact of climate change from different perspectives. Not only will we describe the heavy psychological burden and social challenges from this global crisis, but also propose strategies and instruments to counter despair and defeatism. In particular, Nadja Gebhardt will talk about climate related feelings which are summarized in the umbrella term “eco-anxiety” and how to train psychotherapists dealing with that problem. She will present the results of a first implementation and evaluation of an eco-anxiety related training programme. The second contribution by Michael Schonneck will try to give answers to the question what kind of fear competence is needed to deal with the climate crisis. Jürgen Knieling will talk about the need of changing values and transformation in psychotherapy. Psychotherapy often is anthropocentric, due to our anthropocentric age. Do we need a more social and a more planetary view in our therapies? Should we face the relatedness to nature and the responsibility for planetary health as basis for individual health? The last contribution by Charlotte Flock and others will deal with the question how to teach medical students about planetary health. Experiences with a multifaceted approach at Heidelberg University will be shown.

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## S09-01-B

### Facing the climate crisis in psychotherapy: First implementation and evaluation of a training for psychotherapists on how to treat eco-anxiety in psychotherapy

Nadja Gebhardt

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**Background:** As the climate crisis continues to accelerate, more and more people are expressing a certain degree of worry, despair, anger, and guilt when they think about the current and future consequences. In the scientific literature, such thoughts and feelings are summarized under the umbrella term of eco-anxiety. Psychotherapy patients are particularly susceptible to the adverse effects of eco-anxiety on their mental health. To be well prepared

for this new challenge, psychotherapists must therefore be prepared to deal with eco-anxiety in the context of psychotherapeutic treatment. As far as we are aware, however, there is no scientifically based training to meet this need. **Methods:** Based on the current understanding of eco-anxiety, mechanisms of change in psychotherapy, and curriculum development in health professional education, we developed and implemented a training that consisted of lectures, sessions with standardized patients, and group discussions. Evaluation took place quantitatively in a pre-post design and qualitatively through content analysis of group discussions and sessions with standardized patients. **Results:** The training was carried out successfully and the participants (currently n=15) reported a significant increase in knowledge, attitude, and skills. Qualitative analysis shows a strong influence of the participants' attitudes on the development of the therapeutic relationship and a general interaction of climate change-specific features of the situation with mechanism of change in psychotherapy. **Discussion:** Ours is the first evidence-based and systematically evaluated training for psychotherapists on how to treat eco-anxiety in psychotherapy. It can be adapted to various contexts and thereby enrich any curriculum on psychotherapy and psychosomatics.

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## S09-01-C

### Learn to fear: What kind of fear competence is needed to deal with the climate crisis?

Michael Schonneck

Tagesklinik am Hansaring, Köln, Germany

The climate crisis is frightening in its looming monstrosity. But this emotional impulse does not lead to action. Drastic images and appeals (“I want you to panic”) do not work. Social psychology favors emotional attractors instead. So does fear have no value? This problem has long been known in folk psychology; fairy tales tell of the hero who seeks fear. In this case, too, a drastic and unsuccessful attempt is made to instill fear. The goal can only be achieved in another way, in the final risk of opening the bond between the two. The more intimate and vital the hero's bond with his partner becomes, the more the fear of loss and personal commitment grows. The lecture will use this role model to examine how such a constructive orientation of the search for fear arises. This is followed by the question of how the emerging fears can become positively contagious.

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## S09-01-D

### From individuation to planetarization – about changing values and transformation in psychotherapy

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As well known we live in an anthropocentrically influenced age. Also the history of psychotherapy is significantly influenced by anthropocentrism. Too often the focus of therapy is on development of personality and individual health only. Social and planetary health aspects are rarely included. The lecture gives theoretical thoughts and practical impulses and wants to start a discussion about the question if a change in values is necessary in psychotherapy. Can we broaden the conventional anthropocentric focus to a social and planetary point of view?

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## S09-01-E

### How to teach medical students about planetary health? Experiences with a multifaceted approach

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**Background:** Climate change and health are inseparably linked. Psychosocial health can be impacted by climate change through multiple channels, e.g., impacts of extreme weather and consequential damage and loss. Also, substantially heightened psychological distress due to climate change is already evident. However, until 2020, climate change and sustainability were not systematically integrated into the Heidelberg Curriculum Medicinale (HeiCuMed). Studies suggest that medical students feel inadequately trained in this area, while wishing for inclusion of planetary health education into their studies. This work presents the evolution of planetary health education for Heidelberg medical students. **Methods:** Curriculum PlaN-Med was initiated in 2021, founded by the Baden-Württemberg Stiftung. Initial realizations of the integration into HeiCuMed included modifications to problem-based learning cases and a climate exhibition at the Medical Faculty. This pilot phase laid the groundwork for further development and institutionalization of PlaN-Med. An established staff unit then examined the entire clinical period for thematic links. Given the dense nature of medical studies, the goal was to integrate content on planetary health as a new dimension into existing courses, keeping the effort for lecturers minimal. Parallely the publication of a textbook (“Heidelberger Standards der Klimamedizin”) serves as a valuable resource for health professionals and students. All efforts are accompanied by research and evaluation. **Results:** By 2024 a successful integration of content on planetary health and sustainability was achieved, covering basic knowledge and

interconnections with medical specialties. In the final medical year, for instance, a unit on psychosocial phenomena and cognitive-psychological foundations regarding climate change was established – next to e.g., a unit on climate sensitive health counselling. Suitable materials were added to existing courses in nephrology, geriatrics, gastroenterology, ENT, pharmacology, surgery, health promotion and economics, medical ethics, and hygiene. **Discussion:** This multifaceted approach of longitudinal integration of planetary health into the medical core curriculum depicts a best-practice model for preparing students for climate-related tasks. Experiences gained throughout the endeavor, including lessons learnt on change management at a traditional Medical Faculty, will be shared and discussed at the congress.

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## S10-01-A

### Managing emotions in the medical encounter: an international Balint-symposium

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Balint method is a series of group sessions developed by Mihály Balint in the 1950s with the aim to increase understanding of the unspoken needs of patients affecting the relationship and encounter with their medical practitioner. During each session a troubling case is presented by one of the participants in a free-form case presentation which is followed by reflections from the group members on the possible unspoken factors (including thoughts, emotions). During the session, the contextual issues affecting this specific doctor patient relationship and encounter are explored with the help of two leaders. The leaders “open up possibilities for the doctors to discover by themselves some right way of dealing with the patient’s problems” by their thoughtful listening habits and behaviors which they demonstrate in the “here and now” situation. Balint groups are applied worldwide within the medical communities to increase person-centredness in clinical practice, to overcome isolation experiencing relational continuity in a safe and non-judgemental setting and to express feelings and reflect critically on their thoughts and assumptions. This method has been successfully incorporated into the curriculum of residency training in many countries as well. The symposium is for clinicians interested in becoming more psychologically aware in their relationship with patients. After discussing practical issues regarding the Balint method, participants will be actively involved in a Balint-group session. Group members will engage in a real case presentation and work together with two experienced leaders. There will be

opportunities for debriefing and general discussion following the exercise. In the last part Bálint Society representatives from different countries will briefly summarise the good practice in their special contexts.

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## S10-01-B

### Integrating Balint Group experience into everyday practice: a UK GP's perspective

*Ceri Dornan*

UK Balint Society, Manchester, UK

Michael and Enid Balint's research into the General Practice (GP) consultation and the doctor-patient relationship began in the UK in the 1950s in parallel with the promotion of General Practice as a discipline with its own skills and strengths, in the aftermath of the start of our National Health Service. Some of the GPs who took part in the Balints' research seminars and groups, which led to the development of the case discussion groups we now know as Balint Groups, were also involved in developing training for GPs. When three-year GP Vocational Training came into being, small group discussion about the GP consultation was an integral part. Not all local schemes used the Balint method as such, but its influence was present and most of us who trained in the 1970s were aware of it. Later I joined a group and attended UK Balint Society activities where it was a relief to find that being patient centred was a shared value, when spending time with patients could be seen by others as creating dependence and contrary to efficient practice. In this presentation I will share my thoughts about how the theory and practice of the Balint method helped me to become a less reactive and more thoughtful practitioner and colleague. As well as seeing my patient as a person who brought their own world into the consulting room, I realised that my world came there too. Balint Groups do not explore the inner world of the practitioner, but we can learn a lot about ourselves from the discussions. There is a saying in Balint circles that thinking about our patients in a Balint Group does not necessarily make our work easier, but more tolerable. We can learn to be with patients who are harder to help without castigating ourselves if we hold negative feelings, and be stimulated to be more curious. I will use some examples of patients I worked with, suitably anonymised, and share some experiences of discussions with Balint group participants, including medical students, during my time as a Balint Group leader.

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## S10-01-C

### Following the footsteps of Mihály Bálint in Hungary – past, present and the future

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Psychoanalysis and psychosomatics were intensively developing fields of medicine in Hungary in the early 1900s lead by Sándor Ferenczi, Alexander Franz, János Selye and Mihály Bálint. They provided a well-established theoretical basement and served as doing a lively clinical practice of holistic patient care. However, the further development had been hindered by losses of the world wars and the changes with the political era after. During the Communist-Socialist reign, the heritage of Bálint was guarded by a few hospital teams, and was just tolerated by the state. In the 90s institutes of behavioral sciences began their work at all Hungarian universities that provides medical education, and the Bálint Mihály Psychosomatic Society was founded. In the university curriculum, medical psychology and other related subjects were developed and evolved to integrate the teaching of humanistic-holistic medicine to compensate the rapidly increasing impact of the biomedical scene. Much effort was put forward to make doctor's education more patient- and person-centered, and emphasize the responsibility of doctors for themselves as well as for their patients well-being. Approx. 1500 medical students were introduced to Junior Balint groups in the last 20 years by facultative peer-lead courses (HuMánia). The psychiatrist Andor Harrach (1941-2023), who has made his professional carrier in Kassel, Germany at a psychosomatic rehabilitation clinic has returned to his homeland in 2006 and begun to organize Balint leadership trainings. Since then, more than 100 professionals were trained as Balint leaders, but only a third of them are still currently active. Nowadays, there are around 10-15 active classic Balint groups operating for physicians, and occasional Balint groups are held for trainees. Although the Balint Society gets regular requests from hospitals, we have difficulties with providing stable circumstances for these institutional groups. Recently the state-imbursed healthcare system lacks long-term targets, organization and financial support needed for this activity. Most effort in psychosomatic medicine can be found in the private sector by the majority of more than 450 Hungarian psychotherapists. Organizing integrative programs focusing on interprofessional education could serve in explaining and understanding the importance of psychosomatic approach for under- and postgraduate doctors. The Balint group method is an evidence-based tool supporting this aim.

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## S10-01-D

### Special characteristics of the Balint group supervision in the GP/FM training program in the University of Oulu, Finland

*Markku Timonen*

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**Background:** Since year 2008, the discipline of General Practice/Family Medicine (GP/FM) at the University of Oulu has organized a 2-year (30 ECTS) voluntary additional training program for physicians specializing in GP/FM. The training is based on the core competence areas in GP/FM of European Academy of Teachers in GP/FM (EURACT) and the Nordic core values of GP/FM. The key objective of this training is: a) to adopt a patient-centred approach that increases patient agency (patient responsibility) in encounter and treatment of chronic, multifactorial health and functional capacity problems, and b) to facilitate the development of physician's self-knowledge and self-reflection. The training is carried out with monthly face-to-face training days (20 days) and pre-assignments and a self-reflection diary after the face-to-face training days. **Methods:** Balint group work supervision during face-to-face training days is one of the key teaching methods in our training program. We have developed special educational characteristics for our Balint group work supervision based on studies conducted in the GP/FM training program at the Erasmus University Medical School, Rotterdam as described by Veen and Croix (2016). **Results:** In this "good-practice presentation" of this workshop, experiences of Balint group work of GP/FM training program of the University of Oulu are demonstrated: Compared to traditional Balint group work supervision, special attention is paid to the theoretical conceptualization of learning issues arising from the handling of the patient case by raising these learning issues to the meta-level. Also, the group's collaborative learning output (Take-home message, Learning uptake) is discussed at the end of the Balint session. **Discussion:** The generalizability of the experiences of Balint group work of GP/FM training program of the University of Oulu in real-life GP/FM training programs in Europe is discussed.

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## S10-01-E

### Balint work world wide – the International Balint Federation

*Guido Flatten*

German Balint Society, Aachen, Germany

The first national Balint Societies were founded as early as 1967 in France and 1969 in Great Britain. After the death of Michael Balint in December 1970 the Italian and Belgian Balint Society started their work in 1971 and a bit later the German Balint Society was established in 1974. In particular, it was the merit of Enid Balint in Great Britain who carried on the work of her husband Michael and already in 1972 became the co-founder and first president of the International Balint Federation. The Balint method soon spread to more and more

countries, and expert meetings and International Balint Conferences fostered a fast-growing network. Up to date the IBF consists of 23 national Balint societies. Every two years a large international Balint conference is hosted by one of the member societies and is visited by about 100 to 150 international participants. In 2022 the Belgian Balint Society organized the 22<sup>nd</sup> International Balint Congress in Brussels and in September 2024 the American Balint Society invited to Boulder in Colorado. In addition, an annually but smaller Council meeting is hosted every spring in a different country. The last venues were 2022 in Aachen/Germany, 2023 in Chania/Greek and 2024 in Stockholm/Sweden. At the IBF council meeting in Görlitz/Germany in May 2010 the IBF started a new initiative by offering an international "seminar on leadership" every two years, alternating with the International IBF Congresses. These meetings are limited to 2–3 participants of each member country and are dedicated to explore and exchange ideas about leadership, leadership training and supervision of Balint group leaders. Under the guidance of the IBF board, a subgroup of international members works as a Task Force on Leadership to develop "IBF Guidelines on Balint Group Leadership" and organize the biannual conferences. The leadership conference 2016 in Warsaw/Poland was followed by Helsinki/Finland in 2018 and Belgrade/Serbia in 2023. Some of the well established national Balint Societies work as godparents to support the development and implementation of Balint work in other chummily countries.

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## S10-01-F

### Implementation of Balint groups in the medical education in Germany

*Guido Flatten*

German Balint Society, Aachen, Germany

In 1962 Michael Balint has been invited for the first time to demonstrate his group method in a German-speaking country. After his visit in Sils Maria in Switzerland his idea of focusing on the encounter of a doctor and his patient spread to other countries and Michael Balint also started to train doctors in Germany. In 1974 the German Balint Society was founded and soon after became a member of the International Balint Federation. It was the merit of some medical officials to forward the idea of Michael Balint into the field of continuing medical education. Since 1987 Balint groups have become an obliged part of the medical education and specialization in Germany. Up to date this is valid for all specialists in psychotherapy, psychiatry, psychosomatic medicine and child and youth psychiatry. As part of an extensive training in psychosomatic basic care, Balint groups became compulsory also for general practitioners, for doctors working in the field of gynecology and obstetrics and pediatrics. In addition, all doctors with a somatic specialization who are interested in psychosomatic basic care can participate in this training and by this are allowed to charge special fees by the general health insurance. As it is a challenging task to introduce medical doctors into Balint work, because they have to participate in Balint groups as part of their medical training, the intense training of Balint group leaders remained to be a main focus for the German Balint Society over the last 50 years.

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## S12-01-A

### The clinical science of euthymia

*Jenny Guidi*

Department of Psychology 'Renzo Canestrari', University of Bologna, Bologna, Italy

In this symposium, entitled 'The clinical science of euthymia', Prof. Guidi will provide an overview of the concept of euthymia and its measurement; Prof. Fava will present conceptual and clinical innovations of Well-Being Therapy; Prof. Wang will present recent research findings from a clinical trial; Dr. Eory will present a clinical case of a patient with multiple sclerosis treated with Well-Being Therapy.

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## S12-01-B

### The clinical science of euthymia: conceptual issues and clinical measurement

*Jenny Guidi*

Department of Psychology 'Renzo Canestrari', University of Bologna, Bologna, Italy

Euthymia represents a trans-diagnostic construct where lack of mood disturbances is associated with the presence of positive affect and balance of psychological well-being dimensions, flexibility, consistency and resistance to stress. Clinical assessment should include a broad range of related aspects, such as demoralization, mental pain, allostatic load and lifestyle behaviors. Specific instruments for the assessment of euthymia are available, including both observer- and self-rated instruments (e.g., the Clinical Interview for Euthymia and the Euthymia Scale, respectively) that may be applied within a clinimetric framework encompassing macro-analysis and staging. Euthymia means using allostasis optimally and maintaining a healthy balance that promotes positive aspects of brain and body health through health-promoting behaviors. Euthymia may provide a conceptual framework for a renewed definition of recovery, for measuring treatment outcome and for targeting interventions, including the sequential administration of treatment components. The clinical science of euthymia and the insights gained may unravel innovative approaches to assessment and treatment of both psychiatric and medical disorders, according to a unitary conceptual model.

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## S12-01-C

### Well-Being Therapy

*Giovanni A. Fava*

Department of Psychiatry, University at Buffalo, State University of New York, Buffalo, USA

A specific psychotherapeutic strategy for modulating psychological well-being, Well-Being Therapy (WBT), has been developed and validated in a number of randomized controlled trials. WBT refers to the concept of euthymia, where lack of mood disturbances is associated with positive affect and psychological well-being (flexibility, consistency and resilience). The findings indicate that euthymia can be promoted by specific WBT interventions leading to a positive evaluation of one's self, a sense of continued growth and development, the belief that life is purposeful and meaningful, the possession of quality relations with others, the capacity to manage effectively one's life, and a sense of self-determination. A decreased vulnerability to depression, mood swings, and anxiety has been demonstrated after WBT in high-risk populations. Its updated scope encompasses increasing resilience in a variety of psychiatric and medical conditions, modulating psychological well-being and mood, developing alternative pathways to established treatment modalities, including psychotropic drugs. An important characteristic of WBT is self-observation of psychological well-being associated with specific homework. Such perspective is different from interventions that are labelled as positive but are actually distress oriented. Another important feature of WBT is its individualized focus, that is based on the assumption that imbalances in well-being and distress may vary from one illness to another and from patient to patient.

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## S12-01-D

### The online Well-Being Therapy on allostatic overload in specific population when facing stress: a pilot randomized controlled study

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<sup>2</sup>Department of Neurology, The First Affiliated Hospital of Kunming Medical University, Kunming, Yunnan, China, Kunming, China

**Background:** Stress may lead to allostatic overload, which could eventually result in mental and psychological reactions, and symptoms. Well-Being Therapy (WBT) might mitigate it by enhancing psychological well-being and protecting from psychological symptoms. Since no reports are available on the use of WBT in allostatic overload, we evaluated online WBT effects to reduce allostatic overload in medical workers during the coronavirus pandemic. **Methods:** Sixty-six subjects with allostatic overload were enrolled and randomly assigned to 8 sessions of online WBT (n=32) or 8 sessions of an online psychoeducation program on healthy lifestyle (CON) (n=34). The primary outcome was the percentage of allostatic overload between the two groups at session 8 (T2).

Secondary outcomes included the percentages of allostatic load in both groups at session 4 (T1), at 3- (T3) and 6-month (T4) follow-ups, and changes in the psychosocial index (PSI) and psychological well-being (PWB) sub-scores at the same time points. Generalized Estimating Equation (GEE) models were employed. Marginal estimates were derived for each time point and treatment group, and differences between treatment groups were evaluated using the Wald test on the linear combination of coefficients obtained in the GEE models. **Results:** The WBT group showed significantly lower rate of allostatic overload at T2 than the CON group (28.13% vs 70.59%,  $p < 0.001$ ), similar results were found at T1, T3, and T4 ( $p < 0.001$ ). The WBT group had a lower probability of having an allostatic overload than the CON group among the study time (OR=0.167, 95% CI 0.089 - 0.309,  $p < 0.001$ ). Compared to CON, WBT produced greater decrease in psychological distress ( $p < 0.001$ ) and abnormal illness behavior ( $p = 0.031$ ), a significant improvement in PWB autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, self-acceptance ( $p < 0.001$ ). **Conclusion:** Online WBT may be an effective non-pharmacological therapeutic strategy for subjects with allostatic overload. These findings need to be further validated in different clinical populations.

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## S12-01-E

### The role of euthymia in multiple sclerosis: a case presentation

Ajandek Eory

Department of Family Medicine, Semmelweis University, Budapest, Hungary

**Background:** Multiple Sclerosis (MS) is a chronic, autoimmune disease that affects the central nervous system, causing physical and cognitive symptoms. Exacerbations of the relapsing-remitting form may be triggered by perceived stress and allostatic load. **Methods:** The clinical case of a young female with MS is discussed, with particular regard to the role of individual stressors and allostatic overload (AO), and treatment with Well-Being Therapy (WBT) according to a structured protocol (8 sessions). Initial assessment encompassed symptoms of depression, anxiety and stress using the Depression, Anxiety and Stress Scale (DASS), and determination of AO based on the Diagnostic Criteria for Psychosomatic Research (DCPR). The Clinical Interview for Euthymia (CIE) was also administered. Resilience was further assessed using the short form of the Nicholson McBride Resilience Questionnaire (NMRQ). **Results:** Interpersonal stressors within the family were found to be associated with the onset of MS and symptom exacerbations. Further, university-related stressors contributed to her AO, demoralization, hopelessness, and a low sense of purpose in life. Depressive and anxiety symptoms appeared to be moderate, whereas perceived stress was severe, and resilience rather impaired. The two most significant domains of well-being were personal growth and positive relations. Work experience provided a rich source of reward. WBT helped her to recognize work-related success and strengthen autonomy and self-acceptance by improving her professional identity. She also experienced

personal growth through her illness. Her perceived failures resulted in exacerbations of MS that she could resolve with the help of significant others from her family. During the therapy, she became more aware of the value of the support she received, and she was able to thrive in her relationships even during periods of disability. **Conclusion:** At the end of the 8-session WBT, positive affect and flexibility/consistency improved significantly, resulting in shortened periods of negative emotions, increased calmness, and a greater reliance in facing negative experiences. The structured diary helped to improve autonomy and environmental mastery by increasing awareness and reinforcing the positive effects of each experience.

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## S12-02-A

### What is enhanced psychotherapy?

Stephan Zipfel<sup>1,3</sup>, Wolfgang Lutz<sup>1</sup>, Elisabeth Schramm<sup>2</sup>, Simone Behrens<sup>4,3</sup>

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<sup>4</sup>Psychosomatic Medicine and Psychotherapy, University Hospital Tübingen, Tübingen, Germany

**Objective:** The core idea of enhanced psychotherapy is to enrich established psychotherapy by adding innovative treatment modules, approaches or modes. A specific aspect of enhanced psychotherapy is the development of treatment strategies towards increased personalization in the sense of precision psychotherapy within the framework of precision mental health care and precision medicine. All speakers are members of the Enhanced Psychotherapy Network of the German Center for Mental Health (DZPG). **Content:** In our symposium we will shed light on enhanced psychotherapy from three different perspectives: a) Elisabeth Schramm will present a very recent, modular RCT for patients with depression, Simone Behrens will demonstrate results of her pilot study using virtual reality for the treatment of body image disturbances in patients with eating disorders, and finally Wolfgang Lutz will focus on digital and computer-assisted measures to personalize and enhance outpatient psychotherapy.



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## S12-02-B

### The use of ecological momentary assessments (EMA) and large language models (LLMs) for treatment planning and outcome monitoring in psychological therapy

*Wolfgang Lutz, Steffen T. Eberhardt, Fabienne Mink, Rebekka Wassmann, Antonia Vehlen, Brian Schwartz*

Department of Clinical Psychology, University of Trier, Trier, Germany

**Background/Aim:** In this project, new digital assessment and analysis methods, such as Ecological Momentary Assessment (EMA) and Large Language Models (LLMs), were used to assess patient symptoms and multidimensional problem areas to provide feedback to clinicians to support treatment planning. The research question was: How can multidimensional and multimodal evidence about psychological distress and dynamic change in the early stages of therapy be integrated into empirically based treatment planning and feedback? **Methods:** Two studies using EMA (n=58; n=140) at the University of Trier Outpatient Clinic were used for this project. Affect items were collected four times a day over a two-week period at baseline. To provide feedback to therapists, an additional 390 transcripts from 60 patients were analyzed using the Large Language Model Meta AI (LLaMA), and emotional and cognitive parameters were related to symptom burden in each session. **Results:** The predictive value of temporal psychological distress parameter and positive and negative affect in speech expression for the prediction of symptom burden was demonstrated. Several case studies illustrate how personalized clinical implications can be derived from individual distress and change parameters and how the information can be reported to therapists in a graphically relevant manner. **Discussion:** New digital data collection and analysis methods can provide additional empirical support for personalized treatment planning and feedback. In addition, challenges, issues, and limitations associated with integrating evidence from such developments into decision making and feedback systems (such as the TTN) will be discussed.

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## S12-02-C

### Enhanced psychotherapy using algorithm-based modules for patients with depression, comorbidities and a history of early trauma

*Elisabeth Schramm*

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**Background:** Effect sizes of psychotherapies stagnate at a low-to-moderate level. Therefore, in recent years a new precision approach in mental health has emerged using novel designs to tailor interventions, e.g. by algorithm-based modular procedures. **Methods:** A proof-of-concept study was conducted in 70 adult outpatients with a primary diagnosis of major depressive disorder, at least one comorbid psychiatric diagnosis, and a history of early trauma. Included patients also exceeded the cut-off value on at

least one of three measures of early trauma-related transdiagnostic mechanisms (social threat response, social processes, emotion regulation). Patients were randomized to 20 sessions of either standard cognitive-behavioral therapy alone (CBT) or CBT plus transdiagnostic modules according to a mechanism-based treatment algorithm (MoBa). **Results:** Both approaches led to major reductions of depressive symptoms at post-treatment, with a mild superiority of MoBa over CBT. Participants and therapists in the MoBa group reported higher overall satisfaction and a stronger therapeutic alliance compared to CBT. MoBa patients were nearly three times as likely to experience remission at the end of therapy (29.4% vs. 11.4%; odds ratio, OR=3.2, 95% CI: 0.9-11.6). Among mechanism-based outcomes, MoBa patients showed a significantly higher post-treatment effect on social processes/empathy ( $p < 0.05$ ). Substantially less adverse events were reported for MoBa compared to CBT. **Conclusion:** These results suggest the feasibility and acceptability of an algorithm-based modular psychotherapy procedure in depressed patients with psychiatric comorbidities and early trauma.

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## S12-02-D

### Virtual reality exposure to healthy weight as an adjunct treatment for anorexia nervosa

*Simone Behrens<sup>1,2</sup>, Joachim Tesch<sup>3</sup>, Philine Sun<sup>1</sup>, Laura Wolf<sup>1</sup>, Tatjana Korbanka<sup>1,2</sup>, Sebastian Starke<sup>5</sup>, Michael Black<sup>3</sup>, Jacopo Pruccoli<sup>7,6</sup>, Stephan Zipfel<sup>1,2</sup>, Katrin Giel<sup>1,2</sup>*

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**Background:** Treatment results of anorexia nervosa (AN) are modest, with fear of weight gain being a strong predictor of treatment outcome and relapse. Here, we present a virtual reality (VR) setup for exposure to healthy weight and evaluate its potential as an adjunct treatment for AN. **Methods:** In a series of studies, we investigate VR experience, arousal and clinical effects of VR exposure to higher weight in healthy women, and in women who are currently in treatment for their AN. Healthy women are exposed in one session with two blocks (normal/high weight) whereas patients had multiple sessions of exposure. **Results:** The vast majority of healthy women report arousal but no or low fear when embodying a higher weight body. In healthy women, In study 1, 90% of participants (18/20) reported symptoms of high arousal, but verbalized low to medium levels of fear. Study 3 replicates this finding and also investigated eye gaze during exposure. In patients with AN, VR exposure to healthy weight induced high arousal

which gradually weakened over the course of exposure. Our data shows a trend that three to four sessions of exposure improve fear of weight gain. **Conclusion:** VR exposure is a well-accepted and powerful tool for evoking fear of weight gain in patients with AN. Our study series provides insights in typical mechanisms and informs the optimization of the therapeutic procedure.

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## S14-01-A

### Medical psychiatry units (MPUs) in cultural context: using insights from MPUs in the Netherlands, South Korea and the United States to shape guidelines tailored to patient subgroups

*Marsha Wittink<sup>1</sup>, Susan Padrino<sup>2</sup>, Aubrey Chan<sup>3</sup>, Chedwa Pinto<sup>4</sup>, Sun Mi Kim<sup>5</sup>, Lauren Gensler<sup>6</sup>*

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There is a burgeoning interest among hospitals around the world to engage in innovative strategies to improve the care of patients with concomitant medical and psychiatric conditions. A pivotal advancement is the establishment of Medical-Psychiatry Units (MPUs). MPUs represent a significant leap forward, building on interdisciplinary expertise to deliver thorough care to patients contending with complex psychosomatic health issues. Though all MPUs share a common goal of integrating care, the implementation of MPUs is not uniform across settings. Given the diverse contexts and cultural nuances within different healthcare systems, MPUs may vary substantially, thus determining which patients benefit and for what reason. In this symposium, we will explore how three MPUs in three different countries have been implemented. We will examine how each has been influenced by the cultural climate, financial forces, and health system norms in their respective countries. Speakers representing MPUs in the Netherlands (Dr. Pinto), South Korea (Dr. Kim) and the United States (Dr. Gensler) will describe the rationale for starting the MPU, key elements of the MPU's organization (e.g., staffing, MPU design) and key data related to hospital outcomes. Facilitators from the MPU consortium (Drs. Wittink, Padrino and Chan) will subsequently discuss how these insights can inform the development of guidelines tailored to specific patient subgroups, thereby fostering more effective and standardized care practices across MPUs worldwide.

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## S14-01-B

### The case of Erasmus University Hospital's MPU in the Netherlands

*Chedwa Pinto*

Psychiatry, Erasmus University, Rotterdam, Netherlands

The Erasmus MC MPU was built after recognition of the cost-effectiveness of concomitant medical and psychiatric care. The MPU is located on the internal medicine ward and most of the nurses are medical nurses, some of whom followed a 1-year course in the field of hospital psychiatry. Every shift at least one of these nurses is scheduled. Medical staff consist of a permanent internist and two psychiatrists. The MPU focuses on medical disease, meaning that only patients that need to be hospitalized because of a medical condition and have a concurrent behavioral or psychiatric disorder, are admitted to the MPU. As soon as there is no medical indication for their stay, they are discharged home or to a psychiatric hospital. Regarding context, near the Erasmus MC MPU, also in Rotterdam, there is another MPU, which is part of a mental health care organization (GGZ). This MPU focuses more on psychiatric patients, and therefore also treats patients with lower medical acuity. This ensures that a wide range of patients with concurrent medical and behavioral disorders in the Rotterdam region can be served. We will present preliminary data related to hospital outcomes among various patient subgroups.

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## S14-01-C

### The case of Chung-Ang University Hospital's MPU in South Korea

*Sun Mi Kim*

Psychiatry, Chung-Ang University, Seoul, South Korea

In November 2023, Chung-Ang University Hospital in Seoul, South Korea, initiated the operations of the Medical Psychiatry Unit (MPU), an integrated care facility catering to both internal medicine and psychiatry. As a tertiary general hospital, Chung-Ang University Hospital features a 30-bed inpatient medicine ward where specialists in internal medicine or family medicine directly attend to patients without resident involvement. Leveraging this ward, the Department of Inpatient Medicine collaborated with the Department of Psychiatry to establish an MPU system. Within this system, inpatient doctors assume the role of attending physicians, providing direct care to patients, while dedicated psychiatrists assess and address mental and behavioral concerns in consultation with the attending physicians. Patients admitted to the MPU are paired with a dedicated psychiatrist, undergo daily rounds, and receive immediate attention for psychiatric issues, including evenings and holidays. This presentation will detail the beginnings of the first MPU in South Korea, its integration within the Korean healthcare system, patient demographics, diagnostic classification, and health outcomes.

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## S14-01-D

### The case of Grady Memorial Hospital's MPU in the United States of America

*Lauren Gensler*

Psychiatry, Emory University, Atlanta, USA

Grady Memorial Hospital's Medicine and Psychiatry Unit (MPU) was opened in October 2023. Grady Hospital is a 953-bed, urban, safety-net hospital in Atlanta, GA. The MPU was designed to care for complicated medical and psychiatric patients that often lack access to care. The MPU is a locked 16-bed unit for patients that have a medical indication for admission and psychiatric symptoms that are influencing their care. The unit has a 4 patient to 1 nurse and 1 technician ratio, allowing for careful observation and support for complicated patients. Since opening, our unit has seen over 200 patients with a variety of medical and psychiatric conditions. We expect that our unit will show improved length of stays compared to patients on inpatient medical floors with significant psychiatric comorbidities. We also anticipate improvements in 30-day readmission rates and physical and chemical restraint use.

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## S16-01-A

### Psychosomatic practice and research in Taiwan

*Wei-Lieh Huang*<sup>1,2</sup>, *Shih-Cheng Liao*<sup>1,4</sup>, *Wei-Chia Huang*<sup>3</sup>, *I-Ming Chen*<sup>1,3</sup>

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Many issues in psychosomatic medicine may be influenced by cultural context. In this symposium, we will present findings from psychosomatic medicine research in Taiwan over the past few years, covering four main themes. The first theme focuses on the epidemiological research findings related to somatic symptom disorder (SSD) and functional somatic syndromes (FSS), including population-based prevalence of SSD and FSS, and their associated patterns of medical utilization. The second theme explores the psychopathological features of SSD, encompassing personality traits, quality of life, and findings from a 1-year follow-up. The third theme revolves around the application of the Diagnostic Criteria for Psychosomatic Research (DCPR) in Taiwan, including its use in subtyping SSD and its associations with biomarkers. The fourth theme investigates the relationship between economic status, social interactions, and somatic symptoms in older adults in Taiwan. We hope that this symposium will provide audiences with insights into the psychosomatic medicine in Taiwan and encourage deeper reflections on the cultural aspects of psychosomatic medicine.

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## S16-01-B

### The epidemiology of somatic symptom disorder in Taiwan: findings from community survey and population-based matched cohort study

*Shih-Cheng Liao*

Department of Psychiatry, National Taiwan University, Taipei, Taiwan

**Background:** Somatic symptom disorder (SSD), recognized in DSM-5 in 2013, remains under-researched regarding its epidemiology, comorbidity with mental disorders, and its impact. **Methods:** A nationwide telephone survey and a population-based matched cohort study, utilizing National Health Insurance data in Taiwan, aimed to elucidate these aspects. **Results:** Our study found a 5.00% prevalence of SSD, with higher rates in women and those aged 40-49. Approximately one-third of SSD patients also suffered from depression or anxiety, although these conditions did not significantly increase healthcare utilization. SSD was linked to higher outpatient and emergency department visits when associated with anxiety. Four distinct clusters of SSD were identified, each with unique symptom profiles and varying levels of life interference, depression, anxiety, and worry about health. SSD and functional somatic syndromes (FSS) were associated with higher risks of psychiatric hospitalization, all-cause hospitalization, suicide, and all-cause mortality, along with significantly greater medical costs and longer use of psychiatric medications and analgesics compared to controls. **Conclusion:** This study confirms the DSM-5's characterization of SSD, highlights its significant comorbidity with anxiety and depression, and underscores the importance of recognizing distinct somatic symptom clusters. The elevated suicide risk in SSD patients calls for increased clinical vigilance, suggesting that SSD and FSS have substantial health and economic impacts.

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## S16-01-C

### Exploring psychopathologies of somatic symptom disorder: the findings in Taiwan

*Wei-Chia Huang*

Department of Psychiatry, National Taiwan University Hospital, Taipei, Taiwan

**Background:** The transition from DSM-IV-TR somatoform disorders to somatic symptom disorder (SSD) in DSM-5 marked the change in the conceptualization of psychopathologies concerning somatic distress. **Methods:** SSD is characterized by somatic discomforts and health anxiety, impacting cognitive, affective, and behavioral aspects. SSD in DSM-5 removes the requirement for medically unexplained symptoms and emphasizes functional impairment. Difficulties in clinical diagnosis result from the high co-occurrence of depression/anxiety and heterogeneity within diagnoses. **Results:** A 1-year community follow-up study revealed unchanged levels among SSD patients and decreased levels in pure depression/anxiety cases over time, while levels of somatic discomfort persisted for both groups. Chronicity of health anxiety was

thus inferred as the core feature of SSD. Personality traits also play a role in the development and presentation of SSD psychopathologies, with low novelty seeking, high harm avoidance, and low reward dependence being distinct features of SSD. This introverted, anxious, and socially inhibited population differs from those with pure depression/anxiety, who characterize neuroticism and high harm avoidance. Compared to the general healthy population, SSD patients exhibit higher levels of disability and a diminished quality of life, while depression emerges as a critical determinant influencing the overall functioning and life quality. **Conclusion:** Understanding SSD psychopathologies in presentation, clinical course, comorbidities, and functioning impairment contributes to improved diagnostic quality and enlightens future research into underlying pathophysiology.

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### S16-01-D

#### Application of Diagnostic Criteria for Psychosomatic Research in Taiwan

*Wei-Lieh Huang*

Department of Psychiatry, National Taiwan University Hospital Yunlin Branch, Douliu, Taiwan

The Diagnostic Criteria for Psychosomatic Research (DCPR) has been extensively used worldwide. In the past few years, we have translated it into a Traditional Chinese version suitable for Taiwan and applied it in clinical and research settings. This translated version demonstrated good reliability and validity and supported the structure of the five DCPR clusters. In hospital samples, 90.35% of participants had at least one DCPR diagnosis, while in community samples, 44.65% had at least one DCPR diagnosis. In community samples without DSM-5 diagnoses, the most common DCPR diagnoses were health anxiety and alexithymia. Anticipatory worry was the personality trait most widely associated with DCPR diagnoses. For patients of somatic symptom disorder, DCPR aided in further subtyping, with irritable mood, type A personality, demoralization, and health anxiety showing higher significance in subtyping. Persistent somatization, as defined by DCPR, exhibited a higher correlation with biomarkers such as heart rate variability compared to somatic symptom disorder. We also translated the Diagnostic Criteria for Psychosomatic Research-Revised (DCPR-R) and its semi-structured interview tool into Traditional Chinese, and preliminary findings will be presented at the conference.

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### S16-01-E

#### The association between social participation, available living expenses, and mental health of older adults

*I-Ming Chen*

Department of Psychiatry, National Taiwan University Hospital, Taipei, Taiwan

**Background:** The relationship between socioeconomic status, social participation, and mental health among older adults remains unclear. **Methods:** In our study of individuals aged  $\geq 55$  participating in a congregate meal service, we explored the impact of disposable income and social engagement on somatization, depression, anxiety, and cognitive function. **Results:** Our findings indicate that participants with lower available living expenses ( $< 375$  USD) experienced fewer somatization symptoms and milder depression but demonstrated reduced cognitive functioning compared to those with higher available living expenses. Conversely, participants with higher available living expenses ( $> 936$  USD) showed a significant reduction in somatization symptoms through active social participation. **Conclusion:** These results highlight the pivotal roles of socioeconomic status and social engagement in shaping mental health outcomes, underscoring the necessity for customized interventions. For groups with more financial resources, increasing social activity opportunities might be beneficial, whereas strategies focused on cognitive health could be more advantageous for lower-income populations.

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### S16-02-A

#### The practice of chinese medicine: bridging east and west from the perspective of psychosomatic medicine

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**Background:** Traditional Chinese Medicine (TCM) bibliographies have recorded a multitude of psychological and psychiatric terms that link physical and psychological symptoms together. From the perspective of psychosomatic medicine (PM), TCM holds potential for bridging Eastern and Western approaches. **Methods:** The symposium will feature four speakers from renowned universities and hospitals in eastern China and western Italy. These speakers are actively involved in interdisciplinary research in the fields of TCM and PM. Professor Fiammetta Cosci will present on the essential role of balancing psychic forces for psychological harmony and well-being, aligning with the key concept of

“balance” in TCM. Professor Zhang is scheduled to give a lecture on “Acupuncture and herbal medicines in the management of mental disease: past, present, and future,” which will cover TCM psychological concepts, therapies, and evidence-based findings. Prof. Liu will present on the efficacy of combining TCM five element music with music therapy in alleviating depression, improving mental symptoms, and enhancing psychosocial functioning. Lastly, Prof. Li will discuss her recent research on “Spleen Deficiency” for Non-Suicidal Self-Injury (NSSI) in adolescents. **Results:** TCM is oriented to psychosomatic medicine, addressing both somatic and psychological symptoms and incorporating various psychotherapeutic elements. Both Eastern and Western perspectives emphasize the importance of maintaining a balance of psychic forces for psychological harmony and overall well-being. **Conclusion:** The concept of balance is fundamental to traditional Chinese medicine and is increasingly embraced in the West. Collaborations between Eastern and Western medicine will yield more robust evidence for psychosomatic medicine.

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### S16-02-B

#### The balance of psychic forces: how western culture conceptualize and empower it

*Fiammetta Cosci*

Department of Health Sciences, University of Florence, Florence, Italy

**Background:** The balance of psychic forces was proposed for the first time by Marie Jahoda in 1952 as the sixth dimension to describe well-being. Marie Jahoda gave to this sixth dimension a unique role, since it was the hub in which the other five dimensions of well-being could find a balance and a synthesis. The balance of psychic forces is thus an essential feature for psychological harmony and well-being. **Methods:** This presentation will illustrate how the balance of psychic forces has been conceptualized over time in western culture and possible interventions aimed at empowering it when already present or building it from scratch. **Results:** The balance among psychic forces is a crucial dimension of well-being. It has been demonstrated that it can have a benefit in health status both in healthy subjects and in patients with diseases or disorders. Adaptation of existing interventions and specific interventions proposed and tested to empower or build them are currently available and in need of being implemented. **Conclusion:** A reflection of the role of the balance of psychic forces and well-being is needed to fully take advantage of its empowerment. Further evidence is necessary to gain a better understanding of it and on how to create or ameliorate it.

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### S16-02-C

#### Acupuncture and herbal medicines in the management of mental disease: past, present, and future

*Zhang-Jin Zhang*

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**Background:** There have been numerous psychological and psychiatric terms recorded in traditional Chinese medicine (TCM) bibliographies, developing a TCM specialty called mental-emotional diseases, where symptomatology, etiology, psychopathology and various therapies have been well established. **Method:** In TCM practice, acupuncture and herbal medicine are the mainstays of the management of mental-emotional diseases. Other TCM therapies, such as moxibustion, cupping, scraping, massage, dietary therapy, psychological consultant, aromatic therapy, exercise therapy (such as tai-qi), meditation, and mindfulness, are also often used in the treatment of mental symptoms and wellbeing. This talk will provide an overview of TCM psychological concepts, commonly used TCM therapies and evidence-based findings obtained from clinical trials. **Results:** Over the past two decades, there have also been numerous clinical studies showing the effectiveness and safety of herbal medicine and acupuncture in the treatment of mental disorders, including insomnia, mood disorders, anxiety, and schizophrenia. **Conclusion:** A vast repertory for the development of TCM strategies for mental diseases have been increasingly introduced into today's psychosomatic practice in general hospitals, in order to enhance clinical efficacy, reduce adverse effects caused by conventional treatments, and address comorbid symptoms.

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### S16-02-D

#### Chinese medicine for non-suicidal self-injury: data mining in clinical records

*Yan Li*

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**Background:** Non-suicidal self-injury (NSSI) is widespread in adolescents. Chinese medicine (CM) has proven successful treatments for NSSI among adolescents. **Methods:** The medical records of adolescent patients with NSSI in the past 3 years were reviewed. **Results:** A total of 206 cases were collected. The mean age was (15.17±1.74). 16.99% (n=35) was male and 83.01% (n=71) was female. According to the Internal Medicine of Traditional Chinese Medicine, the most common symptoms included those related to emotion (26.23%), the spleen and stomach (24.53%), and the heart (15.57%). The common tongue signs of NSSI among adolescents included greasy coating (20.14%), white coating (14.36%), light red tongue (14.54%), red tongue (14.19%), and light white tongue (34.6%). The common pulse signs included slippery pulse (19.44%), wiry pulse (18.89%), thin pulse (17.5%), sunken pulse (13.61%), and floating pulse (12.5%). The most common syndromes included spleen deficiency (74.51%) and liver depression syndrome (45.10%). Chinese herbs and formulae played roles in tonifying deficiency (922 times, 40.9%),

moving Qi (324 times, 14.4%), and removing dampness (135 times, 6.0%). **Conclusion:** Spleen deficiency is the fundamental pathogenesis of NSSI, encompassing psychological symptoms such as self-injury, worry, and panic, as well as somatic symptoms such as weakness, fatigue, and diarrhea. This customary interpretation of psychosomatic medicine from point of TCM will direct us in subtyping and providing precise treatment for NSSI.

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## S16-02-E

### Traditional Chinese medicine's five elements music therapy for depression – from music production to clinical application

*Lanying Liu*

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**Background:** Music therapy, a novel form of treatment, is gaining more and more attention. In the Huangdi Neijing, the oldest existing medical book in China, the five tones were introduced into the medical field for the first time. This connected the five tones of the scale (MI, SOL, DO, RE, LA) to the five internal organs (liver, heart, spleen, lung, and kidney) and five feelings (anger, joy, thought, sadness, and fear), and linked them with the theory of yin and yang and the five elements in an organic way. **Methods:** This report will examine how the Five elements music therapy (FEMT), a traditional Chinese medicine, can effectively reduce depression levels, improve mental symptoms and psychosocial functions in patients with depression, as well as the process of music production. **Results:** It has been demonstrated that FEMT can significantly reduce the core symptoms of depression, with a high rate of compliance and a better doctor-patient relationship, leading to improved clinical outcomes. **Conclusion:** It is a widely known fact that music can be a form of healing, and FEMT is a reflection of Chinese culture with a strong cultural affinity. Further evidence is necessary to gain a better understanding of the doctor-patient relationship and treatment adherence of FEMT in TCM.

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## S16-03-A

### Utilizing the Diagnostic Criteria for Psychosomatic Research-Revised (DCPR-R) in diverse cultural contexts: experiences and developments

*Yonggui Yuan*<sup>1</sup>, *Fiammetta Cosci*<sup>2</sup>, *Giovanni Mansueto*<sup>2</sup>, *Wei Xu*<sup>1,3</sup>

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<sup>3</sup>Department of Clinical Psychology, Northern Jiangsu People's Hospital, Yangzhou, China

**Background:** The Diagnostic Criteria for Psychosomatic Research-Revised (DCPR-R) is a valuable instrument for psychosomatic syndromes in addition to traditional psychiatric diagnostic nosology.

However, the cultural and healthcare system differences might reflect their influence on the DCPR-R. This symposium invites leaders and representatives from different cultural backgrounds to report on their recent progress on DCPR-R. **Methods and results:** Dr. Yonggui Yuan explored adapting DCPR-R to suit the Chinese clinical context better. This revision introduced new categories and redefinitions, creating the Chinese Psychosomatic Syndrome (C-PSS), which enhances diagnostic accuracy and management strategies. Dr. Giovanni Mansueto explored the prevalence of Allostatic Overload (AO) among subjects with chronic medical diseases and whether medically ill patients with or without AO differ in terms of specific clinical features. Dr. Wei Xu explored the distribution characteristics of DCPR-R syndrome in a clinical population of 6674 cases and 2500 controls. She will bring the recent report of the nationwide DCPR Study in Chinese General Hospitals (DCPRs-C), supported by the China Society of Psychosomatic Medicine. **Conclusion:** Discussions will cover their findings' clinical, educational, and research implications and explore the potential for international collaboration to advance the field of psychosomatic medicine. Participants will be encouraged to engage in dialogue about adapting the DCPR-R model to their local contexts to promote better integration of psychosomatic care into mainstream medical practices globally.

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## S16-03-B

### DCPR-R allostatic overload in the medically ill patients

*Giovanni Mansueto*

Department of Health Sciences, University of Florence, Florence, Italy

**Background:** This study aimed at examining the prevalence of Allostatic Overload (AO) among subjects with chronic medical diseases and exploring whether medically ill patients with or without AO differ in terms of specific clinical features. **Methods:** Outpatients with a diagnosis of blood cancer, systemic sclerosis, or migraine were recruited at the S. Chiara Hospital (Pisa, Italy) and the University Hospital Careggi (Florence, Italy). The MINI International Neuropsychiatric Interview, the Structured Clinical Interview for DSM-5, and the DCPR-revised Semi-Structured Interview were administered. The Chi-square test and multiple logistic regression analysis were run. **Results:** A total of 439 outpatients were enrolled. Among them, 39 patients had blood cancer, 200 had systemic sclerosis, and 200 had migraine. A total of 104 (23.69%) subjects had a diagnosis of DCPR-R AO, which was distributed among the three clinical populations without statistically significant difference. Based on regression analyses, those with DCPR-R AO were more likely to satisfy a DSM-5 diagnosis of major depressive episode/disorder and were also at higher risk of presenting DCPR-R diagnoses in the cluster of illness behavior and demoralization than those without DCPR-R AO ( $R^2 = 0.142$ ,  $p < 0.001$ ). **Discussion:** DCPR-R AO seems to be a transdiagnostic feature associated with other mental disorders and psychosomatic syndromes that may contribute to the disease burden in medically ill patients. Medically ill patients are in need of a comprehensive assessment, including the appraisal of DCPR-R AO and co-occurring mental and psychosomatic disorders.

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### S16-03-C

#### Psychosomatic syndromes in China: diagnosis, and public health strategies

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**Background:** Psychosomatic syndromes are increasingly recognized as significant health concerns worldwide. In the context of the Chinese population, understanding the unique characteristics and challenges associated with diagnosing these syndromes is crucial for effective healthcare management. This study aims to explore the landscape of psychosomatic syndromes in China, focusing on diagnostic challenges and public health strategies for prevention and management. **Methods:** Drawing on the 2017 editions of the Diagnostic Criteria for Psychosomatic Research-Revised (DCPR-R) and considering the current context in China, we formulated a modification plan through discussions with an expert panel and proceeded to conduct studies on the clinical reliability and validity of these adapted criteria. **Results:** In response to the current clinical realities in China, we have expanded DCPR-R by adding four new categories: neuroticism, body image disorder, doctor-shopping behavior, and somatic discomfort related to major illnesses or surgeries. Additionally, we have redefined hypochondriasis as “hypochondriacal concept,” focusing on areas such as stress and personality (allostatic overload, neuroticism, Type A behavior, alexithymia), illness behavior (doctor-shopping, hypochondriacal concept, disease phobia, thanatophobia, health anxiety, persistent somatization, conversion symptoms, anniversary reaction, disease phobia, body image disorder), and psychological manifestations (demoralization, irritable mood, somatic discomfort associated with major illnesses/surgeries, and secondary somatic symptoms). This comprehensive adaptation has resulted in eighteen diagnostic features that are encompassed in the newly established Chinese Psychosomatic Syndrome (C-PSS), which aligns with China’s national conditions and healthcare context. **Conclusion:** Preliminary clinical applications of C-PSS have demonstrated its utility, particularly for conditions undiagnosed by DSM-5, and have shown promising reliability and validity. Further clinical testing is required to confirm these findings.

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### S16-03-D

#### Diagnostic Criteria for Psychosomatic Research in 175 Chinese general hospitals: a nationwide survey

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**Background:** Diagnostic Criteria for Psychosomatic Research (DCPR) serves as an instrument for identifying and classifying specific psychosomatic syndromes that are not adequately encompassed in standard nosography. The present study aimed at measuring the prevalence of DCPR-R syndromes in different clinical settings and exploring risk factors for such diagnoses. **Methods:** A cross-sectional and cross-national design allowed to recruit 6,647

patients in different clinical settings: 306 had a diagnosis of fibromyalgia (FM), 333 had irritable bowel syndrome (IBS), 1,109 had migraine, 2,550 had coronary heart disease (CHD), and 2,349 had type 2 diabetes (T2D). Participants underwent DCPR-R diagnostic interviews and additional psychological evaluations. DCPR-R diagnoses prevalence was calculated, and potential risk factors for such diagnoses were examined. **Results:** Alexithymia was the most prevalent diagnosis (52.48%-70.47%), followed by demoralization (49.02% in fibromyalgia). Predictors of DCPR-R diagnoses included high anxiety or abnormal illness behavior, and poor well-being. Distinctive risk factors such as stress in FM and T2D (OR 1.24, 95% CI 1.06-1.46; OR 1.26, 95% CI 1.18-1.36), higher education in IBS (OR 1.69, 95% CI 1.15-2.48), being former smokers in migraine (OR 3.34, 95% CI 1.11-9.79), and both employment and former smoking in CHD (OR 1.61, 95% CI 1.07-2.46; OR 1.91, 95% CI 1.25-2.92) were also observed. **Conclusion:** Alexithymia and demoralization should become targets of specific psychological interventions if the aim is to improve the overall health status of patients. Risk factors such as anxiety, and abnormal illness behavior should also become targets of interventions as well as well-being, in need of being empowered.

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### S16-04-A

#### How mental health needs in hospitals are addressed in the East and West: development and advances in consultation-liaison psychiatry worldwide

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Psychiatric disorders such as depression, anxiety, delirium, and dementia are highly prevalent (up to one-third) in hospital settings, significantly impacting the delivery of medical and surgical care and contributing to elevated morbidity and mortality rates among psychiatrically comorbid inpatients. Consultation-Liaison (C-L) psychiatry is the branch of psychiatry that provides a crucial bridge between psychiatric expertise and medical practice, addressing the mental health needs of hospitalized individuals at the request of the treating medical or surgical consultant or team. However, the development of C-L psychiatry is subject to variations dictated by medical governance and financing structures in each country’s healthcare system, and C-L psychiatry around the world is in different stages of development and advancement. To foster collaboration and exchange insights, this symposium convenes esteemed leaders and representatives from the Chinese Society of Psychosomatic Medicine, Korean Psychosomatic Society, Japanese Society of General Hospital Psychiatry, and

Academy of Consultation Liaison Psychiatry. Together, they aim to assess the current state of C-L psychiatry within their respective countries, utilizing available data and sharing valuable experiences. The overarching objective of this symposium is to facilitate mutual learning and collaboration, establishing a platform for advancing the field of Consultation-Liaison psychiatry together.

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### S16-04-B

#### Consultation-liaison psychiatry in South Korea: current status, challenges, and future perspectives

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Although consultation-liaison psychiatry (CLP) in Korea has a relatively brief history, its growth has been remarkable in recent years. Rooted in the principles of Korean Oriental Medicine, which emphasize seamless interaction and complementarity between the mind and body, the psychosomatic approach is deeply ingrained in Korean medical tradition. The establishment of the Korean Psychosomatic Society (KPS) in 1992 was a pivotal moment for the field of psychosomatic medicine in Korea. Subsequently, the KPS initiated the Korean Journal of Psychosomatic Medicine in 1993 and introduced a specialist training program based on formal courses and examinations in psychosomatic medicine in 2008, significantly impacting the academic landscape. The publication of the first textbook on psychosomatic medicine in 2012, followed by a revised edition in 2022, further contributed to its development. At the governmental level, management of CL psychiatry data at the national level via the national health insurance system has been provided to facilitate big data analysis for researchers. However, despite these advancements, the practical application of CLP in medical settings remains limited. Challenges such as inadequate consultation time and low reimbursement rates hinder its widespread adoption. Additionally, societal stigma surrounding mental health care and a shortage of experts and subspecialty certification programs contribute to the underdevelopment of CLP in Korea. In addressing these challenges and differences, it's imperative to

continuously assess the current state of CL psychiatry in Korea based on available data. Furthermore, fostering international collaboration can offer valuable insights and opportunities for advancement in CLP. By leveraging shared knowledge and resources, the KPS can play a pivotal role in propelling CL psychiatry forward globally. This presentation aims to delve into these aspects, offering suggestions for collaboration and strategies to enhance CL psychiatry in Korea and beyond.

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### S16-04-C

#### Current state of consultation-liaison psychiatry in China and future directions

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Modern consultation-liaison psychiatry (CLP) in China traces its roots back to the late 1940s, primarily centered in large general hospitals located in metropolitan regions such as Beijing, Shanghai, Nanjing, Changsha, and Chengdu. However, the formal establishment of CLP in China did not occur until the launching of the Society of CLP and Chinese Society of Psychosomatic Medicine in 1991, and psychiatric care in general hospitals remains underdeveloped. As of 2020, the psychiatry departments of general hospitals in China have hired 45,246 healthcare professionals to address psychiatric issues in medical settings, but the number constitutes less than 20% of those employed in psychiatric hospitals around China. Moreover, less than 10% of the more than 600,000 beds designated for psychiatric patients were available in general hospitals. In response to these challenges, the CSPM and CLP societies have been proactive in efforts to enhance and raise social awareness about psychiatric care in medical settings. Recognizing the disparities in regional development, various CLP practice models based on locally available mental health resources have been devised to address the diverse needs across the country. Among these models, the Chinese Multidisciplinary Integrated Centers of Psychosomatic Medicines have been established, serving as organizational hubs aimed at optimizing CLP services. Additionally, the integration of Chinese Traditional Medicine into CLP practices has been explored, presenting opportunities for synergistic collaborations between Western and Eastern medicine. Furthermore, numerous projects emphasizing multidisciplinary collaboration rooted in CLP principles have been initiated and are being promoted. Throughout the presentation, detailed insights into the latest and evolving data concerning CLP in China will be shared, facilitating discussions among international colleagues and fostering innovation and expansion in the global field of CLP.



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## S16-04-D

### Consultation liaison psychiatry in Japan: current status, challenges, and future perspectives

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Consultation-liaison psychiatry (CLP) was introduced in Japan in 1977, but it was not fully appreciated until the establishment of the Japanese Society of General Hospital Psychiatry in 1988. The importance of psychiatry in medical settings was emphasized by the 2004 implementation of a new clinical residency system that mandated psychiatry training for all physician trainees in Japan. The 2012 revision of medical fee schedules provided additional financial impetus for the establishment and expansion of psychiatric liaison teams across hospitals in Japan. Yet, despite these advancements, several obstacles hinder the widespread adoption of CLP in Japan. In order to understand the barriers to the practice of CLP, it is essential to comprehend the healthcare system of Japan which segregates medical services and psychiatric services. This systematic separation between physical and mental healthcare constitutes a major challenge in determining where and how patients with psychiatric symptoms receive care. While approximately 1,600 hospitals with a total of 320,000 beds for psychiatric patients are available in Japan, only about a third of hospitals with 80,000 psychiatric beds are allotted to general hospitals where CLP could potentially take place. The remaining majority are standalone psychiatric hospitals, where limited access to adequate physical healthcare presents a serious problem. This presentation aims to spotlight CLP within general hospital settings and delve into its multifaceted roles within Japan's healthcare landscape, drawing insights from national survey data. As Japan grapples with a rapidly aging population and the escalating burden of healthcare, we will discuss the growing importance and associated challenges confronting CLP. Furthermore, we will offer reflections on the current scope of CLP in Japan and how it can serve as a catalyst for collaboration and enhanced healthcare management in the global field of CLP.

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## S16-05-A

### Physical illnesses in a new diagnostic and therapeutic psychosomatic perspective: dialysis patients, fibromyalgia and coronary heart disease

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In this symposium, we focus on physical disease and new developments in diagnosis and therapy in Japan and Germany. Yoko Tanemoto will speak about „Importance of Fatigue in Dialysis Patients. Takumi Izuno will present new data of a “Molecular biological analysis of the pathophysiology of fibromyalgia” and

Hans-Christian Deter and Anna-Sophia Grün will present new data of the long-term follow-up of the Berlin Anxiety Trial (BAT). At the end of the session, Makoto Hashizume summarize new data of the “Morita therapy – a Psychotherapy originating in Japan applicable to Physical diseases”.

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## S16-05-B

### Mind-body interactions underlying fatigue in hemodialysis recipients

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**Results:** Although depression is often discussed as a contributing factor to dialysis-related fatigue, our questionnaire-based study found no significant association between depression and fatigue in hemodialysis recipients. This absence of correlation may result from addressing the previously overestimated studies of depression. Our findings indicate that fatigue in patients undergoing hemodialysis is linked to specific illness perceptions and alexithymia. These patients tend not to recognize their stress as emotional responses but express it through physical symptoms, including fatigue. This might relate to mind-body interactions involving physical factors such as anaerobic metabolism, metabolic acidosis, and protein-energy wasting, which could also contribute to dialysis-related fatigue [1]. **Conclusion:** This talk explores the mind-body interactions underlying fatigue in hemodialysis recipients and discusses potential therapeutic targets from a psychosomatic perspective, aiming to fill the knowledge gap in effective treatments for this debilitating condition.

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### Association between the white matter microstructure and psychological factors in patients with fibromyalgia

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**Background:** Fibromyalgia (FM) is a disease characterized by chronic widespread pain concomitant with psychological symptoms such as anxiety, depression, and catastrophizing. In this study, we investigated the characteristics of the white matter microstructures of female FM patients and the association between factors identified by commonly used psychological indices and white matter microstructures. **Methods:** Thirty-nine female FM patients and 25 female healthy controls (HCs) were recruited for the study: five FM patients were excluded due to white matter lesions. The following analyses were performed: 1) Diffusion tensor images (DTI) were acquired for 34 FM patients (age  $41.6 \pm 7.4$ ) and 25 HCs (age  $39.5 \pm 7.4$ ). Tract-based spatial statistics (TBSS) was used to compare their fractional anisotropy (FA), which represents the degree of diffusion anisotropy, and mean diffusivity (MD), axial diffusivity (AD), and radial diffusivity (RD), which represent the magnitude of diffusion. 2) Data from the State-Trait Anxiety Inventory, the Pain Catastrophizing Scale (rumination, helplessness, and magnification subscales), and MRI were acquired for the FM patients. Correlation analysis was done of the factors identified using the psychological indices and DTI scalars. **Results:** We found that 1) FM patients had a lower mean FA value and higher mean MD and RD values than HCs. 2) There was a positive correlation between trait anxiety and FA values in the inferior fronto-occipital fasciculus, uncinate fasciculus, and internal capsule and a negative correlation with the MD value. Negative correlations were found between total score, helplessness, and magnification of the PCS and MD and RD values in the inferior fronto-occipital fasciculus, uncinate fasciculus, and internal capsule. Positive correlations were also found between helplessness and magnification and FA values in the inferior fronto-occipital fasciculus and a part of the uncinate fasciculus. **Conclusion:** Changes in the white matter microstructures of female FM patients may be related to anxiety and pain catastrophizing.

### Males with Coronary Heart Disease (CAD) die earlier during long-term follow-up than CAD females – results of the Berlin Anxiety Trial (BAT)

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**Background:** Long-term studies in CAD have shown that the severity of disease and cardiovascular risk factors are predictors of all-cause mortality (ACM). Studies on gender and its association with the effects of psychosocial intervention (PSI) are rather rare. Based on the endocrine situation, we hypothesized (1) that men would die earlier than CAD women, and in conjunction with women's openness to psychological problems (2) that psychosocial treatment would reduce ACM more in women than in men. **Methods:** We collected data on ACM of  $n=180$  CAD patients (mean age 60.6 years, 26% women) who were included in three studies in the years 2004-11 (SPIRR-CAD trial, SPIRR-CAD pilot study and Berlin Anxiety Trial). Samples consisted of depressed or anxious CAD patients. Depression was assessed by the HADS. ACM was assessed using a community-based registry. We compared ACM in male vs. female patients. Adjusted models including psychosocial intervention, age and left ventricular ejection fraction (LVEF) as control variables. **Results:** We obtained information on ACM in 175 patients (96.7%) after a mean $\pm$ SD follow-up of  $13.6 \pm 2.1$  y. (range 10.5-17.3 y). Of these participants, 53.2% had prior myocardial infarction, 88.4% reported NYHA class I and II dyspnea. Mean HADS depression score was  $8.3 \pm 4.0$  at study entrance. Deceased patients had a lower LVEF ( $53.9 \pm 15.4$  vs.  $61.0 \pm 10.0$ ,  $p=.006$ ), and were significantly older ( $66.1 \pm 8.8$  vs.  $58.4 \pm 8.5$ ,  $p=.001$ ). Logistic regression to mortality showed age (HR 1.192,  $p=.001$ ), EF (HR: .94,  $p=.001$ ) and sex (HR: 1.175;  $p=.035$ ) as significant factors. CAD men showed a higher ACM than CAD women (OR: 1.62). Men in the intervention group (IG) showed a lower mortality than the control group (CG; OR: 0.72). IG women had a higher mortality rate than CG women (OR: 2.1), but all these results were not significant. Patients were about to undergo a psychosocial intervention, which could be interpreted as motivation to adjust disease management and change health behaviors. **Conclusion:** Consistent with our hypothesis, gender was a significant predictor of ACM. Survival was higher in men who received psychosocial intervention than in non-treated men. Treated CAD women had the lowest survival rate. Although these results are not significant, they were somewhat surprising and were not consistent with our hypothesis. To understand the gender issue in CAD, we need more intervention studies with long-term follow-up. The mixed-gender CAD groups used here may not be as effective as the homogeneous female groups.

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## S16-05-E

### Morita therapy – a psychotherapy originating in Japan applicable to physical diseases

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Among the various psychological therapies used in the practice of psychosomatic medicine in Japan, Morita therapy is effective for many patients with physical diseases. Here the author would like to give an overview of Morita therapy and introduce some clinical cases. Morita therapy is a psychotherapy founded by Shoma MORITA around 1919 in Japan. He initiated his original way of treatment for patients who are characterized by introversion and perfectionism, and have high need for self-control. Morita regarded anxieties and fears not as pathological symptoms, but as a reflection of innate desires to live a better life. He considered mania preoccupation which induces vicious cycles of symptoms as a psychophysiological mechanism; the patients' attitude to intentionally control their anxiety paradoxically intensifies their symptoms. Vicious cycles are assumed between symptoms and attention, and between real feeling and unrealistic thinking. To get out of these vicious cycles, Morita instructed a unique way of coping, which is called "Arugamama" in Japanese or "Being as it is" in English. First, patients should not fight their symptoms or anxieties, but they should learn to leave and accept them as they are without trying to manipulate them. Second, patients are encouraged to find their innate desires for life. Morita emphasized that "fear of symptoms" always coexists with the "desire for life" and he persuaded his patients to transform their desire for life into constructive actions. Although Morita therapy is one of the psychotherapies that originated in Japan, the author believes that it has universality not only within Japan but across cultures as well.

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## S18-01-A

### Involving our patients in research for better treatment and care – concepts and perspectives for participatory approaches in psychosomatic clinical studies

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Collaboration with people who are themselves affected by a disease is currently a hot topic in medicine and the health sciences under the term Patient & Public Involvement (PPI). PPI involves participatory cooperation between scientists or practitioners with patients, relatives or other affected persons, ideally throughout the entire process of research and implementation. People who are themselves affected by a disease have valuable experiential knowledge that can make key contributions to clinical and health services research, for example, in the prioritization of research questions, conceptualization of interventions and forms of care, identification of relevant outcomes, and dissemination of results. While PPI is already highly valued in some countries, e.g. in the UK, its potential is still very little used in Psychosomatic Medicine in general

and also in most health care systems so far. The symposium aims to highlight the potential of patient involvement in Psychosomatic Medicine. The individual contributions will present concepts and perspectives for the involvement of experts by experience from various ongoing effectiveness studies and in the provision of care.

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## S18-01-B

### Structured peer-support for people with rare diseases on the example of the international project Q.RARE.LI

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**Background:** Individuals with rare chronic diseases have a high need for psychosocial support, which often remains insufficiently met. The large number of different rare diseases and the geographical dispersion of affected individuals greatly complicate the care of this patient group. At the Department of Psychosomatic Medicine and Psychotherapy of the University Medical Center Hamburg-Eppendorf, Germany, a psychosocial support program specifically for people with rare diseases has been developed together with a patient organization. The program is based on peer-support and can be applied transdiagnostically. In an initial efficacy study, the program led to improvements in various health outcomes such as mental quality of life and disease acceptance, and was highly rated by participants (Depping et al., 2021, *JAMA Psychiatry*). **Method:** Participants in the support program work on a structured self-help book from home over a period of six weeks, based on Acceptance and Commitment Therapy. Additionally, they engage in a weekly 30-minute supportive phone call with a peer counselor. Peer counselors are trained beforehand and provided with a counseling guide and supervision. As part of the international research project Q.RARE.LI, the effectiveness of the program in the routine care of people with rare liver diseases is being investigated. For this purpose, N=253 patients have been included in an ongoing randomized controlled trial, and the program is additionally evaluated in a mixed-methods program evaluation. Subsequently, the program is planned to be implemented in routine care in five different healthcare

systems (Germany, Canada, Belgium, Poland, and Hungary). **Results:** This contribution presents a peer-concept as part of the symposium “Involving our patients in research for better treatment and care – concepts and perspectives for participatory approaches in psychosomatic clinical studies”. The program specifically targets individuals for whom healthcare services are often difficult to access. Since it is cross-disease and location-independent, it has the potential to address the unmet need for psychosocial support in people with rare diseases and presents a way to effectively involve patients into healthcare practices.

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### S18-01-C

#### Peer-support in chronic diseases from a peer-supporter’s perspective: a systematic review

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**Background:** Peer-support can be a valuable addition to routine medical care for patients. Chronic diseases often come with a lower quality of life and an increased risk of loneliness. Peer-based interventions, in their ability to provide social support and connectedness, can improve coping with the illness. Although the benefits of peer-support have been widely proven, the majority of research has focused on the recipients. Given that peer-supporters is a crucial component of this type of support, it is of great importance to consider their perspective. The aim of this systematic review is to provide an overview of the existing literature on the experiences of peer-supporters in the field of chronic diseases. **Methods:** We conducted a systematic search in four databases (PubMed, PsychINFO, Psyn dex, Web of Science). The search term combines frequently used synonyms for peer-support with MeSH-Terms and keywords for “chronic disease” as well as chronic diseases listed in the WHO definition. We included empirical studies that address peer-support in chronic diseases from the perspective of peer-supporters (>18 yrs). There were no limitations regarding the form of support, but all outcomes had to be clearly attributable to the peer-supporter. This included all qualitative, quantitative and mixed-methods evidence on the peer-supporters’ experience. **Results:** We found n=9134 studies. After removing duplicates, the titles and abstracts of the remaining studies (n=5095) were screened for eligibility. All studies considered meeting the inclusion criteria (n=574) were then independently reviewed by two researchers as full-text. N=75 studies are considered eligible for data extraction and synthesis, which will be finalized until the congress. First insights indicate that the method and quality of the studies vary widely. Delivering peer-support brings multiple benefits, such as feeling needed and adding value, increased confidence or improved management of the own illness. Challenges include organizational demands, dealing with different needs and emotions, or insufficient support. Training and exchange with other peer-supporters function as facilitators. **Conclusion:** This review helps to understand the experiences and effects that peer-support programs can have on peer-supporters. Thereby, we will be able to derive

implications for future peer-support programs in the field of chronic disease that are beneficial not only for the recipients but for all included parties.

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### S18-01-D

#### Participatory development of evidence-based patient narrative videos for patients with eating disorders: results from a pilot study

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**Background:** Patient Narratives, i.e., recovery stories of persons previously affected by a mental health disorder, can provide feelings of hope and understanding to persons currently affected. The use of patient narratives could be a promising approach to increasing treatment motivation and uptake behaviors of patients with eating disorders. The aim of this pilot study was the collaborative development of evidence-based patient narrative videos and the assessment of their perceived authenticity, empathy and usefulness with healthy participants. **Methods:** A series of patient narrative videos were created using a multi-stage participatory process. A former and recovered patient with an eating disorder was recruited as a lived experience representative to share her treatment-experiences. A psychotherapist of the same age and gender as the lived experience representative was recruited to share the same information from a professional perspective. Control group videos were created with the lived experience representative, regarding a somatic condition unrelated to eating disorders. The degree of emotionality of the content was further varied between the videos, so that each video perspective featured both a lower emotionality and a higher emotionality version. **Results:** All videos were assessed as being “good” to “acceptable” and the majority of participants reported that the length of the videos was “just right”. When asked which level of emotionality they preferred, 68.4% of participants reported they preferred the videos with higher emotionality. Initial results show significant differences between the different perspectives of the videos (i.e., lived experience, psychotherapist, and control group) in regard to the authenticity, empathy, and usefulness ratings, wherein the lived experience videos were rated the highest, followed by the psychotherapist and control group videos, respectively. These results will be presented in more detail. **Conclusion:** Patient Narrative Videos were perceived as being authentic, empathic and useful by healthy participants. Significant differences were found in the ratings of the videos, with participants showing a preference for videos with eating disorder content and a higher level of emotionality. A 4-arm randomized controlled study is currently being completed to assess the effects of patient narrative videos on the treatment motivation and uptake of treatment services for patients with eating disorders.

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## S18-01-E

### Peer-led support for individuals experiencing unemployment and mental health issues: Findings of the 3For1 project

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**Background:** Unemployment remains a significant individual and social issue. Individuals affected by unemployment not only face massive financial distress, they are also at a higher risk of experiencing psychological distress and mental disorders, such as depression and anxiety disorders. The stigma surrounding mental illness and unemployment can also cause feelings of shame and may result in the avoidance of seeking professional help. Also, individuals experiencing psychological distress and unemployment often encounter additional challenges when looking for support due to prejudice and stigmatization. This often leads to a self-perpetuating vicious circle of psychological distress and unemployment, resulting in long-term unemployment and chronic mental health issues. **Methods:** To address this issue, the joint project 3for1 - 3 paths, one goal - was established. 3for1 is a multi-centre intervention aimed at supporting individuals experiencing psychological distress and unemployment. 3for1 is a pilot project funded by the German Federal Ministry of Labour and Social Affairs as part of the 'Innovative ways of participation in working life - rehapro' programme. Participants of 3for1 receive individually tailored support using three modules: (a) a low-threshold psychotherapeutic consultation; (b) job coaching aiming at a swift and needs-oriented placement on the primary labour market; and (c) peer counseling provided by peer-guided recovery counselors with *lived experience*. Recovery counselors have a history of mental distress, life crises or unemployment and may offer support at eye level. **Results:** The involvement of individuals with lived experience bears the opportunity of opening up new perspectives for the health promotion of people affected by unemployment, as well as for the associated accompanying research and mental health recovery. **Conclusion:** The congress presentation will include an overview of the 3for1 project with a specific focus on the characteristics of individually tailored support, challenges and opportunities, as well as practical examples.

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## S18-01-F

### Participatory patient involvement in psychotherapy research for eating disorders: experiences and perspectives from a randomized controlled efficacy study

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**Background:** The advancement of more effective therapy and care is a priority in eating disorder research. The inclusion of people with lived experience of eating disorders can enrich and accelerate this process, as experts with lived experience can contribute their own perspectives on the disorder and its treatment. Although the inclusion of experiential knowledge in eating disorder research is increasing, it has not yet been implemented in a structured way in clinical studies, and there is a lack of evidence on the concepts and processes of clinical participatory research. The presentation presents the participatory collaboration with experiential experts in the randomized controlled efficacy trial SUSTAIN, in which a novel psychotherapy for anorexia nervosa is being investigated. **Methods:** In 2020, people who have lived experience with anorexia nervosa as relatives or sufferers were recruited throughout Germany to participate in SUSTAIN. The experience advisory board consists of 16 people with a median age of 44 and accompanies the study throughout its entire duration. The collaboration is structured through workshops at annual face-to-face meetings and regular online meetings in between. At the beginning and after 2.5 years of collaboration, anonymous online surveys were conducted to assess motivation, experiences and effects of the advisory board's work. **Results:** On average, the lived experience experts report a high to very high level of motivation for their work and rate the work of the advisory board as satisfactory. The amount of work involved in the advisory board work was assessed as neutral. The experience experts rated the appreciation from the study team, their own increase in knowledge, and the contribution of their own experience as positive. No one reported destabilizing effects of the advisory board's work; individual members felt strengthened in coping with anorexia as a result of the advisory board's work and felt that the work contributed to destigmatizing the eating disorder. **Conclusion:** The structured and long-term involvement of experiential experts in clinical eating disorder research is complex but feasible, has predominantly positive effects for the study team and the experiential experts and has great potential for improved scientific and clinical processes and results.

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## S20-01-A

### Oriental treatment methods used in psychosomatic medicine

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In this symposium, we are proud to present therapies that are common to Japan and that are spreading throughout the world. Many are based on traditional Oriental therapies from China and India, but they have been modified to fit Japanese cultural and medical needs, mixing traditional therapies with cutting edge therapies developed throughout the world. We are especially happy to feature Dr. Eory from Semmelweis University in Hungary, who will present her experience with Accupuncture. We start with a background of Psychosomatic medicine in Japan by Prof. Kubo, followed by presentations on Nikan Therapy by Dr. Kawai, Kampo Therapy by Dr. Okumi, and Yoga Therapy by Dr. Kimura.

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## S20-01-B

### History and current status of psychosomatic medicine in Japan

*Chiharu Kubo*

Faculty of Nutrition, Nakamura Gakuen University, Fukuoka, Japan

From its origin in traditional Oriental medicine, psychosomatic medicine in Japan has progressed to where it now includes a unique blend of ancient and modern treatment modalities. In this presentation, I will start with a background of the history of psychosomatic medicine in Japan and its introduction to Japan by Prof. Yujiro Ikemi, followed by a discussion of how it is currently practised in Japan. The talk will present descriptions of specific therapies that are unique to Japan or that have been modified to fit the Japanese context, such as Naikan, Kampo, Yoga, and Accupuncture, moxa cautery, and Morita.

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## S20-01-C

### Naikan therapy for lifestyle-related diseases

*Keisuke Kawai*

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**Background:** Naikan Therapy is a Japanese psychotherapy founded by Yoshimoto Ishin in the 1960s, based on Buddhist practice. Japan Naikan Association and International Naikan Therapy Conference have been established for research and promotion of the therapy. **Method:** In this therapy, a folding screen is erected in a corner of a room, and the patient sits alone in this space from morning to evening for one week. During this time, the participants are asked to chronologically examine their past behavior and

attitudes toward people with whom they have had close relationships. The interviews will be conducted on three themes only: “What others have done for me.”, “What I have done for others in return.”, and “What trouble I have caused to others.” The interviewer conducts a 2-3 minute interview every two hours. Naikan therapy does not aim to eliminate symptoms. As the patient progresses through the process of this therapy, he or she is exposed to the contradiction between self-centeredness and acceptance without judgment by others, which shifts his or her fixed point of view. Of course, Naikan therapy does not directly cure the internal disease itself. The patient’s mind becomes receptive to the disease, the recuperation behavior changes, and the symptoms improve spontaneously. In the medical field, it was introduced to treat alcoholism, anxiety, depression, and eating disorders. In addition to that, we have adapted Naikan therapy to lifestyle-related diseases such as obesity and diabetes that are refractory to ordinary medical treatment. Those cases will be presented in this presentation.

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## S20-01-D

### Japan’s pride in Kampo medicine and psychosomatic correlation

*Hirokuni Okumi*

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Kampo medicine, “Traditional Japanese medicine”, was imported from China and Korea over 1,300 years ago and has evolved in its own unique way to the present day. Kampo medicine uses a unique method of medical examination to determine the symptoms and treatment. While this perspective has a great affinity with psychosomatic medicine, which advocates a psychosomatic correlation between mind and body, But it is only about 60 years since Kampo medicine has in clinical usage in Japan because there was a period when it was denied. This notion has led to a contradiction in which the original diagnostic methods of Kampo medicine have not yet been fully penetrated to all doctors in medical education, while nearly 90% of doctors has prescribed some crude drugs of Kampo medicine. This is different from Korea and China, where the two licensing systems of traditional medicine and Western medicine coexist. In addition, Japan’s medical insurance system is limited in which covers only herbal medicines and extracts listed in the pharmacopoeia. In addition, unlike other East Asian countries, Japan has a different qualification system for drugs and other Oriental medicine procedures such as acupuncture, moxibustion, and massage, which makes it difficult to fully utilize a unified approach to Oriental medicine. This presentation will explain the history of Kampo medicine and its problems in modern medicine, and explore its actual and potential applications in psychosomatic medicine.

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## S20-01-E

### Attempt at yoga therapy for patients with eating disorders

*Keishin Kimura*

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**Aims:** In recent years, there has been an increase in patients with eating disorders characterized by abnormal eating behaviors and a strong preoccupation with weight and appearance, significantly impairing both mental health and daily/social life. We have been implementing an integrated treatment approach that includes various group therapies in addition to the basic treatment. This presentation reports on our attempt and observational results of group yoga therapy for patients with Anorexia Nervosa (AN). **Methods:** A retrospective study was conducted on 88 AN patients who underwent group yoga therapy from July 2019 to August 2023. The average BMI was 14.82, and the average age was 30.7 years. Under the supervision of a psychosomatic physician, a yoga therapist conducted sessions including practices (asanas/breathing exercises/meditation/psychoeducation) and sharing, totaling approximately 80 minutes. The sessions emphasized adjusting activity levels and intensity due to decreased physical strength, focusing on safety for individual complications, and conveying the preciousness of life. **Results and discussion:** Based on self-evaluations before and after the practice, many AN patients reported perceiving physical and psychological improvements. No worsening of physical complications was observed during the study. **Conclusion:** The observational results suggest that group yoga therapy, as one of the group therapies for AN patients, can contribute to alleviating patients' primary complaints and emotional improvement, thus enhancing the effectiveness of the basic treatment.

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## S20-01-F

### Acupuncture

*Ajandek Eory*

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**Background:** Traditional Chinese Medicine (TCM) originated in China over 5000 years ago. TCM has been included in the ICD-11 under the name Traditional Medicine since 2022. It is a diagnostic and therapeutic system which considers the interrelationship between humans and the environment (macrocosmic correspondences) and views health as a balanced state of mind and body (microcosmic correspondences). It assesses disease as an imbalance, that can arise from either external causes, such as environmental factors or internal causes, such as emotions, if either is too intensive or long-lasting. While an external factor is likely to cause acute illness first, which can be treated based on its symptoms, a disbalance caused by emotions can directly affect internal organs and their bodily networks, potentially causing somatic symptoms related to the constituents of these networks and leading to chronic conditions. In cases of chronic illness, it is important to discover and treat the original source of the disbalance alongside current symptoms to achieve optimal results. The diagnostic and

therapeutic framework is based on the Yin-Yang and Five Phases theories, and the symptoms and signs presented by the patient are elaborated, adding pulse and tongue diagnosis to determine the origin (root cause) of the imbalance and define therapeutic targets with the patient. Treatment modalities are non-verbal and can effectively address emotional and somatic imbalance through the energy channels (meridians) that connect the skin surface with the internal organs and related networks. **Method:** Needling (inserting acupuncture needles into meridian points), massage and energy can be used on the skin, while herbal medicine containing 4–20 ingredients may be applied internally, either alone or in combination. Chinese culture promotes preventative measures such as eye massage in schools to prevent myopia and physical exercises like Tai Chi and Qi Gong to improve overall health. **Conclusion:** These methods have been scientifically proven to be effective and are therefore available in many countries as part of nationally reimbursed healthcare. In her presentation, the author will introduce Traditional Chinese Medicine (TCM) through a clinical case study and discuss its application in Hungary.

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## S22-01-A

### Clinical interviewing: an essential method of medicine and an advanced art for clinicians

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**Background:** The effectiveness of a physician very much depends on skills in eliciting information from the patient by interview and observation, and on the ability to interpret such clinical information. Clinical interviewing has multiple purposes which include patients' complainings, beliefs toward their symptoms, individual attitudes and behavior related to health and disease and those crucial determinants such as lifestyle, presentation of symptoms, behavior of health care seeking and adherence to medical advice. In addition, the initial interview establishes a dialogue between patient and physician that is instrumental for evaluating subsequent responses to treatment and discrepancies that may arise from objective findings and subjective perceptions. The goal of this symposium is to promote "soft" strategy and tactics in clinical practice by discussing on clinical interviewing as a neglected essential method of medicine and save the lost clinical art for clinicians from all medical setting like general practitioner, gastroenterologist and cardiologist. Teaching interviewing for medical students and young clinicians become a basic part to arrive at the goal of the

effort especially in biomedicine predominated and electronic medical recording driven times. **Structure and Articulation of the symposium:** It will be co-chaired by J. Cao and C. Rafanelli. The order of presentations is as following: 1.G. Fava: a leading talking on general aspects of clinical interviewing as a neglected basic method of medicine and an advanced clinical art for clinicians. 2. A. Eory on Clinical interviewing in general practice. 3.: J. Cao on clinical interviewing in practice of gastroenterology, which will include medicalized empathy, psychosomatic assessment, weakening stigma and arousing motivation for psychosomatic intervention for patients with GI disorders to get a global rehabilitation of high quality. 4. C. Rafanelli on clinical interviewing in clinical cardiology and its significance in clinical outcome and comprehensive rehabilitation in heart diseases. 5. R. Erschens will mainly concern teaching interviewing for medical students and young clinicians.

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## S22-01-B

### The art of clinical interviewing

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Clinical interviewing is the basic psychosomatic method to understand how a person feels and what are the presenting complaints, obtain medical history, evaluate personal attitudes and behavior related to health and disease, give the patient information about diagnosis, prognosis and treatment, and establish a bond between patient and physician that is crucial for shared decision-making and self-management. The quality of interviewing determines the quality of data that are collected and, eventually, of assessment and treatment. The art of interviewing consists in applying the most appropriate approach to the individual in a specific setting, where observation, introspection, and dialogue are basic ingredients for making patient data scientific. However, current health care trends privilege expensive tests and procedures and tag the time devoted to interaction with the patient as lacking cost-effectiveness. Instead, the time spent to enquire about problems and life setting may actually help to avoid further testing, procedures and referrals.

Moreover, the dialogue between patient and physician is an essential instrument to increase patient's motivation to engage in healthy behavior. Thus, interviewing deserves more attention in educational training and more space in clinical encounters than it is currently receiving.

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## S22-01-C

### Clinical interviewing in general practice

*Ajandek Eory*

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**Background:** General practice has a special place in clinical medicine. Representing the first line of accessible treatment general practitioners meet the widest possible range of patients, they deliver care within the community they serve, while following their patients during their life, providing a holistic, generalist approach in the context of the individual. The generality of their approach requires knowledge and understanding of the complexity of the patient, which dynamically changes in time and according to the environment. **Method:** The evidence-based model is of restricted use in most cases because the majority of patients present symptoms and signs which cannot be fully explained by the linear, scientific model. To prevent failure, it is crucial to consider the patients' health and illness narratives, as well as the context in which these problems arise. During clinical interviews, the general practitioner should identify the nature of the problem, possible actions, and common goals of the intervention. Shared understanding is essential to achieve congruence and establish a common knowledge base, which can help avoid undertreatment or escalation of illness that does not fit into current models of healthcare. Consultation should be approached as a social interaction that empowers the patient rather than undermining their self-management. The general practitioner is faced with complexities and uncertainties that change over time depending on contextual factors. To fit into a dynamic model of practice that recognizes the changing nature of illness and the importance of patient-centered medicine, the clinical interview should be conducted using an appropriate range of knowledge to explore and interpret the illness experience with the individual patient. Interpretive skills are key for general practitioners to improve accountability through mutual understanding and patient activation, benefiting both parties.



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## S22-01-D

### Clinical interviewing in gastroenterology: fundamentals and art

*Jianxin Cao, Lixin Ding*

Psychosomatic Gastroenterology Institute/Department of psychosomatic gastroenterology, Soochow University/Changzhou First People's Hospital, Changzhou, China

**Background:** Clinical interviewing in gastroenterology is composed of two aspects: basic and art. Goal of basic aspect is to collect information for GI related diseases diagnosis and art aspect is not only helpful for diseases diagnosis but necessary for treatment decision and adherence to certain intervention as well, especially psychosomatic related intervention. In addition, clinical interviewing play a very important role in global rehabilitation for patients with not only functional disorders but also organic GI diseases. Art aspect of interviewing is the most effective method to prevent iatrogenic stress. The two parts can be described in separate way but are practiced in integrated psychosomatic way and play an important part in the whole clinical course of an individual patient.

**Contents:** The presentation will include specified "medicalized" empathy, conventional biological and comprehensive psychosomatic assessment, relieving stigma of symptom attribution and psychotropic medication, and arousing motivation for psychosomatic intervention for comprehensive and high quality of global rehabilitation in patients with refractory GI diseases or especially functional GI disorders. **Conclusion:** Structural interviewing for training young gastroenterologists seems to be developed though it is not really needed for those experienced ones.

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## S22-01-E

### Clinical interviewing in cardiology

*Chiara Rafanelli, Graziano Gigante, Regina Subach, Sara Gostoli*

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Clinical interviewing is useful for detecting the medical indices of heart disease, disease severity and unhealthy lifestyle in the context of the so-called lifestyle medicine. These indices may or may not be linearly associated with patients' suffering from a psychological point of view. Suffering in cardiology is a broad concept, which includes not only the clinical manifestations of depression or anxiety, but also the subclinical and/or psychosocial aspects of distress such as minor depression, demoralization, abnormal disease behavior, allostatic overload. These factors can influence, beyond medical parameters, the clinical course of heart disease, prognosis, adherence to treatment, and healthier lifestyle. A paradigmatic example of the importance of clinical interviewing in cardiology is summarized in the ESCAPE project (Horizon 2020). It focuses on the crucial role of clinical interviewing in distressed heart failure patients, allowing the care manager to provide interventions tailored to patients' specific needs. It also implements a joint assessment and intervention process led by a collaborative team of experts including general practitioners, cardiologists, psychosomatic experts and pharmacologists, offering insights into physical, mental and pharmacological aspects that may affect patients'

quality of life and the course of their disease. In conclusion, dedicating time focused on the patient through clinical interviewing is useful for detecting the above-mentioned aspects and benefits the relationship between doctor and cardiac patients, according to a shared intent (patient-centered approach), also to improve motivation for treatment.

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## S22-01-F

### Clinical interviewing in medical education: integrating and evaluating traditional and innovative teaching methods

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**Background:** Clinical interviewing is a fundamental aspect of medical practice, playing a pivotal role in diagnosis, treatment, and patient engagement. It is of great importance to ensure medical students receive comprehensive training in these skills at an early stage. Based on our own research, we developed and evaluated various traditional and innovative methods and tools to familiarise medical students with different clinical interview scenarios. **Methods:** The studies presented here report on well-established teaching scenarios, including small-group teaching with role-playing, interviews with real and standardised patients and structured feedback. Additionally, they encompass more innovative client-centred communication methods based on empathy, such as motivational interviewing (MI), which aim to promote behavioural change in patients. Peer-assisted learning approaches, such as medical history groups, are based on self-organised learning, authentic patient contact and reflective exchange with peer feedback at "eye level". Technological advances have played an important role in changing communication patterns. In recent years, we have been particularly integrated innovative AI-based technologies, app-based applications and chatbots. **Results:** The findings indicate notable advancements in several domains, including enhanced empathy and patient care, more profound reflection in interactions with colleagues and teachers on matters pertaining to "shared memory," "personal encounter," and "helping alliance," and enhanced communication abilities of medical students in specific contexts. The integration of AI and digital assistance systems such as chatbots has enabled the identification of pertinent requirements for the prospective integration of AI into the medical curriculum. Furthermore, it has facilitated an initial grasp of the potential opportunities, limitations and risks associated with the technology, as well as its possible applications. **Conclusions:** Our findings indicate the significance of diverse didactic approaches utilising diverse technologies and novel digital support systems to facilitate the empowerment of medical students in clinical interviewing. Furthermore, early contact with real patients, the opportunity to learn from and with professional role models, and the chance to reflect on one's own experiences and self-projection with mentors and peers are all important factors in this process.

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## S22-02-B

### Behavioral health integration into an academic neurology department in USA

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Neurologists and Psychiatrists have long recognized the frequent co-occurrence of neurologic and psychiatric conditions within their clinical settings. Commonly seen psychiatric conditions among patients with neurological disorders include depression, anxiety, and functional neurological disorders. Thus, it is vital for both neurology and psychiatry to collaborate to provide well-rounded patient care. In 1977, at the University of Rochester Medical Center (URMC), Dr. George Engel developed the biopsychosocial approach, which has been widely adopted as a standard model of care. At URMC, the departments of neurology and psychiatric bear legacy to Dr. Engel's tradition by focusing on an integrated view of human health. We designed a multidisciplinary mental health clinic embedded in an academic neurology setting, which allows us to capture patients who are often left unsupported and undertreated. Launching in September 2021 with one post-doctoral functional neurology psychology fellow, our embedded clinic grew over the next year to include a psychologist, psychiatrist, and two masters' level therapists. Overall, the referral volume from 188 total in the fiscal year of '22, to 609 referrals in the fiscal year '23 demonstrates the significant need for psychiatry services like ours in other neurological settings. For the purpose of this symposium, we will (1) present a history of collaboration between our departments of psychiatry and neurology, (2) provide an overview of how we developed our embedded clinic within the guidelines of regulatory bodies within New York State with the goal of improving access to care, (3) review referral data, and (4) discuss our lessons learned and recommendations.

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## S22-02-C

### Developing psychosomatic medicine workshop for medical doctor in Indonesia : 7 years experience

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Psychosomatic Medicine (PM) is a multidisciplinary field that investigates the intricate relationship between the mind and body, emphasizing how psychological factors can impact physical well-being. In 2017, the author initiated a series of psychosomatic medicine workshops specifically designed for medical doctors. Over the course of several years, six workshops have been conducted in various regions within Indonesia. The primary objective of these workshops is to equip medical doctors with a foundational understanding of psychosomatic medicine, encompassing key concepts and their clinical relevance. The workshops commence by elucidating the definition and scope of Psychosomatic Medicine (PM), with an emphasis on stress, emotions, and mental health, all within the framework of psychoneuroimmunology. Moreover, practical examples of psychosomatic issues encountered in daily medical practice, as well as psychiatric comorbidity in medical illnesses, are

discussed. The workshops underscore the significance of assessment, diagnosis, and the recognition of psychosocial factors during medical presentations. Further attention is devoted to the indispensable role of psychoeducation and patient empowerment in addressing psychosomatic problems. Although the workshops focus primarily on pharmacological treatment and supportive psychotherapy as intervention approaches, the modules also incorporate case studies and practical applications of PM within daily medical practice. To foster active engagement and collaboration, participants are divided into groups during the workshops. These groups are provided with case examples to stimulate discussions and facilitate the exchange of ideas. Additionally, participants are apprised of current research trends in psychosomatic medicine, enabling them to integrate evidence-based practices into their clinical approaches. The workshops have received positive feedback from participants, with an overall satisfaction rating of 4.3 out of 5. This underscores the effectiveness and value of the training in enhancing participants' knowledge and understanding of psychosomatic medicine.

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## S22-02-D

### Development and application of Autogenic Training in the field of psychosomatic medicine in Japan

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**Background:** Autogenic training (AT) is one of the major psychotherapies in the field of psychosomatic medicine (PSM) in Japan. The Japanese Society of Autogenic Therapy (JSAT) was established in 1978 by Prof. Yujiro IKEMI who is the pioneer of PSM in Japan and founder of the Japanese Society of Psychosomatic Medicine (JSPM). Many clinical and basic investigations have been made and the accumulations of knowledge have been contributory for elucidation of the usefulness in the clinical setting and mechanisms of effectiveness of AT. Here we summarize our investigations and report some main studies. **Results:** Murakami reported the application of AT for the health promotion of industrial employees in cooperation with Japan Productivity Center. Many biological and psychological effectiveness were demonstrated and modified AT was adopted for the health promotion of variable companies, Murakami also observed the change of lymphocyte population during the AT and found the immune regulation effects. Koike et al. made many clinical experimental trials in the

field of dentistry. They made and proved several important discoveries to control the anxiety and pain of patients by conducting the AT and they also proved the improvement of stress related function of salivary secretion and halitosis. Shinozaki et al. made unique basic investigations using the functional MRI. They found the change of blood flow in the brain of the experimental subjects during conducting AT and elucidated the biological mechanism of effectiveness. **Conclusion:** With the use of advanced latest technologies, clinical and fundamental research will be promoted to explain the usefulness and effectiveness of AT and also lead to development of psychotherapy and psychosomatic medicine.

## ST01-01

### Temperamental sensitivity, attachment dimensions, conflicts with parents and psychopathological symptomatology in children and adolescents suffering from headache: a case control study

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**Background:** Primary headache is one of the most common somatic complaints in children and adolescents with an estimated prevalence of 10–20% in the school-age population. Several biological, psychological, parental/social dimensions can contribute to both the onset and maintenance of headache condition. The present study aimed at investigating possible differences in self-reported temperamental sensitivity to environmental stimuli, somatic symptoms, attachment dimensions and child-parent quality of relationship, and parent-report internalizing and externalizing problems comparing children and adolescents suffering from headache with healthy controls. **Methods:** A clinical sample of 83 children/adolescents with a headache diagnosis (54 girls, 29 boys; mean age 12.87; SD=3.06) and a healthy group of 136 children/adolescents (76 girls; 60 boys; mean age 12.34; SD=2.02) completed the Children's Somatization Inventory-24 (CSI-24), the Experiences in Close Relationships Scale-Revised Child version (ECR-RC), the High Sensitivity Children scale (HSC), the Child-Parent Relationship Scale (CPCR) and a sociodemographic questionnaire. Mothers completed the Child Behavior Checklist 6–18 (CBCL). Since data do not have a normal distribution the U Mann-Whitney non parametric test has been applied to evaluate possible differences between groups. **Results:** The two groups resulted homogenous as regards age and gender distribution. Data analysis revealed that clinical participants scored significantly higher than controls in ECR-RC avoidance to fathers ( $p=.01$ ), HSC total

( $p=.005$ ), Low Sensory Threshold ( $p=.02$ ) and Easy of Excitation ( $p=.045$ ), CPCR conflict dimension ( $p=.04$ ) and in all CBCL pathological scales ( $p\leq.001$ ). No differences in self-reported somatic symptoms emerged. **Conclusion:** Present findings sustained a higher environmental sensitivity and a worse parent-child relationship and psychopathological functioning in children and adolescents suffering from headache compared to controls. Clinical intervention sustaining these areas of fragility seem fundamental. Longitudinal studies are crucial to better explore the possible role of these dimensions on the onset of headache in children and adolescents.

## ST01-02

### Genital pain and sexual satisfaction in chronic pain: effects on distress and quality of life of women affected by chronic headache, fibromyalgia, and vulvodynia

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**Background:** Chronic pain (CP) is a common issue among women, impacting various aspects of their lives, including sexual activity. However, accurately assessing the prevalence of sexual problems in women with CP poses challenges due to oversight from both patients and clinicians, resulting in a lack of comprehensive understanding and evidence across different CP conditions. **Objectives:** To primarily compare sexual functioning, genital pain, and satisfaction among women diagnosed with diverse CP conditions. Additionally, it seeks to investigate the role of sexual factors in predicting levels of CP-related mental and physical distress and quality of life (QoL) for each specific condition. **Methods:** Between April 2023 and January 2024, a total of 1006 women belonging to five groups (Chronic Headache - CH; Fibromyalgia - FM, Vulvodynia - VU, Mixed Condition - MX, and Healthy Controls - HC) completed an online protocol assessing sexual functioning, genital pain, sexual satisfaction, mental and physical distress, and QoL. One-way MANCOVAs, with age as a covariate, were used to analyze group differences, while hierarchical multiple regressions examined sexual predictors of CP-related psychological and physical distress and QoL for each group. **Results:** Across all groups, mean FSFI total scores were below 26.55, indicating high presence of sexual impairment. The VU group showed the highest prevalence of genital pain (97.93%), followed by MX (74.29%) and FM (55.91%). All clinical groups frequently experienced intercourse interruption due to pain. ANCOVAs revealed lower sexual functioning scores for FM, VU, and MIX compared to HC and CH. VU had the highest genital pain scores, followed by MX and FM, with VU and MX reporting lower satisfaction scores than other groups. Genital pain emerged as the primary factor of distress across all groups except controls, with CH and FM also showing sexual satisfaction as significant. For physical QoL, genital pain was significant for VU and MIX. Regarding mental QoL, sexual satisfaction was significant for CH and MX, while genital pain and sexual satisfaction were significant for VU. **Conclusion:** This study underscores the consistent presence of genito-pelvic

pain and sexual dysfunction among women with CP compared to healthy controls. It stresses the importance of integrating genitopelvic pain assessment and addressing related sexual difficulties in CP diagnostics and care to improve overall well-being and QoL.

## ST01-03

### Predictive value of the Big 5 personality dimensions on the short and long-term outcomes of a Group Cognitive Behaviour Therapy cohort in chronic fatigue syndrome

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**Background:** Chronic Fatigue Syndrome (CFS) is a debilitating condition characterized by persistent fatigue impairing daily functioning. While cognitive behaviour therapy (CBT) offers moderate relief, many patients fail to recover sufficiently or at all. Personality, particularly within the five-factor model, remains largely underexplored as a potential predictor for CBT outcomes in CFS. To the best of our knowledge, only neuroticism has been positively associated with mental quality of life. **Aims:** This study aims to explore personality traits as predictors for the response to group CBT for CFS, in the short- and long-term. **Methods:** Between 2002 and 2012, 792 CFS patients underwent 12 group CBT sessions over 9 to 12 months in an outpatient university referral centre for CFS. This well-documented single cohort study includes follow-up data of 596 CFS patients at baseline (T0), with 467 patients contributing data in the short term, post-CBT (T1), at 6 months (T2), and/or at 12 months (T3). Long-term outcomes were surveyed online between 2018 and 2021 (T4), with a final participation count of 350 CFS patients. A mixed model accounting for the time-series cross-sectional data (measurements in time nested in respondents) will be used to determine if there is a relationship between personality traits (NEO Five-Factor Inventory) and the 3 dependent variables, i.e. fatigue (Checklist Individual Strength), physical functioning (Short Form 36 Health Survey) and psychological distress (Symptom Checklist-90). If serious multicollinearity (correlation  $\geq .30$ ) is present in the NEO-FFI scales, the separate analyses will be appended by a multivariate analysis including all scales simultaneously. The development of the outcome over time will be examined, firstly by entering time as a fixed effect; secondly by allowing random intercepts for time (indicating differential starting levels for each individual); and thirdly by allowing random slopes for time (indicating different speeds of recovery for each individual). A final analysis will correct the model for known

confounders, according to available literature (e.g., age, self-efficacy, CFS-severity variables, psychiatric comorbidity). **Conclusion:** This study aims to clarify the impact of personality dimensions on group CBT outcomes, in order to assess the necessity of a more personalized and differential treatment approach and to improve the outcomes of CBT for CFS.

## ST01-04

### Beyond pain intensity: exploring the impact of pain catastrophizing, pain vigilance and pain acceptance on sexual dysfunction in female individuals with vulvodynia.

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**Background:** Female individuals affected by vulvodynia present varied descriptions of chronic vulvar pain, encompassing sensations such as burning, stinging, or rawness, either constant or intermittent. This pain exerts a profound influence on individuals, extending across physical, psychological, and social domains; however, sexual functioning is one of the prominent areas of impact. Individuals with vulvodynia report lower levels of satisfactory sexual activity and face severe difficulties across all dimensions of sexual function. **Methods:** In this study, we investigated the interplay between pain-related factors, psychological factors, and sexual function in women with vulvodynia. While pain intensity stands out as an initial consideration, it becomes imperative to delineate additional components contributing to the pain experience. Psychological factors such as pain catastrophizing, pain vigilance, and pain acceptance represent crucial dimensions impacting the experience of pain and overall functioning, as reported in other chronic pain conditions. Our cross-sectional study examined 104 participants, with a mean age of 32.5 years and an average education duration of 15.66 years. Through hierarchical regression analysis, we observed that pain intensity significantly predicted sexual dysfunction. Notably, the model's explanatory power substantially improved by integrating psychological variables of interest. **Results:** Of the psychological variables, pain hyper-vigilance and pain acceptance emerged as significant predictors of sexual dysfunction, underscoring their pivotal roles. Contrarily, pain catastrophizing did not attain statistical significance. Overall, the final model accounted for a significant proportion of the variance in sexual dysfunction, highlighting the collective contributions of pain intensity, pain vigilance, and pain acceptance in explaining levels of sexual dysfunction among vulvodynia patients. Specifically, elevated sexual dysfunction is correlated with heightened pain intensity and vigilance, alongside diminished levels of pain acceptance. **Conclusion:** Thus, our results underscore the intricate interplay between pain and psychological factors impacting sexual functioning in women with vulvodynia. Our findings have the potential to inform targeted interventions and multidisciplinary approaches for the management of vulvodynia.

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## ST01-05

### Personality dimensions and chronic fatigue syndrome (CFS): a NEO-FFI-NL-based comparison of CFS and control groups

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**Background:** Differences in personality dimensions in chronic fatigue syndrome (CFS), such as elevated neuroticism and introversion, have been reported but also questioned due to methodological issues. This study aimed to compare personality dimensions in terms of the Five-Factor-Model, among adults with CFS against healthy controls, chronic disease patients and psychiatric outpatients. Additionally, it aimed to examine the personality differences between non-infectious and post-infectious CFS groups. **Methods:** Data from 1130 CFS patients, 313 healthy controls, 271 chronic disease patients and 256 psychiatric outpatients were analysed. The five personality traits assessed with NEO-Five-Factor Inventory were compared between groups by separate ANCOVAs with age and sex as covariates. Multiple linear regression with backward elimination was used to detect main effects and interactions. Due to the potential confounding effects of comorbid disorders, sensitivity analyses were conducted by stratifying the CFS group into 3 subgroups based on psychiatric and chronic somatic comorbidities. **Results:** Significant differences in neuroticism ( $p < .001$ ), extraversion ( $p < .001$ ), agreeableness ( $p < .001$ ) and conscientiousness ( $p < .001$ ) were found across all groups. CFS patients exhibited higher neuroticism and lower extraversion and conscientiousness compared to chronic disease and healthy control groups ( $p < .001$ ), resembling the psychiatric group regarding these 3 dimensions. An interaction effect between

group and sex was observed for extraversion, with CFS males scoring lower than CFS females, unlike other groups. Moreover, the psychiatric group scored lower in agreeableness than the other groups ( $p < .001$ ). Sensitivity analyses showed consistent results for CFS patients without psychiatric and chronic somatic comorbidities. Only neuroticism exhibited significant differences among the three stratified CFS-groups, the CFS group with psychiatric comorbidity had significantly higher scores than those without. No personality differences were found between non- and post-infectious CFS groups, nor in the dimension openness in any of the comparisons. **Conclusion:** CFS patients exhibit distinct personality profiles from healthy controls and chronic disease patients in neuroticism, extraversion and conscientiousness, resembling psychiatric outpatients (except for agreeableness). However, these differences were not entirely due to psychiatric comorbidity, but indicate a shared vulnerability.

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## ST01-06

### Transdiagnostic resting-state EEG biomarkers of pain, depression, and fatigue

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**Background:** Pain, depression, and fatigue are highly comorbid and prevalent symptoms. Importantly, this symptom cluster has been associated with increased suffering and poor treatment outcomes. The underlying brain mechanisms are only partially understood, but a common etiology has been proposed. However, transdiagnostic biomarkers are lacking. Insights into brain function in pain, depression, and fatigue will aid the understanding of this comorbidity. Moreover, developing transdiagnostic biomarkers could further the diagnosis and treatment of this symptom cluster in line with the National Institutes of Mental Health (NIMH) Research domain criteria (RDoC) approach. **Methods:** To summarize the current knowledge on electrophysiological brain correlates of chronic pain, depression, and fatigue, we performed a series of preregistered systematic literature reviews (PROSPERO: CRD42021272622, CRD42022330113 and CRD42024492853) in accordance with PRISMA-Guidelines. MEDLINE, Web of Science Core Collection, and EMBASE were searched for quantitative resting-state electroencephalography (EEG) studies in adult patients suffering from each of these symptoms/diseases separately. **Results:** The systematic reviews in patients suffering from chronic pain and fatigue have been finalized and included 76 and 26 studies, respectively. For both symptoms, cross-sectional studies revealed an increase in theta band

power compared to healthy participants. Results for depression patients are pending. Risk of bias was assessed with a modified Newcastle-Ottawa Scale, and was considerably high in all of the systematic reviews. **Conclusion:** These findings point towards increased theta oscillations, which have also previously been described in depression, as a transdiagnostic biomarker for the symptom cluster of pain, depression, and fatigue. The use of theta oscillations to diagnose, monitor and eventually also treat this burdensome comorbidity, e.g. using neuromodulation techniques, should be further evaluated.

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### ST01-07

#### Management of functional neurological disorder: preliminary results of a systematic review and meta-analysis

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**Background:** Functional neurological disorder (FND) is a rare disease caused through challenges in the functioning of the nervous system, affecting the transmission and reception of signals between brain and body. Symptoms may affect the sensorimotor system and the cognitive functioning and might complicate making the right diagnosis. Patients often receive initial treatment in acute medical settings, complicating the start of appropriate therapy. Guidelines for the management of FND are lacking. Therefore, a systematic literature review and meta-analysis on the current state of the art of clinical management approaches will be conducted. **Methods:** A systematic search in PubMed, PsycInfo, PSYINDEX, Embase, Web of Science and The Cochrane Library will be conducted. A further search will be run in OpenGrey. Randomized-controlled trials including interventions for the clinical management of FND offered by health care professionals will be included. Inclusion criteria are adults aged 18 years and older with a formal diagnosis of FND according to the International Classification of Diseases (ICD) or Diagnostic and Statistical Manual of Mental Disorders (DSM). The screening process will be conducted by two independent, blinded to each other, reviewers using Rayyan. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) are followed. A meta-analysis will be carried out. **Results:** Preliminary results on the primary outcomes post intervention are: 1. Symptom severity and 2. Number of symptoms. Secondary outcomes are the measurement of: 1. Psychological and daily functioning 2. Life Quality 3. Mental disorder comorbidities 4. Health care utilization 4. Adverse effects. The interventions will be compared to any intervention mentioned above, treatment as usual, waiting list control groups, placebo. Information on previously investigated interventions will be presented at the conference. **Discussion:** We hypothesize high symptom burden in patients with FND with high prevalence of mental comorbidities (e.g., anxiety, depression, personality disorders) and

high health care utilization. Best-practice treatment approaches will be presented to formulate national and international recommendations. Results inform health care providers of effective treatment approaches and might open the field for discussion regarding lack of health care paths.

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### ST01-08

#### Transcutaneous vagal nerve stimulation: innovating postoperative pain reduction through neuromodulation

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**Background:** Chronic pain (CP) is a complex bio-psych-social disorder affecting a considerable portion of the European population, with an estimated overall point prevalence of 20%. CP leads to severe limitations, disabilities, and socioeconomic challenges. Transcutaneous auricular vagal nerve stimulation (tVNS) has emerged as a promising non-pharmacological treatment for pain management due to its analgesic effects and potential to activate anti-inflammatory cascades. This study aims to evaluate the efficacy of tVNS in patients undergoing knee replacement surgery to reduce pain. **Methods:** A three-arm randomized controlled pilot study comprising a sample size of 60 participants divided into intervention, sham intervention, and treatment as usual. The intervention consists of 2-3 daily stimulations lasting 40-60 minutes post-surgery. Collection of data takes place at three points: upon admission, at discharge, and three months post-intervention, to assess pain severity, analgesic use, hospitalization duration, and mental health outcomes. **Results:** First results will be provided at the conference. Outcome measures will include pain ratings (McGill Pain Questionnaire, NRS), somatic symptoms (SSD-12), mental comorbidities (PHQ-9, GAD-7, WHO-5), and the subjective acceptability of the intervention. **Discussion:** This study will provide valuable insights into the feasibility, acceptability, and effectiveness of tVNS as a postoperative pain management strategy. By addressing the gap in research on the effects of tVNS on post-surgical analgesia and mental health, it has the potential to influence pain management protocols and contribute to the broader understanding of non-pharmacological treatments for CP. As a next step, tVNS will be investigated in a psychosomatic treatment setting as an additional treatment approach in treating patients with persistent somatoform pain.

## ST01-09

### Assessing the risk of somatic symptom disorder (SSD) in patients with inflammatory bowel disease (IBD) - is PHQ-4 screening sufficient?

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**Aims:** SSD is a mental disorder listed in the DSM-V that has been introduced as a new diagnostic category in ICD-11 as “bodily distress syndrome”. This article presents the results of a prospective cross-sectional study aimed at investigating the prevalence of SSD. It was also investigated whether screening with the PHQ-4 is sufficient to detect patients at risk of SSD. **Methods:** Data was collected at Magdeburg University Hospital from August to October 2023. The combination of the Somatic Symptom Scale (SSS-8) and the Somatic Symptom Disorder-B Criteria Scale (SSD-12) was used to identify patients likely to present SSD in patients with confirmed inflammatory bowel disease (N=237). We also investigated the association between SSD and variables such as age, gender, education, complications and disease severity (Mayo score; Harvey-Bradshaw index) on the degree of distress. It was also investigated what percentage of patients at risk of SSD were correctly screened positive by the PHQ-4. **Results:** A prevalence of SSD risk of 20% was determined across all IBD patients. There was no relevant difference in prevalence between Crohn’s disease and ulcerative colitis patients. 85.7 % of patients at risk of SSD were screened positive by the PHQ-4. In addition, there was a significant positive correlation between the Harvey-Bradshaw Index and SSD-12 total score ( $p < 0.001$ ) and SSD risk ( $p = 0.003$ ). Furthermore, patients with intestinal perforation showed significantly higher SSD values during the course of the disease ( $p = 0.004$ ). **Conclusion:** The results indicate that IBD patients are disproportionately burdened by somatic symptoms. In addition, around 15% of the patients examined appear to have a profile of psychological distress that exists separately from depressive symptoms and anxiety symptoms, which is why the SSD-12 should be used separately for these patients.

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## ST01-10

### Persistence of gastrointestinal symptoms in Irritable Bowel Syndrome and Ulcerative Colitis - First baseline results of the SOMA.GUT-RCT

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**Background:** Ulcerative colitis (UC) and irritable bowel syndrome (IBS) are distressing chronic conditions associated with abdominal pain and altered bowel habits of unknown aetiology. Studies indicate that in both conditions increased levels of illness-related anxiety and dysfunctional symptom expectations contribute to symptom persistence. Comparing both conditions with regard to common and disease-specific factors in the persistence and modification of gastrointestinal (GI) symptoms seems justified. In the DFG-funded SOMA.GUT-RCT (part of FOR 5211 SOMACROSS), patients with UC and IBS are examined regarding biopsychosocial factors that are associated with GI symptom burden and are linked to symptom persistence over time. We hypothesized that patients with IBS show higher psychosocial and somatic symptom burden, while patients with UC display higher scores in biomedical parameter. **Methods:** Baseline data is investigated cross-sectionally using chi-square and t-tests to compare patient groups with IBS and UC and to identify associations between overall somatic symptom severity (PHQ-15) and biopsychosocial factors. These latter encompass sociodemographic (sex, age, education level, work status, partnership), psychosocial (incl. burden by somatic symptoms, quality of life, perceived stress, depressive and anxiety symptoms, illness anxiety and adverse childhood events) and biological factors (incl. GI symptom severity, comorbidity and inflammation markers). **Results:** 2099 patients were screened for eligibility in a two-step process, with the final sample consisting of N=247. Baseline data was available from N=240 patients, including 126 patients with UC and 114 with IBS. The sample predominantly self-reported as female (73,3%), with a mean age of 41,4 (SD 13,7). Overall somatic symptom severity did not differ significantly between groups (PHQ-15 in UC  $m = 10,87$  (SD 4,27) vs. in IBS  $m = 11,11$  (SD 3,82)). GI symptom severity (IBS-SSS) was significantly higher in patients with IBS ( $m = 293,3$ ; SD 97,8) compared to patients with UC ( $m = 244,5$ ; SD 90,1). No baseline differences were found for depression (PHQ-9) and anxiety severity (GAD-7) or burden by somatic symptoms (SSD-12). **Conclusion:** Patients with UC and IBS showed no differences in terms of psychosocial and overall somatic symptom severity but differed in GI symptom severity. Further analyses will help to clarify the multivariate relationship between these variables and somatic symptom severity.

## ST01-11

### Somatic Symptom Disorder in general hospital inpatients – Identification and severity levels (NCT04269005)

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**Background:** With the DSM-5 revision, Somatic Symptom Disorder (SSD) no longer necessitates the medical unexplainability of symptoms, focusing instead on psychobehavioral criteria. This study is part of the “SomPsyNet” project that targets patients from SOMatic acute hospitals and aims to prevent PSYchosocial distress consequences in their course of disease by establishing and evaluating a stepped and collaborative care NETWORK. In this contribution, we addressed the scarcity of data on SSD in general hospital inpatients by aiming to evaluate its prevalence and severity levels within this group. **Methods:** We assessed SSD in general hospital inpatients using the SSD-B Criteria Scale (SSD-12) and the Somatic Symptom Scale-8 (SSS-8). We operationalized the three DSM-5 diagnostic criteria A (SSS-8  $\geq 9$  (Toussaint et al., 2020), respectively  $\geq 2$ , as liberal operationalization of DSM-5 definition), B (SSD-12  $\geq 23$ ), and C (proxies indicating symptom persistence). To scrutinize SSD severity levels (mild, moderate, severe), we analyzed the number of DSM-5 B-subcriteria (cognitive, affective, behavioral) using SSD-12 as well as the somatic

symptom severity using SSS-8. **Results:** Preliminary analysis indicated that among 3179 evaluated patients, 25% surpassed the classical SSD-12 cut-off of 23 (Toussaint et al., 2020), suggesting substantial psychobehavioral distress ( $N_{total}$ : mean SSD-12=15.9,  $SD \pm 10.0$ ;  $N_{SSD-12 \geq 23} = 792$ : mean SSD-12=29.4,  $SD \pm 5.3$ ). If the SSD-12 indicated SSD, it was highly likely that criteria A (distressing somatic symptoms, SSS-8, both cut-offs) and C (proxies for symptom persistence) were also met. Women showed lower levels of psychobehavioral distress compared to men (incl. diverse genders) (mean SSD-12: 15.4 vs. 16.6,  $SE \pm 0.25/0.24$ ,  $p < .001$ ). SSD-12 scores decreased with increasing age ( $B = -0.05$ ,  $p < .001$ ,  $F(1,3148) = 28.93$ ,  $R^2 = .009$ ). Analyses of SSD severity levels are ongoing. **Discussion:** The findings underscore the substantial relevance of SSD in somatic hospital inpatients, emphasizing the need for integration into somatic inpatient care. Our study highlights gender and age-related variations in SSD, reinforcing the need for tailored management. Furthermore, as the analysis of SSD-12 B-criteria and severity levels progresses, these insights promise to refine our understanding and management of SSD.

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## ST02-01

### The state of the military’s self-system as a result of the war in Ukraine

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**Background:** Every year, the problem of rehabilitation and re-adaptation becomes more acute. For almost two years of active hostilities on the territory of Ukraine, the number of citizens affected by Russian aggression has increased significantly, both physically and mentally. The results of the work carried out, in general, provide an understanding of the functioning of the Self-system in the military, which is constantly faced with extremely stressful conditions. **Aims:** Continue and expand research on the effects of full-scale invasion and participation in hostilities on the functional state of the Self-system in the military. Compare the results of the studied groups with each other and interpret them. **Methods:** 83 cases of inpatient treatment at the Ivano-Frankivsk Precarpathian Regional Center for Mental Health of military personnel were analyzed. From the materials, test tasks were used, in



particular, the narcissistic inventory of Deneke and Hilgenstock, a multifactorial data analysis was carried out with the additional application of assessing the reliability of questionnaires using the “Jamovi” program; clinical interviews. **Results:** We examined the state of the Self in soldiers who were at various stages of inpatient treatment or rehabilitation in the Precarpathian Regional Mental Health Center of the Ivano-Frankivsk Regional Council and the First Volunteer Surgical Hospital of the “BRASS” Clinic. The primary instrument used in this study was the Narcissistic Inventory (Deneke & Hilgenstock, 1989). The results showed that the highest scores were obtained on the subscales of dimension III and separate subscales of dimensions II and I, which correspond to dimension III (i.e., crisis stabilization of self-state). Scale IV dimension (i.e., negative body image) was minimal and correlated only with physical status or dysfunction due to trauma (i.e., was not intrapsychic). **Conclusion:** The functional state of the Self-system is closely related to the performance of military personnel. After continuing the analysis of the Narcissistic Inventory in the military, based on previous work, we obtained results that make it possible to formulate recommendations for possible interventions both in the external environment and for optimizing the strategy of treatment and rehabilitation, namely to expand and divide the management strategy of military personnel who were directly in the combat zone and those that did not have direct combat contact.

## ST02-02

### The trauma of forced displacement in children as a result of the full-scale Russian invasion of Ukraine

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**Background:** The situation that our country is experiencing is one that goes beyond normal human experience. Active military operations, forced displacement and evacuation - all this creates a significant disruption in people's daily life. Taking all this into account, there is a problem of acute stress disorder, adjustment disorders and PTSD. This is especially true for children exposed to emergency situations. **Aims:** To investigate the level of anxiety, depression, PTSD symptoms and general health in children affected by war events. **Methods:** 40 children were examined - 21 girls and 19 boys, who were undergoing rehabilitation treatment in sanatoriums of the Ivano-Frankivsk region. The average age of the examined was 11±2.3 years. All examinees were interviewed according to the scale “Primary screening of post-traumatic stress disorder”. For a more in-depth examination of children's reactions to war trauma, the PCL-5, CPSS-5-SR were used. **Results:** “Primary screening for post-traumatic stress disorder” showed a positive result in 18 (45%) examinees. The results of assessing the severity of PTSD symptoms, according to the CPSS-V SR criteria, showed that the minimum level of their severity was observed in 9 (22.5%) of the examinees; weakly expressed - 12 (30%); moderate - 11 (27.5%); significantly expressed - 7 (17.5%). Factor analysis of the data of the PCL-5 scale, in particular the first factor, shows that the child's psyche reacted to traumatic events with symptoms of

intrusion and behavioral defensive reactions. While the second factor reflects signs of modality (loss of interest in what used to be pleasurable), with inherent depressive and post-traumatic states problems in understanding and processing information, which often remain invisible behind the more prominent symptoms of PTSD intrusions. **Conclusion:** The results of the study indicate that war has a significant impact on both the physical health and the psyche of children who have experienced traumatic events. The obtained data are recommended to be taken into account when creating algorithms for early diagnosis and treatment of mental disorders in this population category.

## ST02-03

### Efficacy of team-based care for distressed patients in secondary prevention of chronic coronary heart disease: The multicenter randomized controlled TEACH trial

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**Background:** Psychosocial distress interferes with health behaviors and disease outcomes of patients with heart disease. A few US studies suggest that “blended” collaborative care simultaneously addressing depression and cardiac risk can improve patients' quality of life. However, no such treatment models have been tested in

sufficiently large trials in Europe. The TEACH multicenter trial therefore examined the primary hypothesis that a 12-month blended collaborative care intervention (compared to treatment as usual) improves disease-specific quality of life (assessed with HeartQoL) in psychosocially distressed patients with coronary heart disease (CHD) and at least one insufficiently controlled medical risk factor. In addition, several secondary outcomes were assessed. **Methods:** Between November 2020 and April 2023 we randomized 457 CHD patients with elevated distress scores (>12 on the HADS total score and / or >5 on the PSS-4) and at least one insufficiently controlled medical risk factor. Of these (mean age±SD: 63±9.5 years, 77% men), 54% had a previously documented mental disorder and 42% had received mental health treatments before randomization. The most frequent medical risk factors were hypertension and hyperlipidemia (84% each). **Results:** Patients in the intervention group received regular phone calls (typically every other week for the first three months and monthly thereafter) by specially trained care managers (mostly nurses) to provide support in managing distress and adjusting health behaviors. During weekly video calls, a team consisting of a psychologist, two medical specialists in psychosomatic medicine and cardiology reviewed the patients' progress and provided recommendations to support patients' health behavior, decrease their distress or adjust treatment according to evidence-based guidelines. Patients' treating physicians remained responsible for any medication adjustments or specialist referrals. Blinded research assessors met with patients in person at 12 (primary endpoint) and 18 months to administer the assessment batteries and obtain medical data, and contacted patients for additional centralized telephone follow-ups at 6, 24, and 30 months (depending on inclusion date). Twelve-month assessments were completed for all patients in April 2024 and main outcome data will consequently be analyzed. **Conclusion:** We will present at the meeting details on the study sample and first 12 month outcome data on quality of life, psychological adjustment, and medical risk factor control.

## ST02-04

### Impact of the escalation of violence in the Middle East since October 7 on mental health, somatic complaints, political trust, and sense of connectedness among communities in Germany

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**Background:** The biopsychosocial model of health posits that an individual's well-being is influenced not only by biological and psychological factors but also by the broader social context (Engel, 1977). Following the escalation of violence in the Middle East since October 7, the far-reaching psychosocial impact, especially on Jewish and Muslim communities in Germany, due to their possible biographical, cultural, and religious ties to the conflict region, has become a pressing concern. **Objectives:** The present research aims to investigate mental health outcomes, political trust, and sense of connectedness to the wider German society following the escalation of violence since October 7, with a focus on the Jewish and Muslim communities in Germany, among others. We expect that individuals with a lower sense of connectedness to the wider German society and lower political trust will show poorer mental well-being during the violent escalations, irrespective of group differences. We will also explore how the intensity of experienced emotions, perceived threat during the violent escalations, individual variables such as religious identity or immigrant background, and trauma-related stress predict somatic symptoms. **Methods:** Prompted by the urgency of the violent confrontations, an online survey was conducted between December 2023 and March 2024. 560 adults, especially those with a Jewish or Muslim background or those who felt burdened by the events since October 7 in the Middle East, completed the full survey. We measured mental health (i.e., emotional experience, depression, anxiety, somatic symptoms, stress, and trauma symptoms), sense of connectedness to the wider German community, and political trust by validated questionnaires. Four optional open-ended questions inquired about participants' feelings, subjective distress, coping strategies, and desired help. **Analytic Approach:** The quantitative data has been recently collected and is currently being processed. We will use structural equation modelling and multilevel modeling to examine the relationships among variables. **Implications:** Insights will be crucial for developing a multi-level understanding of the psychosocial consequences of socio-political upheavals such as conflicts, particularly relevant in the current era. Such knowledge can be central to the development of targeted mental health interventions and policy improvements aimed at enhancing community well-being and social cohesion.

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### ST03-01

#### Association between gastrointestinal symptoms and anxiety, BMI and gastrointestinal quality of life

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**Aims:** To study the relationship between somatization symptoms and anxiety, body mass index (BMI), gastrointestinal quality of life in patients with functional gastrointestinal disorders (FGIDs).

**Methods:** A total of 148 patients with FGIDs were selected from January to December 2021. According to the score of patient health questionnaire-15 (PHQ15), they were divided into a mild somatization group (n=82) and moderate severe somatization group (n=66). Generalized Anxiety Disorder-7 (GAD-7), Patient Health Questionnaire-15 (PHQ-15), Gastrointestinal Quality of Life Index (GIQLI) were used to evaluate all subjects. SPSS 23.0 software was used for data analysis. An Independent sample t-test was used to compare BMI, anxiety, gastrointestinal quality of life scores and disease duration between the two groups. Pearson correlation analysis and multiple linear regression analysis were used to study the correlation between somatization symptoms and anxiety, BMI, and gastrointestinal quality of life and disease duration. **Results:** There were no difference was found in age and gender ( $P>0.05$ ). There were significant differences in disease duration ((32.63±35.59) months, (70.82±96.55) months), BMI((22.64±2.96) kg/m<sup>2</sup>, (19.70±3.86) kg/m<sup>2</sup>), GAD-7((5.46±2.41), (11.70±4.98)), GIQLI((98.54±18.56), (50.85±23.42)) between the two groups ( $t=-9.98-13.82, P<0.05$ ). Correlation analysis showed that PHQ-15 was positively correlated with GAD-7 ( $r=0.635, P=0.000$ ), and negatively correlated with BMI ( $r=-0.402, P=0.000$ ), and negatively correlated with GIQLI ( $r=-0.787, P=0.000$ ), and positively correlated with disease duration ( $r=0.315, P=0.000$ ). The Multiple

linear regression analysis showed that gastrointestinal quality of life and disease duration entered the regression equation.

**Conclusion:** The severity of somatization in patients with FGIDs is related to anxiety, BMI, and gastrointestinal quality of life, suggesting that they may play an important role in the pathogenesis of FGIDs with somatization. Gastrointestinal quality of life and disease duration are significant factors of the severity of somatization in patients with FGIDs.

### ST03-02

#### Current and past depression as risk factors for incident type 2 diabetes in men and women – results from the Gutenberg Health Study

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**Background:** The effects of the mind on the body are of eminent interest for a comprehensive understanding of disease processes. Psychodiabetology explores how mental factors influence diabetes risk. The effects of depression are of major interest in psychodiabetology, due to its high public health relevance. Research on the topic established an association between depression and risk of type 2 diabetes mellitus. However, depression may take different courses, and it is not fully understood how these affect the development of diabetes. This study aimed to clarify how different trajectories of depression affect diabetes risk and, additionally, to study whether sex modifies the association between depression

and type 2 diabetes. **Methods:** We analyzed data from the Gutenberg Health Study, a longitudinal and population-based cohort study (N=15,010) in Germany. Depressive symptoms (measured by PHQ-9), history of depression, diabetes mellitus, and relevant covariates were assessed at baseline, and the outcome of type 2 diabetes mellitus was evaluated 5 years later. Logistic regression was used to estimate odds ratios of incident type 2 diabetes mellitus, adjusting for potential confounders as identified in a Directed Acyclic Graph. **Results:** In the confounder adjusted model, current depression (PHQ-9  $\geq$  10 at baseline; OR = 1.79, 95% CI = 1.11 to 2.74), and persistent depression had a statistically significant (OR = 2.44, 95% CI = 1.62 to 3.54) effect on incident type 2 diabetes mellitus. A history of depression without current depression had no statistically significant effect on type 2 diabetes (OR = 1.00, 95% CI = 0.68 to 1.43). The effect of depression on incident diabetes did not differ significantly between women (OR = 2.02; 95% CI = 1.32 to 3.09) and men (OR = 2.16; 95% CI = 1.41 to 3.31; p-value for interaction on the multiplicative scale  $p=0.832$  and on the additive scale  $p=0.149$ ). **Conclusion:** This study shows that history and trajectory of depression have a relevant influence on the risk of type 2 diabetes, with persistent depression being associated with highest relative odds of diabetes. This raises interesting questions about the cumulative effects of depression trajectories on diabetes and body metabolism in general. Furthermore, this study does not support sex as a moderator of the association between depression and diabetes.

### ST03-03

#### Study protocol of a short psychosomatic intervention to prevent depression and anxiety disorder in patients with atrial fibrillation undergoing pulmonary vein isolation

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**Background:** Atrial fibrillation (AF) is a prevalent cardiac arrhythmia affecting approximately 2% of the population. AF is associated with an increased risk of comorbid psychological disorders, notably depression and anxiety. Pulmonary Vein Isolation (PVI) is a common ablation treatment for AF and leads to a reduction in depressive and anxious symptoms. However, the diagnostic procedure of cardiac patients is often does not encompass mental aspects. This randomized-controlled trial (RCT) aims at investigating the efficacy of an enhanced psychodiagnostic procedure in a cardiac department to prevent depression and anxiety disorders in patients undergoing PVI. **Methods:** This study proposes an RCT with an intervention and control group (receiving treatment as usual) with 50 patients per arm. Participants in the intervention group will receive a short psychosomatic intervention by a psychosomatic physician, identified through psychometric instruments such as the Hospital Anxiety and Depression Scale (HADS) and the Patient Health Questionnaire (PHQ), aiming to mitigate

symptoms of depression and anxiety. Assessments will occur before and after the PVI procedure, with follow-ups at 6 and 12 months to evaluate the intervention's effectiveness over time.

**Results:** Based on a systematic review and meta-analysis on prevalence of depression and anxiety disorder in patients with AF undergoing PVI, an interventional study is being designed. The study protocol and first pilot data will be presented at the conference. It is anticipated that the intervention group will exhibit a significant reduction in symptoms of depression and anxiety post-PVI, compared to the control group. **Discussion:** Depression and anxiety disorders are notably prevalent among AF patients and can detrimentally affect their prognosis and quality of life. The proposed RCT aims to fill the existing gap by integrating a psychosomatic approach into the treatment pathway of AF patients undergoing PVI. By addressing the psychological aspects of AF, the study expects to not only improve mental health outcomes but also enhance overall treatment efficacy. This could pave the way for the inclusion of psychosomatic care in national and international guidelines, promoting a more holistic, patient-centered approach to AF management.

### ST03-04

#### Somatic symptom disorder in patients with irritable bowel syndrome and ulcerative colitis: cross-sectional findings from the SOMA.GUT-RCT

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**Background:** Ulcerative colitis (UC) and irritable bowel syndrome (IBS) are two impairing chronic diseases with overlapping gastrointestinal symptoms such as abdominal pain or altered bowel habits. In both diseases, psychological distress, such as illness-related anxiety and depressive symptoms, may interact with gastrointestinal symptoms and contribute to symptom persistence. Illness-related anxiety is one key feature of DSM-5 Somatic Symptom Disorder (SSD). Thus, patients with a somatic disease like UC may also meet the diagnostic criteria for SSD. Given the limited understanding of SSD in IBS and UC, this study aims to examine the frequency of SSD and its association with sociodemographic, psychosocial, and clinical factors within these diseases. **Methods:** Cross-sectional data from the SOMA.GUT-RCT (see study protocol, Löwe et al. 2022 [1]) was analysed. The diagnosis of SSD was assessed using semi-structured interviews based on the Structured Clinical Interview for DSM-5. Patients with and without SSD were compared across and within diseases using chi-squared and t-tests to examine sociodemographic, clinical (e.g. disease duration, symptom severity), and psychosocial factors (e.g. anxiety, depression). **Results:** The sample

consisted of  $N = 239$  patients (74.2% female; mean age  $41.4 \pm 13.7$  years) diagnosed with UC ( $n = 126$ ) and IBS ( $n = 113$ ). In the total sample, the frequency of SSD was 41.8% ( $n = 100/239$ ). When looking at UC patients only, 29.4% (37/126) fulfilled the SSD criteria, whereas within the IBS patient group, 55.8% (63/113) received an SSD diagnosis ( $\chi^2(1) = 17.05, p < .001$ ). **Conclusion:** A substantial number of patients with UC or IBS meet the criteria for SSD, with a higher frequency among IBS patients. More than half of the patients with IBS had an SSD diagnosis, pointing towards a high burden due to their gastrointestinal symptoms. One-third of UC patients meet the SSD criteria, indicating a high relevance of SSD also in the context of inflammatory bowel disease. The results highlight the importance of identifying SSD in gastrointestinal care settings, as additional interventions targeting psychological distress have the potential to improve overall patient outcomes and quality of life.

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### ST03-05

#### Influence of kinesiophobia, catastrophizing and anticipated fatigue on physical performance and experienced fatigue in patients with primary biliary cholangitis

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**Background:** Fatigue is the most commonly reported symptom in patients with primary biliary cholangitis (PBC). Exacerbation of symptoms following physical activity is characteristic for many patients suffering from fatigue. Consequently, it may cause fear of physical activity and avoidance behaviour toward exercise. Experimental studies in patients with chronic fatigue syndrome (CFS) demonstrated that kinesiophobia, catastrophizing and symptom expectancies impaired the performance of physical activities. Accordingly, we investigated if higher levels of anticipated fatigue, kinesiophobia and catastrophizing prior to a stair-climbing task predict worse performance and more severe fatigue after the task in patients with PBC. **Methods:** A total of  $n = 49$  patients with PBC filled out self-rating questionnaires on their

anticipated fatigue (Numeric Rating Scale ranging from 1-10), kinesiophobia (TSK-GV) and catastrophizing cognitions (CSQ-CAT) before a self-paced two floor stair-climbing task. Performance was measured as duration of the task in milliseconds and change in heart rate from baseline to task completion. After stair climbing, experienced fatigue was self-rated (NRS 1-10). Correlational and multiple linear regression analyses were used to assess associations between performance, fatigue level after stair climbing and psychological variables, while controlling for age, sex, BMI and baseline fatigue. **Results:** On average, patients needed 66.33 seconds ( $SD = 10.93$ ) to complete the stair climbing task. Mean difference between anticipated and experienced fatigue was  $M = .67$  ( $SD = 1.68$ ). Performance in stair climbing showed no correlations with other measures, neither using duration of task nor change in heart rate as an index variable. Fatigue after stair climbing was only predicted by expected fatigue prior to the task ( $p < .001$ ). **Discussion:** Results of our study with patients with PBC differed from previous experimental studies examining patients suffering from CFS. While neither anticipated fatigue, kinesiophobia, nor catastrophizing predicted performance in stair climbing, anticipated and experienced fatigue correlated highly in our sample. To our knowledge, these are the first results that show an influence of expectations on experienced fatigue in patients with PBC.

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### ST03-06

#### Psychosocial factors in East-Europeans with irritable bowel syndrome (IBS): are there particularities?

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**Background:** Psychosocial factors are important in the disorders of gut-brain interactions (DGBI), mainly IBS. Few data are available in East Europe on this association. Only Poland and Romania have participated in the recent Rome Foundation Epidemiology Global Study (Sperber et al., *Gastroenterology* 2021) We aimed to review the available data on IBS in East-Europe and to identify potential particularities. Hypothesis: to test if living conditions in a past totalitarian regime could influence the clinical expression of IBS, a stress-sensitive condition. **Methods:** A comprehensive

literature search was performed on PubMed, Embase, Clarivate and Scopus, identifying observational studies assessing psychosocial factors in IBS in all East-European countries. We also considered reviews (Dumitrascu et al., J Gastrointestinal Liver Dis 2020 and own data from the Rome Epidemiological Global Study, Dumitrascu et al. J Gastrointestin Liver Dis 2022). We compared epidemiological data and psychosocial factors with those reported in West Europe. **Results:** There is a paucity of data on DGBI in general, including IBS and its psychosocial determinants, in most East-European countries. Catastrophizing and poor stress management were detected in Romanian patients. Overlap of IBS with other DGBIs is surprisingly less important in Romania. The prevalence of IBS in Romania and Poland correspond to the average data from all the 30+ countries surveyed by the Rome global study. **Conclusion:** Psychosocial factors are less studied in East-European IBS patients, compared to West-Europe. Prevalence data are very reliable only in Romania, Poland, according to literature data. More research is needed to increase the knowledge on psychosocial particularities in IBS in this part of Europe.

### ST03-07

#### Psychosocial predictors of cigarette smoking in liver transplant recipients

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**Background:** Liver transplantation (LT) centers routinely assess the psychosocial functioning when evaluating candidates, paying attention to substances abuse and addressing it appropriately before entering them on the waiting list. Nevertheless, the impact of smoking on LT candidacy is rather variable and not uniformly evaluated. Not surprisingly, tobacco use is quite frequent among both LT candidates and recipients. This is concerning since LT patients are already at higher risk of developing cardiovascular disease, hypertension, hyperlipidemia and diabetes compared to general population, and those with a history of active smoking are in turn more exposed to more severe post-transplant morbidities, including biliary and vascular complications, cardiovascular events, reduced graft function, immunosuppression-related tumors, and lower survival rates. **Aim:** The present study aims to ascertain whether the smoking status of LT recipients can be predicted by their psychosocial profile assessed before inclusion on the waiting list. **Methods:** This single-center retrospective cohort study was conducted on 290 LT recipients. Data collection was performed through clinical interviews and digital medical records analysis. Participants' smoking status was self-reported, with no laboratory surveillance performed. Participants' psychosocial profile was evaluated through clinical interviews conducted by clinical psychologists with experience in transplant psychology. **Results:** Twenty-three percent of the participants were active smokers after LT. Logistic regression analysis  $\chi^2(15)=115.894$ ,  $p<0.001$ ,  $R^2$  (Nagerkelke)=0.499) controlling for demographics, history of smoking and graft functioning, showed that

alcohol-related liver disease ( $p=0.012$ ,  $OD=0.362$ ), positive history for psychiatric/ psychological conditions ( $p=0.008$ ,  $OD=0.088$ ), current anxiety ( $p=0.040$ ,  $OD=0.134$ ) and poor social inclusion and support ( $p=0.002$ ,  $OD=0.441$ ) significantly predicted post-LT active smoking. **Conclusion:** The results of this study confirm the prevalence of active smokers among LT recipients and suggest how the psychosocial structure assessed before the patient is placed on the active waiting list significantly predicts post-LT smoking status, providing also further evidence about the link between smoking and psychosocial functioning. This study reinforces the importance of psychosocial evaluation and targeted interventions of LT candidates to ensure optimal post-transplant outcomes.

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### ST03-08

#### Linking cardiometabolic multimorbidity to depressive symptoms in oldest-old people: results from a cross-sectional study in Germany

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**Background:** Depression is often associated with the presence of cardiometabolic multimorbidity (CMM). However, it remains unclear whether this association persists in the very old population. Hence, we examined the link between CMM and depressive symptoms in the oldest-old population. **Methods:** Using cross-sectional data from a representative sample of individuals aged 80 years and older in North Rhine-Westphalia, Germany (N=1,863), we constructed an additive disease index covering seven cardiometabolic diseases (CMDs): myocardial infarction, heart failure, hypertension, stroke, diabetes, kidney disease, and obesity. Depressive symptoms were assessed using the short form of the Depression in Old Age Scale (ranging from 0 to 4 points). We employed a multivariable linear regression model to study associations between disease index categories (0, 1, 2,  $\geq 3$  CMDs) and depressive symptoms, and report beta coefficients ( $\beta$ ) with 95%

confidence intervals (CIs). **Results:** The study population was evenly distributed across age groups (80-84, 85-89, and 90 years and older), with 50.2% being women. Participants exhibited mean depressive symptoms of 0.94, and 44.0% presented with two or more CMDs. Heart failure, hypertension, stroke, and obesity were each individually associated with heightened depressive symptoms. An increase in depressive symptoms was observed in participants with two CMDs ( $\beta=0.30$ ; 95% CI: 0.12-0.48) and three or more ( $\beta=0.40$ ; 95% CI: 0.18-0.62), in reference to those with no CMD. Moreover, we observed a significant, additive dose-response association between an increase in CMD count and depressive symptoms ( $\beta=0.16$ ; 95% CI: 0.09-0.23). This association tended to be slightly more pronounced for women ( $\beta=0.19$ ; 95% CI: 0.10-0.29) than for men ( $\beta=0.10$ ; 95% CI: 0.02-0.19). **Conclusion:** A higher number of CMDs was associated with increased depressive symptomatology, indicating the need to address both physical and mental health in oldest-old individuals with high CMD burden.

### ST03-09

#### Association of illness perception and personality with fatigue in hemodialysis recipients

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**Background:** Fatigue in hemodialysis recipients interferes with daily activities [1], and its underlying causes and treatment remain unclear [2]. Psychological factors, like illness perceptions and alexithymic personality, cause fatigue in other diseases [3, 4]; however, their contribution to hemodialysis-related fatigue is unknown. **Methods:** This cross-sectional study included 53 hemodialysis recipients. To assess participants' fatigue, we used a self-administered patient-reported outcome questionnaire. The associations among the scores of the revised Illness Perceptions Questionnaire (IPQ-R), Toronto Alexithymia Scale (TAS-20), and Hospital Anxiety and Depression Scale (HADS) and fatigue were analyzed using bivariable and multivariable analyses. **Results:** Patients with fatigue had significantly higher median scores for the IPQ-R subscales "Identity" and "Negative emotional representation about illness" than those without fatigue, suggesting the association of specific illness perception with fatigue. Median scores for the TAS-20 subscale "Difficulty identifying feelings" were also significantly higher among fatigued patients, suggesting the association of alexithymic personality with fatigue. Depression was not associated with fatigue. **Conclusion:** Multivariable logistic regression revealed the association of a high "Identity" score with a high risk of fatigue. Specific illness perception and alexithymic personality were associated with hemodialysis-related fatigue.

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### ST03-10

#### Frequency and correlates of non-adherence in a large sample of patients after kidney transplantation: A KTx360° substudy

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**Aims:** Adherence to the immunosuppressive medication is crucial for transplant and patient survival after organ transplantation. Non-adherence is a common and preventable cause of graft loss. The WHO defines adherence as a complex construct influenced by multiple variables. Despite frequent reports of associations between non-adherence and various variables, results often appear contradictory. In Germany, the absence of patient registers that include psychosocial aspects limits available data to smaller interventional studies, likely representing a selected patient cohort. **Methods:** As part of the structured multimodal follow-up program KTx360°, 838 post-kidney transplant patients were assessed from May 2017 to September 2020. Each participant underwent a psychosocial risk assessment conducted by either a medical doctor or psychologist. The assessment included the Basel Assessment of Adherence to Immunosuppressive Medications Scale (BAASIS) to evaluate adherence behaviors. **Results:** The average age of participants was 52.3 years (SD = 13.5), with 58.7% being male. Of these, 22.1% reported non-adherence according to the BAASIS interview. The most common issues were timing non-adherence (13.0%) and taking non-adherence (11.7%), with only 0.5%

reporting cessation of at least one immunosuppressive medication. Factors associated with self-reported non-adherence included younger age, male gender, employment status (part- or full-time), higher education (over 12 years of schooling), longer time since transplantation, higher levels of anxiety and depression (measured by the Hospital Anxiety and Depression Scale), and lower perceived social support. **Conclusion:** Among patients after kidney transplantation, 22.1% reported non-adherence to the immunosuppressive medication, aligning with findings from other studies. Given the significant rate of non-adherence, incorporating routine adherence assessments into clinical practice is recommended to improve outcomes.

### ST03-11

#### Early life stress and attachment trauma and their roles on essential hypertension

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**Background:** Essential hypertension is still a disorder of unknown cause. It develops throughout the lifespan and often remains undetected for a long time, in particular during its preliminary stages. Our research group was able to show a high prevalence of early life stress and insecure attachment representations in patients with primary hypertension (Balint et al. 2016a, 2016b). Therefore, we hypothesized that childhood maltreatment (CM) and insecure attachment patterns may be responsible for a set point adjustment in the biological stress axes, and could thus contribute to the development of essential hypertension. **Methods:** To test this hypothesis, we derived the autonomic nervous system (ANS) activity using electrocardiography (ECG) and impedance cardiography (ICG) in healthy mothers (19–43 years old) and their healthy one-year-old child to determine heart rate (HR), blood pressure as well as respiratory sinus arrhythmia (RSA) and pre-ejection period (PEP) as parameters of parasympathetic and sympathetic tone, respectively. **Results:** Mothers with CM experiences presented with significantly ( $p < 0.01$ ) lower PEP values than mothers without CM experiences, indicating higher sympathetic nervous system (SNS) activity. Surprisingly, PEP was also significantly ( $p < 0.01$ ) lower in the children of mothers with CM experiences when compared to the child of mothers without CM. Mothers with insecure attachment representation, especially with attachment trauma, also showed significantly ( $p < 0.001$ ) lower PEP values together with both significantly higher ( $p < 0.001$ ) diastolic and mean arterial blood pressure ( $86 \pm 9$  and  $99 \pm 8$  mmHg, respectively) when compared to mothers with secure attachment representation ( $78 \pm 10$  and  $92 \pm 8$  mmHg, respectively). **Conclusion:** CM and attachment trauma led to a set point adjustment of the ANS with chronic SNS over-activation. This may have led to the measured increase in

blood pressure at this age. Interestingly, we show a transmission effect of SNS activation in the child through ELS experiences in the mother. Further results and conclusion derived from the above studies will be presented in detail at the symposium.

### ST03-12

#### Struggling at the start of a relationship: a pilot study of trauma and dissociation in women with miscarriage

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**Background:** Early developmental stage has been considered critical for the development of self-regulation. Through interaction with significant others, children relieve bodily and emotional tensions, learning how to monitor and regulate physiological and mental states. Not surprisingly, adverse childhood experiences such as physical and emotional maltreatment have been found to increase the risk of health problems. Traumatic experiences and trauma-related psychopathology prevail in people with persistent somatic symptoms or functional somatic syndromes. However, it remains largely unknown whether unresolved traumatic stress also affects body systems at pregnancy, the very start of parent-child relationship. Biological risk factors commonly identified for miscarriage are not shown in a half of women who have miscarriage recurrently. We hypothesized that prior traumatic experiences may sensitize women to the physiological and psychological tensions during pregnancy, increasing the demand to the reproductive system. This pilot study aimed to generate initial evidence for the link between unresolved traumatic stress and miscarriage. **Methods:** We surveyed dissociation, a psychopathology with a tie to chronic traumatization, as well as somatic symptoms and traumatic experiences in women with sporadic miscarriage. Two clinical groups were formed, for those with or without a prior live birth. If unresolved traumatic stress plays a role in miscarriage, we expected that there would be a subgroup characterized by trauma and dissociation in those without a prior live birth. **Results:** The result was consistent with our hypothesis. A mean-level difference between the two groups was evident, in victimization experiences, dissociation, and somatic symptoms attributable to emotional distress. Importantly, victimization experiences correlated positively with dissociation and the emotional attribution of somatic symptoms in the no-live-birth group but not in the live-birth group. **Conclusion:** The finding indicates the potential applicability of the psycho-bio-social formulation for miscarriage.



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### ST03-13

#### Effects of the psychobiotic *Bifidobacterium longum* 1714 on psychological well-being during exposure to a long-term isolated confined and extreme environment in Antarctica

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**Background:** *Bifidobacterium longum* 1714<sup>TM</sup> (1714<sup>TM</sup>) is a patented probiotic which can sustain vitality and/or reduce mental fatigue in humans, counter-regulate stress responses and/or negative emotions in humans and counter-regulate social stress in humans. The aim of this study was to evaluate its efficacy under extreme real-life conditions. **Methods:** A randomized double-blind placebo-controlled trial was conducted to test the effects of 1714<sup>TM</sup> (20g of 10<sup>9</sup> colony-forming units) on psychological well-being of volunteers exposed for 12 months to an isolated, confined and extreme environment at the research station Concordia in Antarctica. The Profile of Mood States (POMS) and the Positive and Negative Affect Schedule (PANAS) and ten Visual Analogue Scales for well-being (VAS) were rated

by participants themselves, with VAS also rated by an external expert at site during the course of the Antarctic stay. Linear mixed-effects models were used to explore the impact of time and group (1714<sup>TM</sup> versus placebo) on psychological wellbeing, with adjustments made for age. Post-hoc analyses were conducted by obtaining the estimated marginal means for the interaction between group and timepoint followed by Bonferroni correction. **Results:** Out of the 32 participants (n=18 1714<sup>TM</sup>; n=14 placebo; mean age 37.4±11.3 years, 19% women) of the winter-over periods 2018/19, 2019/20 and 2021/22, three volunteers dropped out but were included in the intention-to-treat analysis. VAS external rating was similar between the groups. For the self-rating, VAS scores were in favor for 1714<sup>TM</sup> during the Antarctic winter: for Happiness (June: Δ 18 units out of 100, p<.01; July: Δ 14 units out of 100, p=.04), Calmness/Balance (May: Δ 14 units out of 100, p=.04; June: Δ 16 units out of 100, p=.02), Activeness/Adventurousness (May: Δ 16 units out of 100, p=.03), Feeling stressed (July: Δ 21 units out of 100, p=.01) and Stress Coping (August: Δ 11 units out of 100, trend; September: Δ 10 out of 100, trend). For PANAS no differences were observed between groups. POMS total score was in favor of the probiotic group during the Antarctic winter, especially the subscales depression/dejection, anger/hostility, and tension/anxiety. **Conclusion:** 1714<sup>TM</sup> showed enhanced self-perceived psychological well-being compared to placebos in real-life extreme conditions, while external expert ratings did not reflect the intervention. Biological data collected requires further evaluation to corroborate these findings.

### ST03-14

#### Effects of a long-term isolated confined and extreme environment in Antarctica on psychological well-being

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**Background:** Isolation and confinement dramatically affect mental well-being, as experienced by many people during the Covid-19 pandemic. In this study, we analysed the mental well-being of staff living voluntarily in long-term isolation and confinement on an Antarctic Research Station. **Methods:** The psychological well-being of volunteers exposed to an isolated, confined and extreme environment at the research station Concordia, Antarctica was assessed throughout their 12 months winterover mission. The Profile of Mood States (POMS), Positive and Negative Affect Schedule

(PANAS), and ten Visual Analogue Scales for well-being (VAS) were rated by participants themselves, with VAS also rated by an external expert at site, during the Antarctic stay. Linear mixed-effects models were used to explore the impacts of age, sex and time on psychological wellbeing. **Results:** Thirty-six participants (seven women) with a mean age of 37.4 (11.1) years of the winter-over campaigns 2018/2019 (N=13, 3 women), 2019/2020 (N=12, 4 women) and 2021/2022 (N=11, 0 women) participated. Mental wellbeing during the Antarctic winter and upon Antarctic crew change periods (beginning and end of summer) worsened as measured by decreased values for self-rating of VAS scores ( $p < .001$ ), the POMS sub-scores Confusion & Bewilderment, Tension & Anxiety (both  $p < .05$ ) and PANAS negative affect ( $p < .01$ ). Similar trends were found for POMS total and POMS Anger & Hostility scores. For POMS Vigour & Activity ( $p < .01$ ) along with PANAS positive affect ( $p < .05$ ) a constant decrease over time was displayed. Overall, there was great variability between the participants. Younger participants and women were more affected than older participants and males, respectively. The VAS expert-ratings aligned with the self-rating, but participants mostly rated themselves less optimistic than the external expert ( $p < .05$ ). **Conclusions:** Long-term isolation and confinement lead to impaired mental wellbeing, however, the extent differed between individuals. Additionally, crew members were more affected during transition periods in the Antarctic summer, which are typically associated with changes in crew size and composition, changes in workload, and stress.

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## ST04-01

### The close link between interoceptive sensitivity and body image concerns in anorexia nervosa

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**Background:** Reduced levels of interoceptive awareness may predispose individuals to severe body-image disturbances in clinical populations (Badoud and Tsakiris, 2017). About Anorexia Nervosa (AN), two previous studies (Phillipou et al., 2022; Monteleone et al., 2021) investigated the link between interoceptive sensitivity and eating-related psychopathological symptoms, underlining the role of the interoceptive components of self-regulation, trusting, and body listening. However, no study has explored the link with negative body image, which is a core characteristic of AN. **Methods:** We measured the level of interoceptive sensitivity with the traditional Multidimensional Assessment of Interoceptive Awareness (MAIA) and the body image attitudes through the Body Uneasiness Test (BUT) in a sample of women with AN and a sample of women with no eating disorders (as controls). We verified between groups' differences in MAIA scores. Moreover, we performed a regression

analysis to explore the hypothesis that reduced levels of interoceptive awareness may predict higher body-image disturbances in the clinical sample. **Results:** Participants with AN reported significantly lower scores in the interoceptive components of attention regulation, self-regulation, body listening, and trusting ( $p$  always  $\leq 0.001$ ) compared with the controls. Crucially, in the sample of women with AN, lower expressions of these components were significantly related to higher negative body image, especially in terms of weight phobia, body image concerns, avoidance, detachment and estrangement feelings towards one's own body ( $p$  always  $\leq 0.001$  one-tailed). According to the regression model, trusting ( $p < 0.001$ ) and self-regulation ( $p = 0.02$ ) significantly predicted a more negative body image. **Conclusion:** We confirmed an alteration of interoceptive sensibility in AN; moreover, we reported its crucial role in the expression of negative body image. The less our participants experienced their bodies as safe and trustworthy and they regulated distress by paying attention to bodily sensations, the more they expressed negative attitudes towards their bodies. Thus, our evidence supports the hypothesis that interoception plays a role in multiple subjective bodily experiences, including body image. From a clinical perspective, our results may encourage evidence-based interventions that enhance individuals with AN's ability to attend to and interpret correctly their internal bodily signals.

## Comprehensive alteration in white matter microstructure in women with anorexia nervosa.

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**Background:** Fractional anisotropy (FA) is a metrics in diffusion tensor imaging (DTI) studies to assess the white matter (WM) integrity. The WM alterations in patients with anorexia nervosa (AN) have been reported; however, the results have been highly inconsistent in previous studies, partly due to the heterogenous samples across studies and modest sample size. **Methods:** The study included 45 female patients with AN, with a mean BMI of 14.8 (1.7), and 41 female HC participants with a mean BMI 20.6 (1.9), from four medical facilities. The WM integrity was investigated using tract-based spatial statistics (TBSS) with diffusion tensor images. To reduce the confounding effects, age, body mass index (BMI), the location where the MRI imaging was performed, and total intracranial volume (TIV) were incorporated as a covariate in the analysis. **Results:** The study revealed significant reduced FA values in widespread areas of the brain in patients with AN including corona radiata, posterior thalamic radiation, internal and external capsule, superior longitudinal fasciculus, and sagittal stratum. These areas encompassed most of the regions identified in each previous study. **Discussion:** The observed decreased FA in widespread areas of the WM may be attributed to the higher severity of the patient group characterized by lower BMI compared to previous studies. The persistent decrease in FA values even after adjusting by BMI or age as covariates suggested that the deterioration of WM integrity may originate from the pathology of AN itself. To elucidate when these changes occur and to develop the intervention aimed at preventing them, longitudinal study focusing on individuals at high risk of onset are warranted.

## ST04-03

### Maternal eating disorders during the perinatal period: findings from a longitudinal multi-method family study

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**Background:** The time around the birth of a child is a vulnerable period, especially for families with mental health burden, i.e. eating disorders (EDs). In our study, we compare families with and without the presence of maternal ED history in terms of fetal brain development, pregnancy outcomes, child development, parenteral psychopathology and maternal feeding behavior. **Methods:** Data derived from the EMKIE study, a longitudinal multi-method pilot study, including women with ED history (ED group, n = 24), women without ED history (HC group, n = 33), their male partner and their child born during the study course. Families were followed up from late pregnancy (t1) until the end of the child's first year of life (t3). Using fetal magnetoencephalography (fMEG), an auditory sequence was presented to assess brain response latencies in fetuses of mothers with and without a history of anorexia nervosa (AN) at t1. At three months postpartum (t2), families reported on birth outcomes, infant feeding, parenteral adjustment (MAMA/PAPA), ED symptoms (EDE-Q), depressive symptoms (PHQ-9) and stress levels (PSS10). At t3, the same psychological variables were assessed and a mother-infant feeding interaction was videotaped and structurally analyzed. **Results:** At t1, fetuses of mothers with lifetime AN showed slower brain responses to auditory stimulation compared to fetuses of control mothers, though,

this difference was not significant. Birth outcomes were comparable between groups, except for lower weight-for-length birth percentiles in children of women with ED history. Mothers with ED history were more concerned about infant feeding at t2. At t3, we found similar feeding scale outcomes in women with and without ED history. Mothers with ED history reported more severe ED symptomatology, higher depression scores and lower total maternal adjustment compared to women of the HC group across all measurement points. No differences were found between partners of women with and without ED history. **Discussion:** Follow-up on children of mothers with ED history is pivotal to investigate if fMEG outcomes are associated with child development. Partners of women with ED history did not appear to be affected by their partners' disease and may therefore play a protective role in the affected family system. Our observational data are encouraging as they support maternal sensitivity and competency around mealtimes irrespective of ED history.

## ST04-04

### Sense of loss of control and impaired goal-directed control in bulimia nervosa: a case-control study

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**Aims:** We examined the relationship between the sense of loss of control (LOC) which was throughout the binge-eating and purging behavior of Bulimia Nervosa (BN), and the goal directed control. **Methods:** Female BN and healthy controls were enrolled (35 vs 35, age ranged from 17-30). The difference in demographic information, eating disorder scale, mood status, impulsivity, and food addiction scales were compared between the two groups. A sequential two-stage decision task was used to assess goal-directed/habitual control in both groups, and metrics were fitted by computational psychiatry method to assess the goal-directed control. We explored the relationship between LOC and goal directed control using multiple linear regression and partial correlations in BN group. The patients with BN were followed up 1 month after discharge, and the relationship between goal-directed control and treatment outcome which was indicated by LOC reduction rate was analyzed. **Results:** BN subjects exhibited impaired goal-directed control, more psychological/behavior characters related to eating disorder, and higher depression, anxiety, impulsivity, food addiction level. BN patients' higher LOC was associated with goal directed impairment index, eating/weight concern, dietary restriction, BISBAS behavior drive, BIS noplanning impulse and age (p<0.05). However, the influence of goal directed impairment index (choice stickiness and beta MF) on LOC still existed after regressed other factors. The treatment outcome was associated with goal directed impairment index, body shape concern, weight

concern, BISBAS behavior drive/fun seeking, BIS noplanning impulse, YFAS. When other factors were regressed and only spaceship task test indicators were considered, a clear trend was observed for higher mixing weight, lower beta MB and choice stickiness ( $p < 0.001$ ) were associated with better treatment outcomes. **Discussion:** We provided evidence on relevant role of goal-directed control deficit in the LOC of BN. The behavioral symptoms of BN are understood from the psychological feature of LOC, and the common potential psychological mechanism of BN and other mental disorders is explored by verifying the role of goal-directed deficits in LOC. These findings provided new insight to improve the interventions of BN. In the future, it may be possible to improve the sense of LOC in BN by intervening with goal-directed deficits.

## ST04-05

### Low body weight and lack of energy – a gynecological perspective on anorexia and relative energy deficiency in sports (RED-S)

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**Background:** Low energy availability due to eating disorders or extensive exercise/sports can decrease GnRH-pulsatility and consecutively leads to low gonadotropins (primarily LH and FSH). The typical clinical finding is a functional hypogonadotropic hypogonadism or functional hypothalamic amenorrhea (FHA) with low estradiol and low progesterone levels. Not only the most evident menstrual cycle disturbance - amenorrhea (no menstrual bleeding for at least 3 months) has adverse effects on bone health. Also, oligomenorrhea (menstrual cycles longer than 35 days) may impact bone health. Special attention is needed in adolescents with primary amenorrhea (no menstrual bleeding until the age of 16 or >2,5 years after thelarche). Although RED-S and anorexia are associated with delayed puberty, other reasons for primary amenorrhea, such as obstructive genital malformations or differences of sex development, need to be excluded. FHA is a diagnosis of exclusion, thus a careful work up needs to be done by gynecologists. **Methods:** In a retrospective study, we analyzed data of our outpatient clinic from July 2019 to September 2023. Inclusion criteria was primary or secondary amenorrhea due to FHA and diagnosis of RED-S and/or anorexia. We identified 16 patients with primary amenorrhea, 3 suffered from anorexia, 9 from RED-S and 4 from both RED-S and anorexia. 38 patients presented with secondary amenorrhea, 14 with anorexia, 16 with RED-S and 8 with both RED-S and anorexia. **Results:** If FHA is confirmed, first line therapy is recovering energy status and/or body weight. RED-S needs an interdisciplinary setting, whereas anorexia and other eating

disorders have been domains of psychotherapy. In selected cases transdermal hormone replacement therapy can be an option to enhance bone mineral density in FHA-patients. According to studies, the oral contraceptive pill (OC) has no effect on bone mineral density in these patients and should not be the therapeutic option of choice. In adolescents with delayed puberty the OC must not be used to induce menarche before puberty has ended, as this will end uterus maturation, which is important for fertility in later life. **Conclusion:** In these cases an individual approach is necessary, as so far there is no evidence on pharmaceutical interventions for delayed puberty in FHA-patients. Studies are needed to evaluate the effect of hormonal therapy in eating disorders and RED-S within an interdisciplinary setting.

## ST04-06

### The effect of accelerated intermittent theta burst stimulation (aiTBS) intervention in bulimia nervosa

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**Aims:** Bulimia nervosa (BN) is an eating disorder characterized by fear of gaining weight, recurrent binge-eating, followed by purging behaviors. Currently, the primary treatments for BN are not fully satisfactory. Previous studies have shown that impulsive traits are a risk factor for the occurrence of binge-eating in BN patients. Functional magnetic resonance imaging (fMRI) studies have found dorsomedial prefrontal cortex (DMPFC) is associated with reward and inhibitory control. Therefore, in this study, accelerated forms of intermittent theta burst stimulation (aiTBS) were used to target DMPFC for patients with BN to assess the efficacy and safety of the intervention. **Methods:** Patients with BN who met the admission criteria after evaluation were randomized into the aiTBS group ( $n=27$ ) and the control group ( $n=24$ ). Both groups maintained the original drug regimen unchanged, while receiving inpatient uniform settings, the intervention group on this basis using aiTBS with targeted DMPFC (7 consecutive days, 20 sessions in total), observe the differences in clinical symptom changes between the two groups before and after the treatment, as well as the adverse reactions, in order to assess the efficacy and safety. **Results:** Compared to the control group, the time effect ( $P=0.002$ ), group effect ( $P=0.044$ ), and interaction effect ( $P=0.014$ ) of binge-eating impulses in the aiTBS group were significant. The aiTBS group had a significant time effect ( $P=0.045$  and  $0.038$ , respectively), group effect ( $P=0.002$  and  $0.034$ , respectively), and interaction effect of BIS-11 attentional impulsiveness and motor impulsiveness ( $P=0.022$  and  $0.006$ , respectively) when compared to the control group. And the aiTBS group had a significant time effect ( $P=0.000$ ), group effect ( $P=0.040$ ), and interaction effect of the EDE-Q body shape concerns ( $P=0.009$ ). In the aiTBS group, 5 cases experienced minor local pain at the stimulation site and 2 cases experienced tinnitus during the intervention, with adverse reactions being mild and transient. **Conclusion:** The preliminary study suggested that aiTBS treatment targeting DMPFC significantly reduces binge-eating impulses and improves symptoms related to eating disorders, with overall mild and transient adverse reactions, tolerable by patients.

## Resting-state functional connectivity changes from bodily visual processing regions in anorexia nervosa: a comparison before and after CBT-E

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**Background:** Body image distortion is the core psychopathological feature of eating disorders (i.e., anorexia and bulimia nervosa). People with eating disorders showed less brain volume and activations in bodily visual processing regions, such as extrastriate body area (EBA) and fusiform body area (FBA), compared with healthy individuals. These regions have attracted attention as one of the core brain regions related to the development of eating disorders. However, the evidence of how these regions take part in the course of recovering from eating disorders remained unclear. Considering that enhanced cognitive behavioral therapy (CBT-E), one of the most effective treatments so far, focuses on various symptoms

including abnormal eating behavior and distorted body image, we can assume that its neural effect will be observed as network changes rather than simple regional brain activation changes. **Methods:** Therefore, this study analyzed 19 female anorexia patients from six cohorts to investigate resting-state functional connectivity before and after CBT-E with seed ROIs (regions of interest) in bodily visual processing regions. In addition, we examined functional connectivity changes correlated with body mass index (BMI) changes. **Results:** As a result, we found that functional connectivity from the right FBA to the middle cingulate cortex and amygdala decreased after CBT-E. Moreover, patients who recovered their BMI after CBT-E showed greater functional connectivity between right FBA and left dorsolateral prefrontal cortex (DLPFC). The middle cingulate cortex and amygdala are well-known for participating in emotional processing. In particular, previous studies reported that patients with anorexia had greater activation in amygdala when they looked at body-image stimuli. On the other hand, it is suggested that DLPFC is involved in the decision-making process regarding food consumption, such as reward processing and control of eating behavior. **Conclusion:** We found that CBT-E altered functional connectivity between the bodily visual processing region and brain regions related to emotional processing and decision-making, which may be an indicator of the comprehensive symptom improvement that CBT-E aims to achieve, i.e., improvement in abnormal eating behavior, eating concerns, and body shape and weight concerns.

## ST04-08

### Treatment and prevention of overweight and obesity in children and adolescents – introduction and baseline data of the STARKIDS study

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**Background:** The prevalences of overweight and obesity in adults as well as in children and adolescents are still rising [1]. In Germany there are 15 % of children and adolescents overweight, and 6 % obese [2]. Effective, guideline-compliant and well-evaluated treatment and prevention options are missing. Therefore, the STARKIDS program was developed and is currently being evaluated [3]. STARKIDS addresses the whole family, strengthening them for reaching a healthy weight development. **Method:** STARKIDS is a 1.5-years, step-wise program consisting of max. six face-to-face sessions with medical personal and an online platform in step 1 and further counselling in local health departments in step 2. STARKIDS is structured in 6 modules (STARKIDS Start, eating & drinking, activity & media, family life, STARKIDS keep on and Joker). In the face-to-face sessions the contents are taught in the family's pediatric practice and personal goals are set. With the help of the online platform this

knowledge is deepened with educational movies, texts, serious games and reflexion tools. Transference to step 2 is possible when there was no success in step 1. The STARKIDS study is a cluster-randomized controlled trial with BMI-SDS/BMI percentile and life quality, assessed with the KINDL-R questionnaire [4], as the main outcomes assessed at three measurement points. Data collection began in April 2022 and will be completed in December 2024. **Results:** N=611 children and adolescents were included in the study. Preliminary baseline data from N=575 children and adolescents were analyzed: The STARKIDS sample consists of 55.1% males, with a baseline mean age of M=10.7 (SD=3.15), a BMI percentile of M=98.46 (SD=1.76) [5] and BMI-SDS<sub>LMS</sub> of M=2.4 (SD=.52). The baseline total score (score from 100) of the KINDL-R questionnaire as parent-report form is M=72.42 (SD=11.79). **Conclusion:** Intervention description, detailed baseline data as well as qualitative data will be presented at the ICPM congress.

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## ST04-09

### TWINCORDED-ID: A study of the frequency of adult concordance/discordance of gastrointestinal diseases and eating disorders in monozygotic and dizygotic twins

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**Aims:** Previous studies have shown that patients with eating disorders and/or functional gastrointestinal disorders (IBS etc.) may have an altered sensation of pain. Evidence exists that both genetics and the environment have an influence on the development of these diseases. For this reason, twin studies are important for researching the possible impact of genetics and environment. The aim of this study was to investigate possible differences in pain tolerance and pain perception between twins with symptoms for eating disorders and/or functional gastrointestinal disorders, as well as finding out whether these differences are also evident within the twin pairs. **Methods:** In this study, monozygotic and dizygotic twins from the TwinHealth cohort were contacted and asked to complete a questionnaire about different symptoms and characteristics. Based on these answers, the twins were divided into 4 groups. One group with symptoms of an eating disorder, another group with symptoms of a functional gastrointestinal dysfunction, one with symptoms of both disorders and a group with twins who showed neither symptoms of an eating disorder nor functional gastrointestinal dysfunction. The Neurosensory Analyzer Model TSA 2 was used to measure pain perception and pain tolerance of the twins. First, warmth detection thresholds and cold detection thresholds were assessed on the forearm. After that, heat pain thresholds and cold pain thresholds were measured. All stimuli were applied 5 times with 2 rounds of detection first and pain tolerance afterwards. **Results:** A total of 35 twin pairs were included in the study, 21 monozygotic and 14 dizygotic. The average age was 52 years, about 30% were male while the remaining 70% were female. The calculated ANOVAS, as well as the post hoc t-tests, showed no significant differences between the 4 groups for any of the temperatures recorded. **Conclusion:** Based on these data, patients with symptoms of eating disorders or gastrointestinal dysfunction do not appear to differ in their temperature or pain perception from those without symptoms.

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## ST04-10

### Diagnosis and treatment of athletes with relative energy deficiency syndrome (RED-S) – do they all have an eating disorder?

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**Background:** Relative energy deficiency in Sport (RED-S) encompasses health issues stemming from energy depletion due to intense exercise. An outpatient program at the University Hospital of Tübingen offers multidisciplinary care for affected athletes, incorporating sports medicine, gynecology, psychotherapy, and nutritional counseling, with sports medicine serving as the initial point of contact. **Methods:** Between 2019 and 2022, 58 professional athletes from federal and national squads, as well as those referred privately or by medical professionals, underwent comprehensive assessments. These assessments included anthropometric measurements, physical performance diagnostics, laboratory tests, and resting electrocardiogram readings at the beginning (t0) and end (t1) of the program. Additionally, gynecological and psychosomatic diagnostics were conducted. The collected data aim to characterize the athletes cross-sectionally and also longitudinally to enhance future prevention, diagnosis, and treatment of RED-S. **Results:** The sample predominantly consisted of female athletes (97%) under the age of 18 (66%), with prevalent underweight (59%) and menstrual disorders (93%), mainly primary or secondary amenorrhea. Diagnostic evaluations revealed eating disorders such as anorexia nervosa and bulimia nervosa in 40% of the athletes. The sample was notably heterogeneous. During the program, 64% of the athletes exhibited a mean weight gain of 7 (±6) kg, excluding those still undergoing treatment (36%). **Conclusion:** Multidisciplinary treatment at a RED-S sports medicine contact point provides low-threshold access for affected athletes. Therapists should be aware that a classic eating disorder may also be present.

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## ST04-11

### Modelling perceived body size and weight in obesity through auditory-driven bodily illusions: exploring the role of interoceptive sensitivity

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**Background:** Distorted perceptions of body size are linked to poorer treatment outcomes in obesity [1]. Experimental manipulation of bodily sensory information can reshape body representation in real-time, even depending on interoceptive sensitivity [2]. Low interoception in obesity [3] may explain altered body representations and affect their malleability. **Methods:** We probed whether hearing modified sounds of one's own footsteps could induce the illusion of a lighter or heavier body [4] in participants with obesity. Also, it explored the potential connection between the illusion's effect on perceived weight and individual interoceptive sensitivity. 25 women with obesity (BMI>30kg/m<sup>2</sup>) underwent a preliminary assessment for eating disorder risk (BES) and interoceptive sensitivity (MAIA). Then, participants walked while hearing their footsteps in three conditions: higher-pitched, lower-pitched, and real footstep sounds. They reported perceived body heaviness (light vs. heavy) while walking and modelled a digital avatar to match their own body size. Measures were taken at baseline and after each sound condition. Analyses comprised repeated measures ANOVA and Spearman's correlations. **Results:** Higher-pitched footsteps made participants feel lighter, while lower-pitched sounds made them feel heavier, as anticipated. Sound manipulations didn't affect the accuracy of the avatar modelling but participants who were confident in recognizing emotions via bodily signals tended to represent their body size more accurately, both at baseline and in the control condition. However, interoceptive sensitivity didn't correlate with perceived body size in the illusory sound conditions. Also, higher interoceptive listening was associated with a lower risk of eating disorders. **Conclusion:** These findings support the possibility of shaping the perceived body heaviness through modelled body-related sensory information in obesity [4]. Furthermore, we confirmed that higher interoceptive sensitivity may promote more accurate body representation in obesity, though the effectiveness of bodily illusion might not be linked to one's confidence in interoceptive signals. Bodily illusion susceptibility in obesity might be linked to altered multisensory integration mechanisms, instead [5]. Crucially, understanding risk factors to altered body representations and constraints to its effective reshaping could inform tailored and more effective therapeutic technologies for improving body perception.



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## ST04-12

### Alexithymia and interpersonal stress: an experimental study in individuals with eating disorders

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**Background:** Alexithymia has been considered a risk and maintaining factor for Eating Disorders (EDs). However, the association between alexithymia and ED psychopathology has been poorly explored through experimental studies. This study aimed to assess if individuals with EDs and alexithymia show altered biological and emotional responses to Trier Social Stress Test (TSST). **Methods:** According to the Toronto Alexithymia Scale cut-off scores, 51 participants (29 with anorexia nervosa and 22 with bulimia nervosa) were classified as alexithymic ED participants while 38 participants (21 with anorexia nervosa and 17 with bulimia nervosa) were identified as no alexithymic ED participants. Forty healthy women were also enrolled. Cortisol, anxiety, and hunger responses to TSST were measured. **Results:** In response to TSST, alexithymic individuals with EDs showed heightened production of cortisol in comparison to both non alexithymic ED participants and healthy women, but lower cortisol reactivity than healthy women. Compared to healthy women all individuals with EDs showed increased anxiety response to TSST; alexithymic individuals with EDs displayed heightened anxiety than non alexithymic ED participants. Lower hunger response was found in alexithymic individuals with EDs than in healthy women. **Conclusion:** Alexithymia affects biological and emotional responses to an acute

psychosocial stress in individuals with EDs. This is consistent with the idea that heightened difficulties with identifying and describing emotions and an externally oriented thinking are associated with heightened vulnerability to face social challenges. These findings may promote new insights in the biological bases of EDs and provide novel therapeutic implications.

## ST06-01

### The causal relationship between genetically predicted mental disorders and frailty: A bidirectional and multivariable mendelian randomization study

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**Background:** In observational studies, frailty has been strongly associated with mental disorders. However, the mechanisms underlying the association between frailty and mental disorders remain unclear. **Methods:** We conducted a two-way Mendelian randomization (MR) study to assess the causal relationship between frailty, as measured by the frailty index (FI), and ten common mental disorders. The datasets involved European ancestry individuals and included measurements of the FI (N = 175,226), schizophrenia (SCZ; N = 320,404), major depressive disorder (MDD; N = 480,359), bipolar disorder (N = 337,199), insomnia (N = 462,341), obsessive-compulsive disorder (N = 33,925), anxiety disorders (N = 463,010), autism spectrum disorder (N = 46,351), anorexia nervosa (N = 14,477), opioid-related mental and behavioral disorders (N = 215,650), and mental and behavioral disorders due to use of other stimulants, including caffeine (N = 215,570). **Results:** Two-sample MR analyses were performed using inverse variance weighting, followed by various sensitivity and validation analyses. Genetically predicted SCZ (odds ratio [OR] = 1.019, 95% confidence interval [CI] 1.005–1.033) and MDD (OR = 1.182, 95% CI 1.115–1.253) were significantly associated with higher FI. No causal links were identified between the FI and the other eight common mental disorders. Unfortunately, the reverse directional MR analysis found no causal relationship between ten common mental disorders and FI. In the Multivariable MR, the estimated MDD effect on FI is comparable to the univariate IVW estimate (OR = 1.203; 95% CI, 1.105 to 1.310), while the estimated SCZ effect on FI fails to be significant compared to the univariate estimate. The results of the sensitivity and validation analyses confirmed stabilization. **Conclusion:** Our study strengthens the evidence for a causal relationship between SCZ and MDD, and frailty. Further understanding of the pathological mechanisms underlying this association is essential for the prevention and intervention of mental disorders.

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## ST06-02

### Identifying influences that play an important role in the path from social isolation or loneliness to depression: a mendelian randomization analysis

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**Background:** Isolation and loneliness are associated with depression, but it is unclear whether a causal link exists between isolation and loneliness to depression, or whether modifiable risk variables exist along the pathway that can influence pathogenic outcomes. **Methods:** We extracted genetic variants of European ancestry associated with social isolation or loneliness and depression from the UK Biobank (455,364 and 462,933 individuals, respectively). Subsequently, we assessed the relationship between loneliness or social isolation and depression using a two-sample Mendelian randomization (MR) method. A two-step MR was used to assess the 25 potential mediators associated with the outcome (depression) and to calculate the proportion mediated by mediators that met the requirements. **Results:** In the two-sample MR analysis, genetically predicted elevated levels of social isolation or loneliness ( $\beta = 0.188$ , 95% confidence interval [CI] 0.109, 0.268,  $P = 3.594e-06$ ) were significantly associated with higher levels of depression. Of the 25 potential risk factors for depression, two were identified as mediators of the correlation between isolation or loneliness and depression: neuroticism (mediation ratio: 54.3% [95% CI: 43.1%, 65.5%]) and insomnia (15.5% [95% CI: 7.7%, 23.3%]). Multiple sensitivity analyses confirmed the robustness of the findings. **Conclusion:** Our findings provide evidence that higher levels of social isolation or loneliness have an impact on increased levels of depression, and that neuroticism and sleeplessness in turn play an important mediating role between the two.

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## ST06-03

### Early treatment-related changes in dorsolateral prefrontal cortex activity and functional connectivity as potential biomarkers for antidepressant treatment outcomes in major depressive disorder

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**Background:** Previous research suggests that patients with major depressive disorder (MDD) exhibit cognitive impairments. The dorsolateral prefrontal cortex (DLPFC) activation and its network connectivity may be potential indicators of response to antidepressant medications. **Methods:** This prospective cohort study recruited 115 MDD patients, 43 healthy controls. Demographic data were collected, and psychological assessments and ERP recordings

were performed at baseline and one week after venlafaxine treatment initiation, with a three-month follow-up. Two-way ANOVA and Mann-Whitney U tests examined differences in ERP components between MDD and controls. Linear mixed-effects models (LMMs), hierarchical regression, and binary logistic regression evaluated associations between changes in ERP components following treatment and changes in depressive symptoms and outcomes. LMMs and binary logistic regression assessed associations between changes in functional connectivity following treatment and changes in symptoms and outcomes. **Results:** The MDD group showed significantly reduced current density in the DLPFC during the N2 period evoked by deviant stimuli ( $P = 0.028$ ), and the current density in the right DLPFC during the N2 period evoked by deviant stimuli could predict HAMD-21 scores one week after treatment ( $P = 0.041$ ), with higher current density associated with lower HAMD-21 scores. Furthermore, an early increase in current density in the right DLPFC during the N2 period evoked by deviant stimuli predicted a higher probability of remission at three months of treatment ( $P = 0.005$ ). The functional connectivity values in the beta band between the left DLPFC and left PCC ( $P = 0.003$ ), and between the left DLPFC and right PCC ( $P = 0.004$ ) could predict HAMD-21 scores one week after treatment, with higher connectivity associated with higher HAMD-21 scores. Moreover, an early reduction in functional connectivity in the beta band between the left DLPFC and left PCC (OR = 0.534, 95% CI: 0.297 ~ 0.972,  $P = 0.036$ ), and between the left DLPFC and right PCC (OR = 0.533, 95% CI: 0.299 ~ 0.950,  $P = 0.033$ ) after antidepressant treatment predicted a higher probability of remission at three months. **Conclusion:** Early changes in DLPFC activation and network connectivity may serve as neural markers for monitoring treatment efficacy and predicting clinical outcomes, informing personalized treatment approaches.

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## ST06-04

### Exploring the interplay of alexithymia, mindfulness, and attachment styles on motivational orientations: insights from the dualistic model of passion

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**Background:** Alexithymia is defined as a three-faceted personality trait associated with the processing of emotional information (Nemiah, 1977). Although empirical findings associate alexithymia with many psychopathologies (Preece et al., 2021), mainly within the realm of psychosomatics, scant understanding exists regarding the association between alexithymia and motivational orientations. This research ( $N = 1323$ ) aimed to fill this gap. According to the dualistic model of passion, individuals, despite demonstrating equal levels of commitment, may pursue their passions in divergent manners. Harmonious passion entails the seamless integration of one's passion into their identity while maintaining control, fostering positive outcomes such as well-being. Conversely, obsessive passion is typified by a lack of control, resulting in negative emotions, health complications, and potentially aggressive behaviors, particularly when one's sense of self

becomes jeopardized (Vallerand et al., 2003). Based on the theory of motivated cue integration (Shalev, 2021), we hypothesized that deficits in emotional processing manifested in alexithymia would be expressed in obsessive passion rather than harmonious passion, and that trait mindfulness would mediate the relations between alexithymia and obsessive passion. Additionally, we hypothesized and tested the antecedent role of attachment orientations on alexithymia and motivational orientations. **Results:** In Study 1, consistent with our prediction, higher levels of alexithymia were associated with lower levels of mindfulness. Mindfulness was significantly associated with lower levels of obsessive passion, but not with harmonious desire. The direct path leading from alexithymia to obsessive passion was positive and significant, while the direct path leading from alexithymia to harmonious passion was negative and significant. Finally, mindfulness fully mediated the association between alexithymia and obsession and harmonic passions. In Study 2, consistent with our prediction, we found that alexithymia fully mediated the relationship between anxious and avoidant attachment orientations and harmonious passion. Furthermore, it was found that alexithymia acts as a full mediator in the relationship between avoidance attachment (though not anxious attachment) and obsessive passion. **Conclusion:** The findings are discussed in terms of the association between alexithymia and self-regulation deficits and suggest future theoretical and clinical applications.

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### ST07-01

#### Qualitative evaluation of a video-based music therapy intervention for cancer patients undergoing tumor therapy

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**Background:** Music therapy is becoming increasingly important in oncology and studies have consistently shown significant positive effects of music therapy interventions in terms of improving anxiety, depressive symptoms and pain in patients with cancer.

Since February 2023, a video-based music therapy group intervention for patients undergoing tumor therapy has been carried out at the Clinic for General Internal Medicine and Psychosomatics at Heidelberg University. The focus of the intervention is on receptive music therapy, i.e., active listening to music. The contents of the music therapy group intervention include: (1) using music as a resource; (2) getting to know one's own musical biography; (3) dealing with fears, worries and other stressful feelings; and (4) music-induced relaxation and mindfulness. The online format is intended in particular to take account of the fact that many patients find it difficult to participate in face-to-face events due to their poor physical condition during tumor therapy. **Methods:** After the feasibility and acceptance of the intervention had been confirmed in a pilot study, a qualitative interview study was conducted to explore how the patients experienced the online music therapy intervention and the online format. 13 patients who had participated in the music therapy online group were interviewed in a semi-structured interview. The interviews were conducted from May to September 2023, transcribed, coded and analyzed using MAXQDA software in the sense of a content-structuring content analysis. **Results:** The results indicate a high level of acceptance of the intervention and satisfaction among patients. For the majority of patients, participation led to a more conscious approach to music through its more targeted use for emotion modulation. Patients expressed satisfaction with the online format, especially with its improved accessibility. Relatedness and belonging were also experienced in the online format, indicating strong group cohesion. **Conclusion:** The intervention can be easily integrated into the sometimes quite demanding everyday lives of patients undergoing tumor therapy. Thus, this online music therapy group intervention can be a promising therapeutic option for patients for whom face-to-face participation is not possible.

### ST07-02

#### Care networks of young colorectal cancer patients under the microscope – using egocentric social network analysis

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**Background:** Against the background of increasing numbers of early onset colorectal cancer (EOCRC;  $\leq 50$  years), there is growing evidence that these patients suffer from substantial psychosocial impact and have special psychosocial care needs. To date, however, no research systematically traces the path of (young) cancer patients through the complex, multi-professional care landscape.

We therefore set out to record the current care situation of EOCRC patients. Using egocentric social network analyses, we will explore how patients navigate through care structures and options, i.e., which services and resources are used, to what extent, for what purpose, and via which access routes. **Methods:** Multi-professional care networks, incl. psychosocial and non-professional social support, of  $n = 15$  EOCRC patients ( $\leq 50$  years; vs.  $n = 15 > 50$  years) are recorded. Patients (egos) are interviewed on the phone regarding their care networks using semi-structured, guideline-based network analysis-typical interviews at 3 measurement points (T0 after presentation in the colorectal cancer consultation at the NCT Heidelberg, T1 = T0 + 2 months, T2 = T0 + 6 months). Through so-called actor generator questions, the aim is to fully capture the actors (alters) of the networks. In addition to open-ended questions, to assist memory, a comprehensive list of actors is proposed to the patients (e.g., physicians in private practice, psychosocial counsellors). With the aid of so-called actor interpreters, the relationship between egos and alters (e.g. access, occasion, contact frequency) and potential contact between actors is specified. A mixed methods analysis will be carried out, including network visualization, determination of network metrics, and comparison to patients  $> 50$  years. **Results:** Preliminary analyses show a high complexity of care networks among EOCRC patients. On average, 21.4 alters are named, mostly medical and non-professional social support. General practitioners always play a role. Most patients report contact with health insurance companies beyond the usual extent. In addition to the comprehensive results, the application of the method will be presented at the congress. **Conclusion:** In addition to practical implications, such as identifying gatekeepers, e.g., for psycho-oncological services, or impulses for optimized psychosocial care programmes, the pioneering application of the method in this area allows a unique insight but also requires time-consuming interviews.

### ST07-03

#### Trajectory and predictors of post-traumatic growth amongst rectal cancer patients: an exploratory longitudinal study

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**Background:** Post-traumatic Growth (PTG) is a positive psychological growth resulting from struggling with traumatic life circumstances that challenge personal beliefs. Few studies have examined changes in PTG in rectal cancer (RC) since the early stages of cancer treatment. The aim of this exploratory prospective observational cohort study was to investigate the trajectory of PTG in RC patients undergoing combined modality therapy from diagnosis to follow-up and to identify the factors that might predict PTG at follow-up. **Methods:** Forty-three RC patients were recruited and assessed at four time points after the following treatment phases: after diagnosis (T0 - diagnosis), at least one month after

completion of preoperative treatment (T1, on average 3 months after diagnosis), at least one month after surgical resection (T2, on average 6 months after diagnosis), and at follow-up at least one year after surgical resection (T3, on average 18 months after diagnosis). Measurements included: Post-traumatic Growth Inventory, European Organization for Research and Treatment of Cancer Quality of Life Questionnaire C30 and CR-29 version, Mini-Mental Adjustment to Cancer Scale, Positive and Negative Affect Scale, Resilience Scale and Toronto Alexithymia Scale - 20. **Results:** PTG showed a progressive increase in total score together with all subscales, with a significant increase between T2 and T3 ( $p < .001$ ). Higher PTG scores at T1 ( $p < .001$ ) and greater use of the coping style "Fighting Spirit" at T0 ( $p = .009$ ) and "Fatalism" at T1 ( $p = .031$ ) were significant predictors of higher PTG at follow-up. The final model explained a significant proportion (59%) of the variance ( $p < .001$ ). **Conclusion:** The trajectory of PTG appears to be closely related to RC patients' responses to the different phases of treatment, particularly diagnosis and preoperative treatment. Overall, our data suggest that there is a need to implement psychological screening and tailored support programs aimed at promoting PTG from the earliest phases of RC treatment.

### ST07-04

#### A pilot study for a compassion-based intervention (COMWithU) for patients with advanced cancer: Preliminary analysis in South Korea

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**Background:** Patients with advanced cancer experience a multitude of psychological and existential challenges, encompassing uncertainty about the future, grief from multiple loss, and the need to adapt to altered social relationships. Recognizing the necessity for culturally tailored interventions to address these issues, this study aimed to develop and assess the feasibility of a compassion-based intervention for Korean patients with advanced cancer. **Methods:** The COMWithU is a psychological intervention, designed for adult patients with advanced cancer, consisted of five individual sessions incorporating elements like accepting suffering, practicing compassion-focused meditations directed toward oneself and others, and constructing of illness narratives grounded in the concept of compassion provided by mental health professionals. Participants were recruited from a single university hospital in Seoul, South Korea between Apr 2023 and Nov 2023. Primary outcomes were depression, anxiety, and spiritual well-being, assessed using the Hospital Anxiety Depression Scale (HADS) and The Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale (FACIT-Sp). Secondary outcomes were measured by

the Self-Compassion Scale. **Results:** Of the eight participants (mean age: 48.4±11.4 years) enrolled, seven completed the entire intervention. Analyses indicated a significant reduction in depressive symptoms ( $z = -2.032$ ,  $p = 0.042$ ) alongside improvements in spiritual well-being ( $z = -2.028$ ,  $p = 0.043$ ) and self-compassion ( $z = -2.197$ ,  $p = 0.028$ ) post-intervention. However, there was no statistically significant decrease in anxiety symptoms ( $z = -1.529$ ,  $p = 0.126$ ). **Conclusion:** The pilot study suggests that this compassion-based intervention is feasible and acceptable and shows promise for enhancing psychological and spiritual well-being in adult patients with advanced cancer. Subsequent research employing larger randomized controlled trials is necessary to confirm these preliminary findings. Funding: This work was supported by the National Research Foundation of Korea (NRF) grant funded by the Korean government (Ministry of Science and ICT) (No. 2021R1F1A1060129) and by funds donated to The SHIM (SNUH Health In Mind) Mind-Body center, Seoul National University Hospital, Republic of Korea.

## ST07-05

### Psychosocial support needs of families with Li-Fraumeni syndrome (LFS) or Fanconi anaemia (FA)

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**Background:** Li-Fraumeni syndrome (LFS) and Fanconi anaemia (FA) are rare cancer predisposition syndromes that significantly increase the risk of cancer. Due to their hereditary nature, there is a high risk of multiple family members being affected, placing a significant psychological burden on families. This burden is compounded by lifelong recommendations for preventive measures and ongoing care. Family members appear to play a crucial role in supporting individuals coping with these conditions. However, existing literature primarily scrutinizes the perspectives of affected individuals. Studies delving into the impact of LFS or FA from the perspective of multiple family members, particularly children, are rare and mostly of a qualitative nature. Consequently, this study aims to systematically investigate the impact of LFS and FA on the psychosocial well-being, family life and support needs of individuals as well as their close family members aged 12 and over.

**Methods:** This exploratory study adopts a multi-method approach. Data will be gathered through semi-structured interviews and an online survey using validated questionnaires in German language. Where available, role-specific questionnaires will be incorporated, such as those assessing fear of progression as a parent (e.g. PA-F-KF/E) or as a partner (PA-F-P-KF). Separate descriptive and qualitative content analysis according to Mayring will be conducted for each syndrome. Subsequently, the findings will be presented to representatives of the target group and analysed in a Delphi survey. Following this, we will develop a tailored family support intervention and assess its feasibility and acceptability through pilot testing.

**Discussion:** This study aims to provide an enhanced understanding of the psychosocial impact and support needs of families affected by rare cancer predisposition syndromes, namely

Li-Fraumeni syndrome and Fanconi anaemia. To our knowledge, the utilization of a Delphi survey following a comprehensive needs assessment is unique in this context. This approach will ensure that the characteristics of the proposed intervention align with the needs and resources of the target group. If the intervention demonstrates feasibility, it holds the potential to improve care for individuals with LFS and FA and their family members. This study is supported by funding from the Federal Ministry of Education and Research (grant number: 01GM2205B).

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## ST07-06

### A multimodal prehabilitation program for CAR-T cell therapy: proposal and patient perspectives

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**Background:** Prehabilitation, an effective strategy in various medical interventions, can significantly enhance patient outcomes by optimizing readiness for high-risk procedures. Given the intense psychological and physical challenges posed by CAR-T cell therapy in treating hematologic malignancies, a tailored prehabilitation program could markedly improve patient preparation and treatment outcomes. **Methods:** This study undertook a comprehensive landscape review, expert consultations, and a literature analysis to delineate essential components for a multimodal prehabilitation program. A mixed-methods survey involving 37 CAR-T cell therapy patients at the University Hospital Würzburg refined these components, incorporating patient preferences and addressing their concerns. **Results:** The patient survey showed strong support for a multimodal prehabilitation program, incorporating educational, nutritional, psychological, and physical therapy

components. Patients reported benefits such as empowerment and enhanced therapy preparation. Concerns included information overload and the need for personalized interventions. **Conclusion:** The proposed PreCARE program was well-received by patients, underlining its potential to enhance readiness for CAR-T cell therapy by addressing both physical and psychological needs. Future research should evaluate the impact of prehabilitation on CAR-T cell therapy outcomes and patient well-being to ensure the program's effectiveness and adaptability.

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## ST07-07

### Whose turn is it? The perspectives of healthcare professionals in Germany regarding responsibilities in the management of cancer-related fatigue

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**Background:** Cancer-related fatigue (CRF) is one of the most common unmet needs in supportive cancer care. Due to its multifactorial etiology and complex diagnostics it is most efficiently managed using an interdisciplinary approach. However, this is not sufficiently implemented to date. The aim of this study was to explore how responsibilities in CRF management are currently attributed among healthcare professionals (HCPs). **Methods:** An online survey was conducted among 148 physicians, 184 nurses, and 144 psycho-oncologists working in oncology in Germany. Recruitment included convenience sampling and additional snowball sampling. Participants had to rate statements regarding CRF management on a 4-point Likert scale and to attribute task sectors (screening, counseling, etc.) to the professions they assumed to be responsible. Data were analyzed descriptively. **Results:** The majority of the three professional groups agreed that the interdisciplinary exchange regarding CRF is neglected. Physicians attributed responsibilities primarily to their medical colleagues (working in aftercare, rehabilitation, and acute care). Nurses attributed the highest responsibility to their own profession in three of the five task sectors. Likewise, psycho-oncologists saw themselves in four of the five sectors among the three mainly responsible professions. While nurses attributed a similar level of responsibilities to psycho-oncologists as to their own group, psycho-oncologists attributed considerably higher levels of responsibilities to themselves. Likewise, physicians attributed higher levels of responsibilities to psycho-oncologists than to nurses. **Conclusion:** While all the three professional groups were in agreement regarding the lack of interdisciplinary exchange on CRF, considerable discrepancies were found in whom they saw responsible in CRF management

respectively. Interdisciplinary CRF management is complicated due to unclear responsibilities among HCPs. However, it is necessary not only to define the attribution of tasks in standardized operated procedures, but to enhance interprofessional confidence.

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## ST07-08

### Promoting physicians' communicative competence and performance (KPAP Study, funded by DKH) – results on self-efficacy and burnout symptoms

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**Background:** Effective communication between oncology physicians and patients is critical to quality cancer care. Ineffective communication can lead to psychological distress, professional dissatisfaction, and burnout symptoms in physicians<sup>1</sup>. The project KPAP (Promoting Communicative Competence and Performance of Physicians and Patients), funded by German Cancer Aid, aims to evaluate long-term effects of a communication training program for oncology physicians. Results on self-perceived self-efficacy and burnout symptoms will be reported. **Methods:** The communication training consists of 2.5 days interactive training with a refresher session (at least three months after the basic training). It includes role-playing with actor patients, based on challenging conversational situations of the participants. Self-assessments of self-efficacy and burnout symptoms were collected at the beginning (t0) and end (t1) of basic training, during the refresher session (t2), and at least 3 years after attending the basic training (t3).

Self-efficacy is assessed with an adapted questionnaire from Fallowfield, Lipkin, and Hall<sup>2</sup> and burnout symptoms with the Maslach Burnout Inventory<sup>3</sup>. Repeated measures analyses of variance and mediation analyses will be conducted. **Results:** From 2015 to 2019, 20 communication trainings were conducted with 209 physicians in Cologne. Long-term follow-up surveys have been conducted since 2019. Recruitment and implementation of t3 were complicated by the occupational mobility of participants and the Covid-19 pandemic. A total of 89 subjects could be evaluated for T3. The T3 subsample did not show statistically significant differences when compared with the total sample. There is a significant improvement from T0 to T3 in self-efficacy ( $p < .001$ ) and in the subscale depersonalisation ( $p < .05$ ) of the MBI. **Conclusion:** The study is providing valuable insights into the long-term effects of this training. The findings suggest the potential efficacy of the communication training in enhancing self-efficacy and reducing burnout symptoms in physicians, even amidst the challenges of participant mobility and the Covid-19 pandemic. The long-term data will be used to make recommendations for the design and frequency of future trainings.

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## ST08-01

### Developing a short questionnaire for clinical assessment of brain fog

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**Background:** Brain fog has become one of the most critical issues of public health after the COVID-19 pandemic. Although it is not immediately life-threatening, these sub-health conditions could gradually erode the quality of life. However, its definition is blurred and lacks a suitable tool for clinical assessment. This study aimed to develop a short questionnaire, which can be used in a clinical setting. **Methods:** Based on previous literature and clinical experience five most common clinical symptoms including forgetfulness, difficulty thinking, difficulty concentrating, feeling cloudy, and difficulty finding the right words or phrases to speak were summarized as the main items of the questionnaire. Each item was further expanded into a four-point (0-3) Likert-type scale. The Cronbach's alpha coefficient was used to assess internal

consistency, and K-means clustering analysis was used to derive the cut-off score, respectively. Meanwhile, the receiver operating characteristic (ROC) curve was applied to validate the appropriateness of the cut-off score and sample size. **Results:** 534 valid participants finished the questionnaire online. It includes 183 males and 351 females, all of them aged between 18 and 85 years. The Cronbach's alpha coefficient was 0.82, whereas the cut-off score was 6 in terms of K-means. The area under the ROC curve at the cut-off score 6 was equal to 1 when the sample size was above 436. **Conclusion:** The study gave the first novel questionnaire, which has excellent feasibility and reliability in assessing brain fog.

## ST08-02

### Non-pharmacological treatment options for fatigue: a systematic review

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**Aims:** Fatigue is a complex and multidimensional syndrome that contributes significantly to the burden of patients suffering from a variety of chronic conditions. It is defined as a state of chronic physical and mental exhaustion that cannot be compensated by rest. The etiology of fatigue is not yet fully understood, which makes it difficult to develop standardized treatment concepts. The aim of this systematic review is to identify differences in treatment based on the underlying disease, and to provide an overview of the concepts and efficacy of different non-pharmacological treatment options for fatigue. **Methods:** A systematic literature search was conducted using the databases PubMed, Web of Science, PsycInfo and CINAHL. Eligible were randomized controlled trials evaluating interventions in adult patients with fatigue due to chronic disease, including ME/CFS. Only studies with fatigue as the only primary outcome were included. All non-pharmacological intervention studies specifically designed to relieve fatigue were eligible. The assessment of fatigue should be performed using a validated questionnaire, with fatigue being considered a multidimensional syndrome. **Results:** Initially 7,278 studies were identified and screened by two independent authors. After the removal of duplicates and the subsequent screening process, 90 studies were identified and included. The included studies are reported in groups categorized according to the underlying disease. Most studies refer to the treatment of cancer-related fatigue. In addition, studies have been conducted on multiple sclerosis, post-stroke, rheumatoid arthritis, chronic kidney disease, heart failure, and long-COVID patients, among others. The types of intervention range from rehabilitation programs, cognitive behavioral therapy, web-based interventions, physical activity programs, acupuncture or acupressure to relaxation or light treatments. Especially,

treatments that focus on a multidimensional approach to fatigue appear to be promising. Difficulties in the evaluation arise from the methodological differences between the studies and a non-standardized assessment of fatigue.

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## ST08-03

### Development of a screening instrument for symptom burden in patients with post-acute infection syndromes: PHQ-15 PAIS

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**Background:** Long COVID (LC) is a multisystemic condition that occurs in around 10% of cases after an acute SARS-CoV-2 infection. Importantly, other infections can also lead to post-acute syndromes that often remain undiagnosed. These post-acute infection syndromes (PAIS) are characterized by relatively similar symptom profiles, with the most common symptoms being fatigue, neuro-cognitive deficits, muscle or joint pain and flu-like complaints. Given the substantial healthcare burden caused by PAIS, systematically assessing the corresponding symptoms could further inform PAIS research and help improve routine clinical practice. Hence, a self-report instrument in the form of a questionnaire on PAIS was developed. **Methods:** Structure and instructions of the newly developed questionnaire are based on the established Patient Health Questionnaire 15 (PHQ-15, Kroenke et al., 2002), which assesses somatic symptom burden regarding the 15 most common symptoms reported by patients in primary care on a scale of 0 (“not bothered at all”) to 2 (“bothered a lot”). The PHQ-15 already includes some of the most frequent symptoms of PAIS, which were adopted and complemented. The item pool of the PHQ-15 PAIS was generated based on an extensive literature review, multiple comprehension tests with patients affected by LC and review cycles within an expert group. Items that were considered redundant or difficult to understand were removed or rephrased. **Results:** The final version of the questionnaire consists of 27 PAIS specific items, which are presented following the original 15 items of the PHQ-15. Additionally, patients are asked to indicate the type and date of infection as well as the number of symptoms that were developed following the infection, to be able to quantify the proportion of symptoms attributable to the respective infection. **Discussion and conclusion:** We developed a brief screening instrument suitable to assess symptom burden in different PAIS. Given its structure and brevity, it may be a helpful tool in research as well as clinical practice. Within the DFG-funded research project SOMA.COVID, the PHQ-15 PAIS is currently used to measure symptom burden in 258 patients with LC at baseline, 6 weeks, 3 and 6 months follow-up measurement. Psychometric properties and construct validity of the scale will be examined in this context.

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## ST08-04

### Stress beliefs moderate the impact of COVID-19-related work stress on depressive, anxiety and distress symptoms in health care workers

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**Background:** Health care workers are at increased risk for stress-related disorders due to high psychological and physical job demands. Stress beliefs (i.e., believing stress to be detrimental to one’s health) have been shown to influence the impact of stress on mental health in other populations. The current study evaluates whether stress beliefs moderate the impact of a natural stressor (COVID-19 pandemic related hospital working conditions) on depressive, anxiety and distress symptoms in health care workers. **Methods:** A cross-sectional survey among N=417 physicians and nurses of a large German hospital was conducted during the 3rd wave of the COVID-19 pandemic. Stress beliefs were assessed with the Beliefs About Stress Scale, and mental health symptoms were assessed with the 21-item Depression Anxiety Stress Scale. **Results:** Health care workers reported increased work stress and elevated mental health symptoms. Both experiencing increased work stress and maladaptive stress beliefs were associated with higher depressive, anxiety and distress symptoms. Stress beliefs moderated the association between increased work stress and mental health symptoms. Increased work stress was associated with increased depressive, anxiety and distress symptoms only in health care workers with medium and high negative stress beliefs. Among health care workers with low negative stress beliefs, increased work stress was not associated with increased depressive, anxiety and distress symptoms. **Limitations:** The cross-sectional study design does not indicate the direction of effects. **Conclusion:** This study suggests that negative stress beliefs might moderate the impact of stress on mental health in health care workers.



## ST08-05

### Physical-mental interplay - fatigue in different physical-mental conditions: cross-sectional multicenter study at the German Center for Mental Health

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**Background:** Fatigue - French for tiredness - refers to either subjectively or objectively measurable symptoms of tiredness, exhaustion and listlessness. Fatigue is one of the most common symptoms among patients in primary care and is a major symptom in various psychiatric or psychosomatic disorders (e.g. depression and somatoform disorders). Fatigue is also a common symptom in patients with malignant diseases receiving multimodality treatment, and is perceived by those affected as the most distressing symptom associated with cancer. Furthermore, patients with other somatic diseases such as multiple sclerosis, diabetes mellitus, chronic inflammatory bowel disease, chronic kidney disease and chronic liver disease often complain of fatigue. Moreover, fatigue is the leading symptom in chronic fatigue syndrome. Last but not least, patients with the recently described post-COVID syndrome often complain of fatigue. However, the development and perpetuation mechanisms of fatigue in various physical-mental conditions and in particular the physical-mental interplay are still poorly understood. **Methods:** In cooperation with different sites of the newly founded German Center for Mental Health (Berlin, Heidelberg, Magdeburg, Munich, Tübingen, Ulm), various patient cohorts (age >18 yrs, n >100 per cohort) in which fatigue often plays a prominent role (multiple sclerosis, diabetes mellitus,

chronic kidney disease, chronic liver disease, chronic inflammatory bowel disease, malignancies, somatoform disorders, chronic fatigue syndrome and post-COVID syndrome) are being recruited. As part of a psychometric characterization, various aspects of fatigue and other patient-reported outcomes such as depression, anxiety, stress and quality of life are recorded using validated test instruments in a pseudonymous online survey. In conditions with established markers of disease activity, these are taken from the respective patient file together with information on the disease course. **Research question:** The aim of this cross-sectional multicenter study is to assess fatigue in different cohorts of patients with physical-mental conditions / diseases and provide a deep phenotyping of likely different aspects of fatigue. Based on the resulting findings, a next step will be to develop a tailored approach for the different aspects of fatigue under these various physical-mental conditions.

## ST08-06

### Symptom clusters in patients with persistent post-COVID-19 complaints

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**Background:** The post-COVID-19 condition (PCC) is characterized by persistent multifaceted symptoms. The relevance of somatic and psychological factors in their presentation and maintenance is poorly understood. In the VePoKaP project studying health care needs of PCC patients, we conducted an online survey among members of a German regional statutory health insurance with a diagnosis of PCC (ICD-10 U09.9!) in their 2022 claims data. **Methods:** We randomly selected 21,000 (77.0%) out of 27,275 eligible persons and invited them to participate in the survey, asking for persisting symptoms and their interference with daily life (5 point scale). The PHQ-4 was applied to assess symptoms of depression (DEP) and anxiety (ANX). We computed correlations among symptoms and PHQ-4 subscales and used factor analysis to identify symptom clusters. **Results:** Of all 2,200 respondents, 1,699 patients (median age group 51–55 years, >70% female) reported persistent PCC symptoms. Over 50% still suffered from (in descending order) fatigue, difficulties concentrating (DC), shortness of breath (SoB), post-exertional malaise (PEM), sleep disturbances (SD) and memory problems (MP). Approx. 40% each screened positive for DEP or ANX. Fatigue correlated at  $r > 0.3$  with 8 of 14 other symptoms and with both PHQ-4 subscales. Besides fatigue, depressive symptoms and anxiety correlated at  $r > 0.3$  with

brain fog, DC, MP, PEM, and SD. In contrast, chest pain, palpitations, cough, SoB, and loss of taste or smell (LOTS) were all less strongly correlated with either fatigue or DEP/ANX. After excluding LOTS which was unrelated to any other variables (all  $r < 0.15$ ), factor analysis yielded 3 factors explaining 51.6% of variance. Factor 1 was characterized by neurocognitive and symptoms of DEP and ANX, factor 2 by pain, and factor 3 by cardiopulmonary symptoms. Fatigue, PEM and SD had mixed loadings on all factors. Beyond factor 1, ANX and DEP were also relevant on factor three, but not on factor 2. **Conclusion:** Most respondents with a PCC diagnosis in 2022 still suffered from symptoms attributed to PCC a year later. Fatigue was most frequently reported. It correlated with several neurocognitive symptoms, pain and – to a similar degree – with symptoms of DEP and ANX. The factor structure suggests that in PCC three symptom clusters can be distinguished but that fatigue, PEM and SD could be part of all three clusters. The direction of associations cannot be determined from this one-time assessment.

### ST08-07

#### Patients with post-COVID-19 syndrome benefit from open-label placebos and vagus-stimulating breathing

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**Background:** Up to 80% of patients suffering from persistent symptoms more than six months after a COVID-19 infection complain about a variety of psychosomatic symptoms with no organ cause. Most patients suffer from chronic fatigue, pain, depression or difficulty concentrating. Experimental studies showed that these symptoms could be significantly improved after an open administration of placebos (“open-label placebo”) or with heart rate variability (HRV) biofeedback such as paced breathing. However, we insufficiently understand which patients benefit from which treatment. **Methods:** 80 Patients with post-COVID-19 syndrome are randomised to four groups: an open-label placebo intervention (OLP), a paced breathing training (PBT), both (OLP+PBT), or no additional treatment (TAU). The OLP groups take two placebos/day and receive the information that placebos can significantly improve symptoms, e.g. via the activation of “self-healing powers”. The PBT groups receive a standardized training to breath at 6 breaths/min two times per day for 6 min. At inclusion (T0) and after four weeks (T1) post-COVID-19 and somatic symptoms (PHQ-15), depressiveness (PHQ-9), anxiety (GAD-7), and fatigue (FSMC) as well as cognitive performance using Corsi Span and Colour Stroop tests, will be assessed by questionnaires and tests, and an ECG will be recorded. **Results:** ANOVAs (2 times x 4 groups) with data of 60 included patients to date, between 20 and 66 years (60% female,  $48 \pm 13$  years), show significant reduction of post-COVID-19

symptoms ( $p < 0.001$ ), PHQ-15 ( $p = 0.004$ ), PHQ-9 ( $p = 0.026$ ), GAD-7 ( $p = 0.019$ ), and PHQ-S ( $p = 0.001$ ), but not for fatigue ( $p = 0.886$ ) and no differences between groups. Paired t-tests for each group reveal a significant reduction of post-COVID-19 symptoms ( $p = 0.018$ ) in the PBT group, and of psychosocial stress ( $p = 0.007$ ) in the OLP group. Marginally significant reductions of post-COVID-19 symptoms ( $p = 0.079$ ), PHQ-15 ( $p = 0.051$ ), GAD-7 ( $p = 0.063$ ), psychosocial stress ( $p = 0.97$ ) are shown in the OLP+PBT group. The waiting list control group shows a significant reduction of PHQ15 ( $p = 0.019$ ). **Conclusion:** Patients with post-COVID syndromes can benefit from psychosomatic interventions aiming to improve treatment expectations. Cognitive performance and HRV data will be analysed at the end of the study, and full data will be presented at the conference.

### ST09-01

#### Unveiling the links between eco-concerns, psychological distress and disordered eating: a preliminary network analysis

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**Background:** Climate change is increasingly impacting mental health both directly through extreme weather events and indirectly through psychological distress commonly called “eco-emotions”. Urgent calls have been made to investigate the connection between worries about climate change and the risk of developing eating disorders (ED). A new measure called Eating-related eco-concern (EREC) has been developed to assess this risk, and while it has been shown to not overlap with recognized EDs, its relationship with orthorexia nervosa has not yet been examined. The current study aims to investigate the relationships between EREC, climate change worry, orthorexia nervosa symptoms, ED symptoms and psychological distress through network analyses to uncover the interplay between these constructs. **Methods:** 250 participants from the general population (females=197, males=47, non-binary=4, other gender identities=2) with an average age of  $29.88 \pm 10.29$  years underwent assessment including the EREC, Climate Change Worry Scale (CCWS), Depression Anxiety and Stress Scale (DASS-21), Disorder Examination Questionnaire (EDE-Q) for ED risk, and Eating Habits Questionnaire (EHQ) for orthorexia nervosa risk. **Results:** Bootstrap operations for strength centrality and edge stability returned adequate results. The network analyses revealed that the items with the highest strength centrality were DASS-21-stress, EREC, DASS-21-Depression. Moreover, the network showed positive links connecting EREC and CCWS, EREC and EHQ-orthorexia nervosa symptoms, EHQ-orthorexia nervosa symptoms and EDE-Q-ED symptoms, while negative links emerged between EREC and EDE-Q-ED symptoms, between EREC and DASS-21 stress, and between CCWS and EHQ-orthorexia nervosa symptoms. **Conclusion:** The findings support the clinical utility of the EREC construct in capturing a potential novel pathway to orthorexia nervosa risk. While EREC does not seem to be positively link to psychopathology, either eating-related or stress-related, its role in the presence of climate change worry

might constitute a risk of EDs, indicating potential interactions through which environmental anxieties may exacerbate disordered eating behaviors. Future studies may benefit from the longitudinal exploration of climate-related distress and ED symptomatology.

## ST10-01

### Impact of the Balint Group on healthcare professionals in Cuba as part of the basic course in psychosomatic medicine: a cross-sectional survey

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**Background:** A crucial component in the field of Psychosomatic Medicine is the Balint group, a working group focused on care relationships, which offers psychotherapeutic training to healthcare personnel. This study aims to evaluate the impact of the basic psychosomatic courses and training of the Balint group on health care personnel. **Methods:** A cross-sectional survey was conducted among 34 healthcare professionals who participated in the Basic Psychosomatic Medicine course between 2018 and 2020 and actively participated in Balint groups. Participants were categorized according to their academic background, and their comments on the course were obtained through a 10-item Balint group survey. **Results:** Participants provided predominantly positive evaluations of the Balint groups. The group atmosphere, leadership, and participants' interest in future work in the Balint group received positive comments. No significant differences were observed between the different groups of professionals in most of the ratings. However, psychiatrists showed a higher perception of the future impact of the Balint groups on their work compared to traditional and natural medicine specialists. **Conclusion:** The Balint group serves as an effective tool for self-learning with emotional impact, improving the quality of the training process of health personnel and thus the quality of their work.

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## ST12-01

### Mental health, work ability and soft skills in a psychosomatic inpatient treatment with open as compared to closed therapy groups

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**Background/Aims:** Although there is a lack of empirical evidence (Burlingame et al., 2003), closed therapy groups are often regarded as superior in comparison to open groups (Tschuschke, 2001). The present study investigated which differences become observable in the treatment of chronically ill patients in closed and open therapy groups. Results on changes in the course of inpatient rehabilitation treatment are reported, with regard to overall mental health perception, subjective work ability and psychosocial capacities (soft skills). **Methods:** The data originate from a (quasi-)experimental study in a naturalistic setting at the Berolina Klinik Löhne. Orthopedic patients with mental health load were assigned to three groups: closed group (with coronavirus protective measures), open group (without coronavirus measures), closed group (without coronavirus measures). At the beginning and end of rehabilitation, patients completed a questionnaire on mental health symptoms (PHQ-4), global work ability and work ability in relation to physical and psychological work demands (WAI) and psychosocial capacities on 13 dimensions (Mini-ICF-APP-S). **Results:** The sample comprises N=122 patients in the closed group under corona conditions, N=159 patients in the open group without corona conditions and currently N=37 in the closed group without corona conditions. At the end of treatment, the dropout rate was low with 5.9%. 79.1% of the sample is female. The majority of the sample is in the 50+ age range (82.0%). All three groups improved over the course of treatment in terms of mental well-being and subjective work ability. In the capacity dimensions adjustment to rules, proactivity, perseverance, self-care, mobility of the Mini-ICF-APP, the patients of the three groups rated themselves better at the end of treatment than at the beginning. **Discussion and conclusion:** Treatment in closed and open therapy groups leads to comparable results with regard to the improvement of mental health, work ability and soft skills according to the Mini-ICF-APP. There are also no differences in the comparison with and without corona

conditions. In line with previous studies (Melicherova et al., 2021), this study can also contribute to the finding that open and closed groups are equally suitable for achieving desired outcomes at the end of an inpatient's treatment. The decision concerning closed or open groups should be made according to indication-specific aspects.

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## ST12-02

### Potential benefits of Well-Being Therapy in chronic migraine outpatients

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**Aims:** The present randomized controlled trial tested the benefits of a brief psychotherapeutic intervention, Well-Being Therapy (WBT), in migraine. **Methods:** Twenty-eight chronic migraine outpatients were randomized (1:1) to WBT (n = 14) or Treatment As Usual (TAU) (n = 14). Primary outcomes included the frequency of migraine attacks during the previous 15 days and the level of disability due to migraine (measured via the headache diary and the Migraine Disability Assessment Score - MIDAS). The secondary outcome focused on well-being (Psychological Well-Being scales - PWB). Outcomes were assessed at baseline (T0), after session 4 (T1) and 8 (T2). The TAU condition consisted of eight bi-weekly individual sessions based on the Lifestyle and Well-being National Institute for Health and Care Excellence (NICE) guidelines and on the World Health Organization 12 Steps to Healthy Eating. No access to specific WBT ingredients was allowed in the TAU condition. The overtime changes of primary and secondary outcome variables were evaluated (i.e., T1-T0; T2-T0). **Results:** Regarding T2-T0, the WBT group reported a greater decrease in number of migraine attacks compared to the TAU group (WBT group: mean number of migraine attacks T0 = 13.07, mean number of migraine attacks T2 = 7.35; TAU group: mean number of migraine attacks T0 = 7.93, mean number of migraine attacks T2 = 7.01; p=0.006). At T2, the WBT group had a significant increase in PWB self-acceptance compared to the TAU group (WBT group: mean PWB self-acceptance T0 = 54.50, mean PWB self-acceptance T1 = 61.85; TAU group: mean PWB self-acceptance T0 = 66.78, mean PWB self-acceptance T1 = 66.07; p=0.046). **Conclusion:** The present study provides preliminary evidence on the benefits of WBT for chronic migraine outpatients. WBT seems to benefit in reducing the frequency of migraine attacks and promoting the achievement of self-acceptance in this clinical population.

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## ST12-03

### Predicting therapeutic alliance by automated AI-supported speech analysis – preliminary results on acoustic prosodic speech markers from the ASPIRE pilot project

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**Background:** Automated AI-supported speech analysis in psychotherapy is uniquely suited to contribute to evidence-based monitoring of relevant psychotherapy constructs. The ASPIRE pilot study investigates the interaction between perceived therapeutic alliance as a first model construct and acoustic-prosodic as well as linguistic speech markers of patient and therapist. **Methodology:** Video and audio recordings from N = 20 therapist-patient pairs are taken during psychotherapy implemented in an inpatient psychosomatic treatment. Subjective alliance ratings by patient and therapist are obtained using a validated questionnaire after each psychotherapeutic session (Working Alliance Inventory – Short Revised). Acoustic-prosodic speech markers (e.g., loudness, speaking rate, pitch) are extracted through automatic speech analysis tools (openSMILE, praat). A functional regression model is then trained based on the acoustic-prosodic speech markers to predict the therapeutic alliance. **Results:** After giving an overview of the study design and the collected data, we will present preliminary results on the prediction of the therapeutic alliance by a selected set of acoustic-prosodic speech markers. **Discussion:** The present study contributes to a deeper understanding of the interaction between acoustic-prosodic speech markers and the therapeutic alliance. In the next step, an AI-based prediction model combining both acoustic-prosodic and linguistic speech markers, will be implemented and tested. In conclusion, AI-supported speech analysis may allow more precise intervention planning in “enhanced psychotherapy”.

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## ST12-04

### Reciprocal relationship between self-criticism and outcome in inpatient psychotherapy

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**Background:** Self-criticism is a personality variable (Blatt, 1974) that is related to various mental disorders. It is conceptualized as a state-trait model, meaning that it varies both between persons (trait) and within individuals over time (state) (Zuroff et al., 2016). This distinction is meaningful in psychotherapy research to investigate change mechanisms (Zilcha-Mano, 2021). We know that self-criticism as a trait can impair the psychotherapeutic process (Miller et al., 2017) and predicts a worse outcome (Löw et al., 2020). However, less studied is the role of self-criticism as a potential change mechanism: whether a reduction of self-criticism during psychotherapy predicts future symptom reduction, and vice versa. Therefore, the aim of this study was to investigate the reciprocal relationship between self-criticism and symptom severity over the course of inpatient treatment. **Methods:** Over the course of an eight-week inpatient treatment, patients ( $N = 1.490$ ) weekly filled in one self-report measure of self-criticism (DEQ-12) and one of symptom severity (SCL-K11). Using a dynamic panel model, we analyzed the interaction of the two variables over time. This model is particularly suited for longitudinal data to infer causality and differentiate between state- and trait-effects. **Results:** The data point to a reciprocal relationship between self-criticism and symptom severity during inpatient psychotherapy: a reduction in self-criticism of one patient predicted the same patient's future symptom reduction, and vice versa. This effect was particularly strong in the middle of treatment. **Conclusion:** As self-criticism leads to symptom reduction, it can be interpreted as a change mechanism that might be notably prominent during the working phase of treatment.

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## ST12-05

### Early psychotherapeutic intervention at work: first results of an RCT ("friaa" project)

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**Background:** Mental disorders are the cause of rising numbers of sick-leave days and disability benefits. However, there is a considerable treatment gap worldwide. The threshold for seeking adequate treatment is often high and valuable time elapses before treatment is started. Early, low-threshold and rapid access are urgently needed. The workplace offers itself as an access point for the prevention and treatment of mental illness. **Methods:** The effectiveness of early psychotherapeutic intervention at work (PT-A) is analyzed within the German nationwide multicentered RCT project "friaa" ("Frühe Intervention am Arbeitsplatz"; [1]). It is a short-term psychotherapeutic offer for employees under mental and psychosomatic strain. Participants were recruited via (social) media and from small, middle, and large-sized companies being located around five study centers in Germany. Prerequisites included a common mental disorder (ICD-10 criteria) or a reduced functional level (GAF scale). A manual for modular work-related short-term psychotherapy was designed. Low-threshold initial contact, counseling in all phases of mental illness, workplace relevance and networking with co-treaters are core elements of the new concept of the PT-A [2]. Days of sickness absence serve as primary and self-efficacy as secondary outcome fifteen months after enrolment with a nine months-lasting intervention phase.

**Results:** 60 companies with a total of 123,683 employees took part. In addition, 54,869 people were reached via social media. 550 participants (55% female; mean age = 46, SD = 11) were included, 62 % of whom were employed in large companies. The average number of sick days in the last 6 months before study participation was 22. The depression indicator PHQ-13 had an average value of 13, the work-related self-efficacy scales ERA (return-to-work self-efficacy) and SOSES (short occupational self-efficacy) had values of 3.5 and 3.9. 85% of the participants showed at least one mental illness, the GAF mean value was 66. The results of the ongoing studies' effectiveness will be presented at the congress. **Conclusion:** Descriptive baseline data show a high level of mental strain indicated by ICD-10 diagnoses, moderate to severe depressive symptoms and reduced GAF-scores. The intervention might improve slightly positive self-efficacy and could be – because of its early and work-related treatment – an innovative approach to tackle mental strain and long and recurrent sickness absence.

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## ST14-01

### Psychosomatic-psychiatric consultations and follow-up activities within the SomPsyNet “stepped and collaborative care model” (NCT04269005)

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**Background:** Mental distress is a significant but often overlooked problem in somatic hospital inpatients. It is associated with increased morbidity, more frequent re-hospitalization, higher healthcare costs, poorer treatment outcomes, and reduced quality of life. Addressing this issue effectively requires early detection as well as structured psychosomatic-psychiatric consultations and follow-up activities. The “SomPsyNet” project targets patients from SOMatic acute hospitals and aims to prevent PSYchosocial distress consequences in their course of disease by establishing and evaluating a “stepped and collaborative care model” and associated NETwork (1). In this contribution, we present preliminary results related to psychosomatic-psychiatric consultations and follow-up activities within this innovative care model. **Methods:** The study included 3179 adult patients from selected wards of three somatic hospitals in Basel-Stadt between June 9, 2020, and December 16, 2022. Mental distress was operationalized using validated cut-offs for increased depression - Patient Health Questionnaire-8 (PHQ-8)  $\geq 10$ , anxiety - Generalized Anxiety Disorder-7 (GAD-7)  $\geq 10$

or/and somatic distress - Somatic Symptom Disorder-B Criteria Scale (SSD-12)  $\geq 23$ . Patients above one of these cut-offs were offered psychosomatic-psychiatric consultations designed to initiate the necessary psychosocial interventions and establish a continuum of care. **Results:** We included 1720 patients in the intervention phase of the study. 590 (34%) of these patients were identified as distressed; 24% exhibited symptoms of depression, 14% of anxiety, and 23% of somatic symptom burden. Of the 590 distressed patients, 554 (94%) were offered a psychosomatic-psychiatric consultation, 349 (59%) accepted this offer, and 293 (50%) received a consultation. Of the 293 patients receiving a consultation, 158 (54%) had the consultation report sent to their General Practitioner by the consultation service, and 151 (52%) participated in a telephone debriefing 3-4 weeks after hospital discharge. **Conclusion:** Our findings underscore the relevance of early, systematic detection of mental distress and the subsequent provision of psychosomatic-psychiatric consultations in somatic hospital care. The SomPsyNet model demonstrated potential in addressing this critical area of patient care, with substantial uptake of consultations and follow-up activities, suggesting a useful approach to integrating somatic and psychosocial health care.

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## ST14-02

### Physician resilience, perceived quality of care and job satisfaction among medical doctors with training in psychosomatic medicine during the COVID-19 pandemic

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**Background:** At an individual level, physician resilience protects against burnout and against its known negative effects on individual physicians, patient safety, and quality of care. However, it remains uncertain whether physician resilience also correlates with maintaining a high level of healthcare quality during crises such as a pandemic. **Methods:** This study enrolled physicians working in family medicine, psychiatry, internal medicine, and other medical specialties, who had obtained at least one of three consecutive diplomas in psychosomatic medicine in the past in Austria. Participants completed a quantitative and qualitative anonymous online survey. Resilience was measured using the Connor-Davidson Resilience Scale, and healthcare quality was assessed through single-item quality indicators, including perceived quality of care and job satisfaction. **Results:** The study included 229 physicians (70 males/159 females) with additional training in psychosomatic medicine, working in family medicine (42.5%), psychiatry (28.1%), internal medicine (7.0%), or other medical specialties (22.4%). Participants represented four intensity levels of training background (level 1 to level 4: 9.2%, 32.3%, 46.3%, and 12.2% of participants). Training background in psychosomatic medicine was positively associated with resilience ( $B=0.08$ ,  $SE=0.04$ ,  $p<0.05$ ). Resilience and training background independently predicted perceived quality of care, even after controlling for variables such as own health concerns, involvement in the treatment of COVID-19 patients, financial strain, percentage of working hours spent on patient care, age, and gender (resilience:  $B=0.33$ ,  $SE=0.12$ ,  $p<0.01$ ; training background:  $B=0.17$ ,  $SE=0.07$ ,  $p<0.05$ ). Resilience and training background also predicted job satisfaction (resilience:  $B=0.42$ ,  $SE=0.12$ ,  $p<0.001$ ; training background:  $B=0.18$ ,  $SE=0.07$ ,  $p<0.05$ ). In the qualitative part of this study, resilient physicians reported applying conscious resilient skills/emotion regulation ( $p<0.05$ ) and personal coping strategies

( $p < 0.01$ ) more frequently compared to less resilient medical doctors. **Conclusion:** Physician resilience and higher levels of training background in psychosomatic medicine seem to have played a significant role in the perceived quality of patient care and job satisfaction during the COVID-19 pandemic.

### ST14-03

#### Evaluation of healthcare providers' mindful practice applying the MIPR-Q

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**Background:** Reflective clinical practice and self-awareness are vital for shaping clinicians' interactions with patients. Despite the existence of several mindfulness questionnaires, there is currently no tool that fully captures the aspects of a self-aware approach in healthcare. As part of validating the Mindful Practice Questionnaire (MIPR-Q) clinimetrically, we aimed to describe healthcare providers' mindful practice and examine its associations with their overall levels of mindfulness in daily life. **Methods:** Mindful practice was evaluated using the MIPR-Q with a 4-point Likert scale, ranging from 1 for "never/almost never" to 4 for "always/most always". Mindfulness in day-to-day life was evaluated using the Five Facet Mindfulness Questionnaire (FFMQ) (5-point Likert scale) and the Mindful Attention Awareness Scale (MAAS) (6-point Likert Scale). These scales served as gold standards for validating the MIPR-Q. Descriptive statistics and correlation matrices for the MIPR-Q, FFMQ, and MAAS were calculated using Stata 18. **Results:** Participants from various countries, including USA, China, Poland, Germany, and Italy ( $n=265$ , 51% physicians), demonstrated average levels of mindful practice of 2.92 ( $sd=0.4$ ). The MIPR-Q scales with the highest average score were *Being present* (3.1,  $sd=0.44$ ) and *Critical curiosity/adoption of a beginner's mind* (3.13,  $sd=0.51$ ). Regarding within-test correlations, the MIPR-Q scales *Compassion based on insight* and *Emotional awareness* (0.59,  $p < 0.01$ ) showed the highest

correlation. Regarding between-test correlations, the MIPR-Q showed a stronger correlation with the FFMQ (0.64,  $p < 0.01$ ) than with the MAAS (0.40,  $p < 0.01$ ). Regarding the correlations between single FFMQ and MIPR-Q scales, the lowest correlation was found between *Emotional awareness* (MIPR-Q) and *Non-judgmental experience* (FFMQ) (0.16,  $p < 0.01$ ), the highest between *Emotional awareness* (MIPR-Q) and *Observation* (FFMQ) (0.50,  $p < 0.01$ ). **Conclusion:** Our sample of healthcare providers reported that they often incorporate mindful practice into their clinical care. While there is some overlap between mindful practice and mindfulness in certain aspects, our results confirm that they are distinct constructs. A natural next step in this work is to finalize the validation of the MIPR-Q and to examine the connection between mindful practice and other variables related to patients and healthcare providers, such as healthcare providers' emotional distress and therapeutic alliance.

### ST14-04

#### "Very Empathetic, even over the Screen" – how hard-to-reach patients accept mental health specialist video consultations in a large randomized trial in primary care

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**Background:** Depression and anxiety are the most common psychological disorders. Psychotherapy is effective throughout the life-span, but uptake decreases with certain demographic factors. Technology-based integrated care through mental health specialist video consultations (MHSVC) in primary care physician's (PCP) practice can facilitate access to psychotherapy. How hard-to-reach groups (elderly, rural) with potentially lower technology literacy accept such models is underexamined. The Theory of Technology Acceptance (TAM) states that (dependent on context variables (CV)), perceived usefulness (PU) and perceived ease of use (PEU) of a technology or intervention can influence behavioral intention (BI) to use it. **Aims:** This study used the TAM to understand elderly rural patients' experience with a MHSVC model in primary care and to identify key factors of model acceptance for sustainable future implementation. **Methods:** We interviewed 21 patients (women  $>60$  y., men  $>50$  y.) in rural regions of Germany about their experience within the large-scale randomized PROVIDE trial (brief-intervention, 5 sessions) evaluating MHSVC in primary care\*. To investigate intervention acceptance, we applied inductive qualitative content analysis; subsequently, multiple raters independently mapped inductive codes onto the four dimensions of TAM. **Results:** Patients described previous experience with video-conferencing and psychotherapy, relationship to their PCP and the COVID-19 pandemic as EV that influenced acceptance. Especially, technical support in primary care increased PEU, while a sterile



setting in PCP-practice was perceived uncomfortable. PU was mainly attributed to therapeutic process (alliance; intervention measures), leading to decreased symptoms and high BI. As room for improvement, patients suggested more than 5 therapy sessions. **Conclusion:** Acceptance of the intervention was high, underlining the capability of PROVIDE to integrate MHSCV into primary care. We believe that facilitated ease of use through technical support in the practice gives those with little technology literacy a chance to access MHSVC. Those who are used to videoconferencing might profit more from therapeutic alliance and reduced symptoms through MHSVC, as supported by data on quantitative effectiveness and patients' wish for a longer duration of the intervention. \*Trial Registration: ClinicalTrials.gov, US National Institutes of Health NCT04316572. Prospectively registered, 20 March 2020.

### ST14-05

#### Development of a multilingual stress check scale using PHRF-SCL(SF)

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In order to assess the mental health of healthy people, a concise scale with a small number of questions is desirable to measure the stress responses that everyone may experience on a daily basis. The Public Health Research Center Stress Checklist Short Form (PHRF-SCL(SF)) in Japanese was developed for this purpose. The studies of Japanese aged 18 to 64 have confirmed the reliability and validity of this check list. The PHRF-SCL(SF) questions consist of stress related psychosomatic symptoms that everyone has experienced, and subjects can easily answer them on a three-point scale of "no," "sometimes," and "often." This scale can evaluate multi-dimensional stress response by asking 24 questions, and consists of four subscales: (1) anxiety and uncertainty, (2) depression and inadequacy, (3) fatigue and physical symptoms, and (4) autonomic symptoms. Because of these characteristics, this scale has been used to study stress responses in various social situations. PHRF-SCL(SF) is also useful in foreign countries with different cultural background. In recent years, the number of immigrants has been increasing worldwide, and even in Japan, foreign residents account for about 2% of the total population. According to the FY2020 Basic Survey Report released by the Immigration Services Agency, 18.7% of foreign residents stated that they could only perform basic greetings and could barely speak Japanese. These individuals are at risk of not receiving appropriate assistance due to their limited Japanese language skills. As a tool for providing mental health services to foreign residents in Japan, we developed the PHRF-SCL(SF) translated versions in English, Chinese, Vietnamese, Indonesian, and Korean, and examined their reliability and validity. These scales can be applied in all regions of the world and are expected to contribute to the promotion of mental health in a variety of races and countries.

### ST14-06

#### An integrated mental health video consultations model for patients with somatic symptom disorder in primary care: The randomized VISION pilot trial

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**Background:** Symptoms linked to somatic symptom disorder (SSD) are one of the most common reasons for consultations in primary care. However, specialized psychological services are mostly unavailable. This pilot trial aimed to determine the feasibility, acceptability, and potential clinical effectiveness of the integrated mental health video consultations VISION model for patients with SSD in primary care. **Methods:** We conducted a parallel group, randomized controlled pilot trial (Trial registration number DRKS00026075) involving 51 patients with SSD from 10 primary care practices in southern Germany, who were randomized to the VISION model or enhanced treatment-as-usual (eTAU). The VISION model comprised five video consultations which featured diagnostic clarification, psychoeducation, behavioural activation and brief psychological therapy aimed at a deeper understanding of the biopsychosocial model on SSD. eTAU included training primary care practice teams on the concept and guideline recommendations for treating SSD. Outcomes were assessed at baseline and 6-months and comprised efficiency of recruitment, intervention acceptability, safety, health service use and potential clinical effectiveness (somatic symptoms and related psychological distress, depression, anxiety, recovery, and quality of life). **Results:** The recruitment yield was 55% and overall follow-up rate was 78%. Of the 125 planned video consultations, 98% were successfully attended. Compared with eTAU at 6 months, the VISION model improved both distressing somatic symptoms and personal confidence and hope at small- to medium-sized effects. We did not detect any notable differences between groups for the other effectiveness outcomes. **Conclusion:** An integrated mental health video consultations VISION model for patients with SSD presenting to primary care is feasible, acceptable, and safe. There is also potential evidence indicating that the model improves somatic symptoms along with personal confidence and hope.

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## Who benefits from the intervention? A machine learning approach to predict treatment effectiveness in patients with depression or anxiety from a randomized controlled trial

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**Background:** While different effective treatments and interventions for depression and anxiety exist, prediction of treatment outcomes is still lacking in accuracy. In particular, to understand the effectiveness of an intervention, it is important to understand for which of the participants the treatment is effective for which it is not. At this point machine learning models can help to understand complex relationships between variables and treatment effectiveness heterogeneity in data sets. The aim of this study is to identify this relationship by using data from the randomized controlled PROVIDE-C trial (Trial registration number: NCT04316572). This trial with 376 participants assessed the effectiveness and cost-effectiveness of an integrated model with 5 psychotherapeutic video consultations compared to the usual treatment of patients with depression or anxiety in primary care. The primary endpoint of the study was the absolute difference in depression and anxiety scores between the baseline survey and after 6 months. In addition, a further survey was conducted after 12 months. **Methods:** We will perform a secondary data analysis of the PROVIDE-C data. First, we will split the data set in a training set and a test set and use oblique random forests to evaluate predictors for symptom reduction. Predictors will include sociodemographic information, baseline characteristics and treatment condition. We will assess the variable importance and compute partial dependences and variable interactions for the predictors. Finally, we will use causal random forests to differentiate the impact of predictors for the treatment effectiveness heterogeneity among the participants, including formal significance tests. **Results:** At the time of abstract submission, the PROVIDE-C trial is fully completed. However, the analyses for the prediction of treatment effectiveness are still ongoing. We will present the results of the different machine learning models. **Conclusion:** The use of machine learning could contribute to making more accurate statements about predictors of treatment effectiveness for interventions for patients with depression and anxiety and thus lead to a more precise and effective treatment.

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## Mental health in the workplace hospital – results of the RCT “SEEGER”

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**Background:** Many hospital employees face high levels of psychological distress in their daily work, with negative consequences for individuals (e.g., reduced job satisfaction) and organizations (e.g., increased intention to leave). These problems have particularly been known for a long time in the nursing field – especially in times

of shortage of skilled workers, pressure to economize, role conflicts and work intensification. The quality of medical care depends on each healthcare professional. The German multi-center research project “Mental health in the hospital workplace” (SEEGEN) sought to investigate how an effective, sustainable promotion of employees’ mental health can be achieved. SEEGEN aimed to develop, implement, and evaluate a complex intervention for healthcare professionals [1]. **Methods:** In the first project phase, five interventions specific to stress with behavioral and structural preventive measures for different target groups were developed and piloted at five hospitals. In the second phase, these components were combined into a complex intervention whose effectiveness was tested in a cluster-RCT at three hospitals, using an integrated mixed-methods process evaluation. **Results:** The following five interventions were developed in a participatory manner and successfully piloted with 208 participants: 1) top management training; 2) dilemma competency; 3) stress-preventive relational leadership competence; 4) reconciling work and family life; and 5) staying healthy at work. The RCT (N = 415) did not show significant differences between the intervention and waiting control group regarding changes in the primary (irritation) or main secondary outcomes (well-being and psychosocial safety climate). Barriers to participation included employee turnover, additional workload due to the Covid-19 pandemic and insufficient support by superiors. The “round table” as a preventative tool helped to develop solutions, particularly at the organizational level. **Discussion:** The SEEGEN intervention did not improve primary or main secondary outcomes. Possible reasons include burden of the COVID-19 pandemic and high complexity of the intervention. A mixed-methods process evaluation will shed more light on the reasons for ineffectiveness and moderators of effect. In our opinion, attractive and health-promoting workplaces in hospitals require the interplay of structural health policy decisions and participatory interventions developed specifically for hospitals [2].

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## ST15-02

### Smartphone screen time reduction improves mental health: a randomized controlled trial

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**Aims:** Smartphones have become an integral part of our everyday lives. An association between smartphone use and mental health is well documented, however, it is still unclear whether this is simply a correlation or causality. To determine whether smartphone screen time impacts mental health, a randomized controlled trial (RCT) was performed. **Methods:** A two parallel groups, non-blinded RCT was performed to investigate the impact of a 3-week screen time reduction (< 2h/d) on mental health indicators at baseline (t0), post-intervention (t1), and at follow-up (t2). Main mental health indicators were depressive symptoms (PHQ-9), stress (PSQ), sleep quality (ISI), and well-being (WHO-5). Physical activity was controlled with wearables. **Results:** Healthy students (N=111; 70 females; 22.68 (2.6) yrs; 276 (115.1) min. screentime/day) were randomized to intervention (n=58) or control group (n=53). Although no differences at baseline, significant post-intervention effects were seen on well-being ( $h^2=.053$ ), depressive symptoms ( $h^2=.109$ ), sleep quality ( $h^2=0.48$ ), and stress ( $h^2=.085$ ) ( $h^2=\text{time} \times \text{group}$ ). Screen time increased rapidly after intervention and no significant effects were seen at follow-up. Effects were larger in the subsample that strictly adhered to time limits over the entire intervention period (e.g., on depressive symptoms) ( $h^2=.252$ ) and persistent until follow-up (e.g., on sleep quality) (all  $p$ -values < .05). **Discussion:** Three weeks of screen time reduction showed medium effect sizes on depressive symptoms, stress, sleep quality, and well-being. However, screen time increased rapidly after the intervention and no significant differences were seen at follow-up. The results indicate a causal rather than merely correlative connection between screen time and mental health.

## The efficacy of automated feedback after internet-based depression screening (DISCOVER): an observer-masked, three-armed, randomised controlled trial in Germany

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**Background:** Despite the availability of effective treatments, most depressive disorders remain undetected and untreated [1]. Internet-based depression screening combined with automated feedback of screening results could reach people with depression and lead to evidence-based care. We aimed to test the efficacy of two versions of automated feedback after internet-based screening on depression severity compared with no feedback.

**Methods:** DISCOVER was an observer-masked, three-armed, randomized controlled trial in Germany (ClinicalTrials.gov, NCT04633096) [2]. We recruited individuals (aged  $\geq 18$  years) who were undiagnosed with depression and screened positive for depression (Patient Health Questionnaire-9, PHQ-9  $\geq 10$  points). Participants were randomly assigned 1:1:1 to automatically receive no feedback, non-tailored feedback, or tailored feedback on the depression screening result. The non-tailored feedback included the depression screening result, a recommendation to seek professional diagnostic advice, and brief general information about depression and its treatment. The tailored feedback included the same basic information, but individually framed according to the participants' symptom profiles and treatment preferences. The primary outcome was change in depression severity 6 months after screening. Analyses were conducted following the intention-to-treat principle. **Results:** Between Jan 12, 2021, and Jan 31, 2022, 4878 individuals completed the internet-based screening. Of these, 1178 (24%) screened positive for depression (mean age 37.1 [SD 14.2] years; 824 70% woman). 6 months after random assignment, depression severity decreased by 3.4 PHQ-9 points in the no feedback group (95% CI 2.9–4.0; 325 participants), by 3.5 points in the nontailored feedback group (3.0–4.0; 319 participants), and by 3.7 points in the tailored feedback group (3.2–4.3; 321 participants), with no significant differences among the three groups ( $p=0.72$ ). The number of participants seeking help for depression or initiating psychotherapy or antidepressant treatment did not differ among study groups. The results remained consistent when adjusted for fulfilling criteria for major depressive disorder or subjective belief of having a depressive disorder. **Conclusion:** Automated feedback following internet-based depression screening did not reduce depression severity or prompt sufficient depression care in individuals previously undiagnosed with but affected by depression.

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## Do different AIs think alike when asked about psychosomatic and stress-related issues?

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**Background:** AI is becoming increasingly popular in providing advice for various stressful situations and somatic symptoms. But do the different popular AI platforms think alike when asked questions and advice by different individuals from different parts of the country and world? Is the advice helpful, comprehensive, and empathic?

**Methods:** To address these questions, we developed ten cases or situations and submitted them to two popular AI platforms, Google's Gemini, and Microsoft's Co-pilot from different sites and from 3 different countries-United States, Germany, and India. These cases described symptoms including depression, anger, thoughts of suicide, marital conflict, headache, pain, fatigue etc. Several unbiased blinded raters evaluated the responses generated by AI on different parameters including content, references, empathy, and personal attention. **Results:** The results showed that the two AIs were similar in response to some cases but very different in others, depending on the case characteristics, which will be discussed. To highlight the differences, "winners" were defined as an average score of greater than 0.5. Overall, for Content, Co-pilot was the winner, and for references, Gemini was the winner. As for Empathy, there were no clear winners, but each platform showed different levels of empathy depending on the case and the nature of the problems presented. For Personal attention, Co-pilot tended to be the winner. There were significant differences in the responses based on the location (3 cities in the USA, Germany, and India) from which the cases were submitted. For self-ratings of the original submitters for Content, Co-pilot won by 7 to 1 with 2 ties, for Reference, Gemini won by 8 to 2 with no tie scores. **Conclusion:** In summary, the differences between the two AIs were remarkable and statistically significant in some areas. Yes, Co-pilot and Gemini have different "personalities."

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**ST17-02****The efficacy of video-based psychotherapy versus face-to-face therapy for post-traumatic stress disorder: A meta-analysis of randomized controlled trials**

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**Background:** The COVID-19 pandemic shutdown led to a significant increase in video consultations in psychotherapeutic settings. This was done in order to overcome corona-related barriers of physical distancing and to ensure continued access to mental health support. Despite the abundance of randomized controlled trials comparing video-based psychotherapy versus face-to-face settings for post-traumatic stress disorder a meta-analytic comparison was hitherto lacking. **Methods:** PubMed, Embase and PsycInfo (via Proquest) were searched for randomized controlled trials comparing synchronous video-based psychotherapy and face-to-face therapy in terms of clinical efficacy (i.e., improvement in symptom severity). The interventions had to be conducted by psychotherapists or medical professionals and have a minimum duration of 500 minutes. All participants were required to have a confirmed diagnosis of PTSD according to DSM or ICD. A 3-level meta-analysis was used to analyze multiple outcomes per study, evaluating both within-group pre-post effects and between-group effects. **Results:** A total of 7249 studies were screened. From the 6 studies that met the inclusion criteria, 14 outcomes were extracted for analysis. The number of participants was  $N = 563$  with an average age of 45.92 years and a female proportion of 30%. Pre-post comparisons for video-based settings showed a large and highly significant effect for symptom improvement (*Hedges' d* = 1.19, 95% CI [0.79, 1.59], *SE* = 0.18,  $p < .0001$ ). No significant differences in efficacy were found between face-to-face and video-based settings (*Hedges' g* = 0.14, 95% CI [-0.01, 0.29], *SE* = 0.07,  $p = .07$ ). **Conclusion:** Synchronous video-based psychotherapy is equally effective to face-to-face settings in the treatment of patients with PTSD. However, most of the studies were conducted on relatively homogeneous populations (US veterans) and the treatment approaches were predominantly based on cognitive behavioral methods, possibly limiting generalization to other samples or treatment approaches. Additionally, there was inconsistency in the quality of studies concerning the reported methods and results, with some being incomplete. Further research is needed to address the limitations of current studies and provide a more comprehensive understanding of its effectiveness across diverse populations and therapeutic modalities.

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**ST18-01****Sex-dependent associations of serum BDNF, glycolipid metabolism and cognitive impairments in Parkinson's disease with depression: a comprehensive analysis**

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**Background:** Brain-derived neurotrophic factor (BDNF) and glycolipid metabolism have been implicated in cognitive impairments and depression among Parkinson's disease (PD). However, the role of sex differences in this relationship remains elusive. This study aimed to investigate the potential sex disparities in the link between serum BDNF levels, glycolipid metabolism and cognitive performance among depressive PD patients. **Methods:** PD patients comprising 108 individuals with depression and 108 without depression were recruited for this study. Cognitive function was assessed using the Montreal Cognitive Assessment Beijing version (MOCA-BJ). The severity of depressive symptoms was assessed using the Hamilton Depression Rating Scale (HAM-D-17), while motor symptoms were evaluated using the Revised Hoehn and Yahr rating scale (H-Y) and the Unified Parkinson's Disease Rating Scale Part III (UPDRS-III). Laboratory testing and enzyme-linked immunosorbent assay (ELISA) are used to measure serum levels of glycolipid metabolism and BDNF. **Results:** Females showed superior performance in delayed recall (all  $p < 0.05$ ), male PD patients exhibited higher scores in naming tasks compared to females in non-depression group. There was no sex difference in serum BDNF levels between depression and non-depression groups. Linear regression analysis indicated BDNF as an independent risk factor for language deficits in male PD patients with depression ( $p < 0.05$ ), while cholesterol emerged as a cognitive influencing factor, particularly in delayed recall among male PD patients with depression ( $p < 0.05$ ). **Conclusion:** Our study reveals extensive cognitive impairments in PD patients with depression. Moreover, BDNF and CHOL may contribute to the pathological mechanisms underlying cognitive deficits, particularly in male patients with depression.

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**ST19-01****Association between social disengagement and dementia risk in individuals with type 2 diabetes mellitus: A population-based cohort study***Yannis Y. Liang*<sup>1,2</sup><sup>1</sup>Center for Sleep and Circadian Medicine, The Affiliated Brain Hospital of Guangzhou Medical University, Guangzhou, China<sup>2</sup>Key Laboratory of Neurogenetics and Channelopathies of Guangdong Province and the Ministry of Education of China, Guangzhou Medical University, Guangzhou, China

**Background:** Social isolation and loneliness, two independent constructs of social disengagement, are becoming increasingly recognized factors for dementia risk. We aimed to investigate whether these two constructs also associate with dementia risk in individuals with type 2 diabetes mellitus (T2DM), which is becoming more prevalent, and whether genetic risk for dementia modifies these associations. **Methods:** The longitudinal study included 24,986 participants (mean age: 60.0 ± 6.9 years, median follow-up: 12.0 years) with T2DM at baseline from the UK Biobank. Social isolation and loneliness were assessed using self-reported questionnaires. Genetic risk factors for dementia, including polygenic risk score (PRS) and APOE genotype were extracted. We identified incident dementia cases by linking hospital records and death registries. **Results:** Social isolation (most vs. least: hazard ratio, HR: 1.46 [95% confidence intervals, CI: 1.22-1.75]) and loneliness (yes vs. no: 1.56 [1.25-1.95]) were associated with an increased risk of incident dementia after adjusting for demographic factors; however, such associations attenuated when further adjusting for health behaviours, psychological factors, or diabetes-related characteristics. The social isolation-dementia association was predominantly attributable to health behaviours (48% for the most social isolation), while the loneliness-dementia association was largely explained by psychological factors (46%). Significant modification effects of dementia genetic risk were observed on these associations. **Conclusion:** Social isolation and loneliness were associated with a greater risk for incident dementia among individuals with T2DM, with differential explanatory factors. The genetic risk for dementia modified these associations. The findings underscore the importance of strengthening social connections to mitigate diabetes-related dementia risk. **Funding:** This work was supported by the National Natural Science Foundation of China (grant number 32100880) and Guangzhou Research-oriented Hospital. The funders had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript. This study was conducted using the UK Biobank Resource under Project (No. 93604).

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**ST19-02****Association between trajectories of hair cortisol concentration and psychopathology in children with a chronic physical illness***Emma A. Littler*<sup>1</sup>, *Zahid A. Butt*<sup>1</sup>, *Andrea Gonzalez*<sup>2</sup>, *Mark A. Ferro*<sup>1</sup><sup>1</sup>School of Public Health Sciences, University of Waterloo, Waterloo, Canada<sup>2</sup>Department of Psychiatry and Behavioural Neurosciences, McMaster University, Hamilton, Canada

**Background:** Children with a chronic physical illness (CPI; e.g., diabetes, epilepsy) face considerable stress due to their health challenges. As a result, children with a CPI are at a greater risk of developing a mental disorder – a condition known as multimorbidity. The link between chronic stress and mental disorders, particularly as it relates to chronic cortisol levels, is an emerging area of research. Hair cortisol concentration (HCC) is a novel biomarker for chronic stress; however, research examining HCC over time in children with a CPI and its relationship with mental disorders is limited. **Methods:** Data come from a sample of 263 children aged 2–16 with a physician-diagnosed CPI. Data collection occurred at baseline, 6, 12, and 24 months. Hair samples were taken at each point, and the proximal 3 cm were assayed using ELISA. Psychopathology was measured using the Emotional Behavioural Scales (EBS). Latent class growth models identified homogenous HCC trajectories over 24 months, and linear mixed effects (LME) models examined associations between HCC trajectories and psychopathology. **Results:** 243 children (9.54±4.18 years at baseline, 48.15% female) provided valid hair samples for analysis. Three HCC trajectories were observed: low stable (6.17%), moderate decreasing (48.97%), and high unstable (44.86%). Females and older children were less likely to be in the high unstable group compared to the moderate decreasing and low stable groups. Across all time points, the low stable group had significantly lower mean psychopathology scores (11.9±10) compared to the moderate decreasing (17.1±14.4,  $p=.04$ ) and high unstable groups (17.3±13.7,  $p=.01$ ). The LME models showed a reduction in psychopathology over time for all children ( $b=-.08$ ,  $CI=[-.11,-.05]$ ,  $p<.001$ ). There was a significant time by HCC group interaction, indicating that the low stable group had a greater reduction in psychopathology over time compared to the moderate decreasing ( $b=.18$ ,  $CI=[.06,.30]$ ,  $p=.003$ ), and high unstable groups ( $b=.18$ ,  $CI=[.06,.30]$ ,  $p=.003$ ), while adjusting for age and sex. **Conclusion:** This project is the first to document the course of HCC over time in children with a CPI. Results suggest that children who follow a low stable trajectory exhibit a greater reduction in psychopathology over time, compared to children who follow elevated HCC trajectories. Overall, HCC is a promising tool that can support the early identification of children at elevated risk of multimorbidity.

## ST19-03

### Serum levels of CRP, TNF $\alpha$ and IL-17A may be predictive for increased depressive symptoms in a general population

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**Background:** Low-grade systemic inflammation may be a key player in the immune activation that has been repeatedly described in mental health deterioration. We hypothesized that elevated serum levels of inflammatory factors will increase neuroinflammation and exacerbate depressive symptoms. **Methods:** The participants were part of the Shika study cohort project between 2015 and 2019; the study was carried out in the Noto Peninsula, Japan. In 2015, blood samples were collected from 110 men and 122 women. The serum concentrations of high sensitivity CRP, IL-6, IL-10, IL-12, IL-17A, and TNF $\alpha$  were measured. In 2015 and 2019, these individuals' depressive symptoms were assessed using the Centre for Epidemiologic Studies Depression Scale (CES-D). Data were analyzed using linear models, with the level of significance considered to be  $p < 0.05$ . **Results:** In 2015, the CES-D scores showed significantly positive correlations with serum concentrations of TNF $\alpha$  and IL-17A in women ( $n = 122$ ,  $p < 0.05$ ;  $n = 122$ ,  $p < 0.05$ , respectively), and CRP in men ( $n = 103$ ,  $p < 0.05$ ). In 2019, CES-D scores were significantly positively correlated with CRP and TNF $\alpha$  concentration in men ( $n = 12$ ,  $p < 0.05$ ;  $n = 17$ ,  $p < 0.05$ , respectively). In 2019, men with higher IL-17A levels ( $n = 9$ ) showed elevated CES-D scores in comparison with IL-17A levels in men with lower CES-D scores ( $n = 8$ ) ( $p < 0.05$ ). After controlling for age, BMI, smoking and alcohol consumption, the regression analyses showed that in 2015 the serum concentrations of IL-17A and TNF $\alpha$  were significantly positively associated with the CES-D scores among women ( $F = 1.85$  (6, 112), standardized  $\beta$  (B) = 0.27,  $p < 0.005$  and  $F = 1.62$  (6, 112),  $B = 0.26$ ,  $p < 0.01$ , respectively). As well, in 2015 the serum level of CRP was significantly positively associated with the CES-D scores among men ( $F = 1.17$  (5, 105),  $B = 0.21$ ,  $p < 0.005$ ). Simultaneously, serum concentrations of IL-17A and TNF $\alpha$  of men predicted significantly positive association with the CES-D scores of 2019 ( $F = 2.15$  (5, 11),  $B = 0.62$ ,  $p < 0.05$  and  $F = 1.90$  (5, 11),  $B = 0.59$ ,  $p < 0.05$ , respectively). **Conclusion:** Cross-sectionally, we found a significant positive correlation in women between the degree of depression and serum levels of TNF $\alpha$  and IL-17A, and in men between the degree of depression and CRP. In addition, our longitudinal findings suggest the possibility that TNF $\alpha$  and IL-17A could elevate depressive symptoms in men, although the sample size was small.

## ST19-04

### Effects of living one year in an isolated, confined and extreme environment on human olfactory and gustatory functions

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**Introduction:** In isolated, confined and extreme (ICE) environments, maintaining a healthy body weight is crucial. Sensory functions, particularly the senses of smell and taste, are important in the context of dietary intake, representing key factors in maintaining appropriate energy intake and body weight. In ICE environments with limited olfactory and gustatory stimuli, such as Concordia Station in Antarctica, potential changes in these sensory functions are expected. However, existing data are scarce. **Methods:** We investigated olfactory function (threshold, identification, discrimination) using ODOFIN Sniffin' Sticks and gustatory function using ODOFIN Taste Strips (taste identification test for the taste qualities sour, salty, sweet, and bitter) in volunteers exposed for 12 months to an ICE environment at the research station Concordia in Antarctica. The 19 participants of the winter-over periods 2019/2020 and 2021/2022 ( $39.2 \pm 10.9$  years, 16 men and 3 women) were examined at baseline (T0, three months before Antarctica) and three times during the Antarctic stay (T1/February, T2/June, T3/October) by trained staff. Taste was also assessed six months post-Antarctica (T4). **Results:** At T0, 3 out of 19 participants exhibited hypogeusia. This proportion increased to 6 out of 19 participants two months post-arrival at Concordia Station (T1) and subsequently stabilized at 4 out of 19 participants (T2-T4). The sweet taste quality consistently yielded the highest identification rates throughout the study. Notably, a significant decrease in cumulative salty taste scores was observed over the Antarctic stay, suggesting a decline in salt sensitivity, returning to baseline levels by T4. At both T0 and T1, hyposmia was found in 4 out of 19 participants. This prevalence increased to 7 out of 19 participants during the Antarctic winter, remaining stable until the end of the Antarctic stay. Overall, olfaction sum scores exhibited a downward trend from baseline throughout their time in Antarctica. **Conclusion:** Living one year in an ICE environment like Concordia Station in Antarctica affects olfactory and gustatory functions individually to varying extents. A notable decline in the perception of salty taste during the expedition, with levels returning to baseline upon the return from Antarctica, indicates the occurrence of distinctive sensory alterations in ICE environments, with some individuals experiencing transient reductions in gustatory and/or olfactory function.

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**ST20-01****Mindfulness-based receptive music therapy in depressed patients a pilot randomized controlled trial evaluating heart rate variability and mindfulness**

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**Background:** Depressive disorders are disorders of the entire organism characterized by a cluster of symptoms on the emotional, cognitive, physiological, motor, social-interactive and behavioral level. Current literature shows that depressed people also have a higher heart rate and limited heart rate variability (HRV) compared to control subjects. Relaxation and mindfulness are important promoters of the recovery process of depressed patients. **Aims:** We want to show how mindfulness-based receptive music therapy with monochord and voice can be used to achieve a possible improvement of depressive symptoms by means of chronobiological analysis using heart rate variability (HRV) recordings. **Methods:** This project will investigate the efficacy of music therapy interventions in depressive patients (n=40). Through questionnaires and HRV measurements, psychometric and stress markers and their interaction will be obtained. By collecting HRV data, a connection to the psychophysiological background will be established. Concerning the method, a randomized intervention study including a comparison of the control groups (n=40) has been chosen. **Results:** In the study results, significant improvements in depressive symptomatology are shown in both groups. A significant increase in presence within mindfulness is shown in the music therapy group compared to the control group. A significant increase in total cardiac variability and parasympathetic activity was found in the music therapy group. **Conclusion:** Receptive music therapy with monochord and voice confirm positive vegetative effects regarding improvement of relaxation ability, depression and mindfulness sensitization

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**ST20-02****Trauma-focused art therapy in patients with miscarriage or stillbirth: psychometric and biological treatment effects of the randomized controlled MALT! study**

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**Background:** Women who experienced a miscarriage or stillbirth are at elevated risk of suffering from symptoms of post-traumatic stress, anxiety or depression. [1] The aim of the MALT! study was to examine whether trauma symptoms decrease to a greater extent after an art therapy intervention compared to a watchful waiting condition, and whether these changes can be found in biological parameters of oxidative stress. **Methods:** In an RCT, women in the study group (SG) after miscarriage/stillbirth were assigned to either an eight-week trauma-focused art therapy (AT) [2] or a watchful waiting (WW) group. Participants were examined at the beginning (T1) and after three months (T2). At T1, a control group (CG) of women without miscarriage/stillbirth was recruited. Primary outcome was change in post-traumatic symptoms (Impact of Event Scale, IES-R). DSM-5 diagnoses were obtained using the Structured Clinical Interview for DSM Disorders (SCID). Participants took a functional stress test using the socially evaluated cold pressor test (SECPT) at T1 and T2. DNA strand breaks were determined by single cell electrophoresis (comet assay), reactive oxygen species (ROS) production was analysed by electron spin resonance (ESR). Data were analyzed using mixed models with repeated measures (intent-to-treat). **Results:** For the study, 41 women were randomized, 20 in the AT (age M = 33.5; SD = 5.7) and 21 in the WW (age M = 34.7; SD = 4.6) group. The CG consisted of 28 women (age M = 27.2; SD = 7.4). At T1, the SG reported significantly higher symptoms than the CG (all Cohen's d > 1.00), as well as higher ROS after SECPT (d = 1.5). From T1 to T2, we found significant changes in IES-R (main effects for TIME), but no significant interactions between the AT and the WW group. Post-hoc analyses showed greater reductions in the symptoms of intrusion for the AT group (d = -1.0) than for the WW group (d = -0.5). In exploratory analyses, we found that for women with depression at T1, intrusions were only reduced by AT (d = -0.9) and not by WW (d = +0.1) **Conclusion:** Women after miscarriage or stillbirth were more psychologically and biologically stressed than women without an event. MALT! art therapy lead to a significant



reduction in intrusions, especially in participants with depression. Art therapy plays an important role in the processing of traumatic events such as stillbirth and miscarriage, and is feasible as a method for the prevention of PTSD symptoms.

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## ST21-01

### The Role of Religion and Spirituality in Psychosomatic Medicine

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There is mounting evidence that religious cognitions and behaviors can offer effective resources for dealing with stress. Religious involvement may promote better health by enhancing feelings of self-esteem, or a sense of intrinsic moral self-worth, feelings of efficacy, or perception that one can master or have control over one's personal affairs, promoting constructive coping responses, or enhancing social support. In particular, participation in religious communities may promote mental and physical well-being by regulating health-related behaviors in ways that decrease the risks of diseases. Spirituality such as sharing of religious thoughts and insights, and praying for others is a source of social support. Studies on the health effects of religion/spirituality have linked it to reduced depression and anxiety, increased longevity, and other physical and psychological health benefits. Religion/spirituality may give depressed patients with physical diseases a sense of purpose and meaning in life as well as social support despite health problems. These effects may protect the patients from depression by enabling them to cope better with their illnesses. My personal experience in coping with cancer is also mentioned.

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## ST21-02

### The University of Rochester Physician Communication Coaching and Leadership Development Program

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Starting in 2011, with the beginning of patient satisfaction surveys tied to reimbursement, the University of Rochester Medical Center Dean/CEO asked family health psychologist Susan McDaniel PhD to create a program to help physicians' communication and enhance patient/family experiences of care. The program currently spans across 19 departments at URMC supporting faculty, fellows, and resident physicians. Now termed "The Physician Communication Coaching and Leadership Development Program", there is also a program for psychology postdoctoral fellows and some faculty with appropriate foundational skills to train coaches to do this work. Communication coaching typically involves four steps: 1) The coach and physician communicate to discuss the process and elicit the physician's coaching goals; 2) The coach observes the physician for 4 hours of their typical clinical practice, using the Calgary-Cambridge Patient-Centered Observation Checklist with additional evidence-based items from Dr. McDaniel's research on communication of affect and communication with family members. Coaches code physician and patient communication behaviors during multiple patient interactions; 3) The coach compiles the quantitative and qualitative data and provides feedback in a comprehensive report, which includes a description of the person as a physician, identifying their communication strengths and opportunities for improvement, and individualized recommendations to accomplish this; 4) The coach and physician hold an hour-long feedback meeting to discuss the report, the physician's experience of the coaching process, response to the recommendations, and how it fits with their work's meaning at this point in their careers. The presentation will illustrate how this novel intervention supports physician skills in communication with patients, families, and colleagues, and with team-based care. It encourages reflective practice, self- and situational-awareness, and clinician well-being. We will share examples of enhanced communication coaching interventions with teams, units, and leadership at URMC. We describe the scope and breadth of the program to date (539 faculty, 732 residents, 55 fellows, 4 miscellaneous clinicians [APPs, assistant NMs, etc.]), coaching integration with graduate medical education within several residency programs, and settings in which coaching takes place (outpatient, inpatient, ICU, surgical, research labs, faculty meetings, and administrative meetings).

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## ST21-03

### Evaluating a large language model in simulating different stages of depression and suicidal ideation in medical education

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**Background:** In the field of generative AI, GPT-4 is currently considered one of the leading large language models (1). They are assigned to have the potential to open up various benefits in medical education (e.g. curriculum planning, delivery, assessments and research) (2). Holderried et al. (3) showed that medical students succeeded in taking the medical history of a virtual patient simulated by a GPT-powered chatbot. Usually, taking the medical history is trained by interviewing a real or simulated patient (4). This way, mostly, only one student has the chance to do the interview in person (5). By having GPT-4 simulate a patient, all students are able to train at the same time and get automatically generated, immediate individual feedback on their performance. The complexity of simulating educational and convincing dialogues plausibly increases if the virtual patient not only needs to give information, but also share feelings and communicate authentically. This study aims to explore how well GPT-4 can take on roles of patients with different stages of depression and suicidal thoughts so that it can be used for teaching purposes. **Methods:** We trained GPT-4 to simulate three different characters suffering from different stages of depression and suicidal ideation. Third year-medical students were asked to take a depression-focused medical history via a 20-minute chat. Next, they should give and explain their judgement of what stage the patient is at and suggest how to manage the respective stage of suicidal ideation. Demographic data and feedback concerning user experience are gathered in a mixed methods design, including quantitative and qualitative data. The data is collected during summer term 2024 in the regular teaching on psychosomatic medicine. **Results:** Data collection is currently still ongoing. The results will be presented at the conference, shedding light on the performance of GPT-4 on simulating a role with depressive symptoms authentically and according to the description given. Also, we will get insights into the students' ability of making the correct diagnosis of depression and suggesting measures appropriate to the stage of suicidal ideation. **Discussion:** This study discusses how authentically GPT-4 simulates different stages of depression. To further upscale this new opportunity, more rigorous studies particularly looking at efficiency are needed.

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## ST22-01

### Implementation of a standardized and interdisciplinary care including mental health in patients with differences of sex development

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**Background:** Individuals with differences of sex development (DSD) or other complex genital malformations do feel insufficiently cared for by the health care system and complain about a deficit in medical and psychological expertise. As a consequence, they are still confronted with misdiagnoses and malpractice. Inter- and multidisciplinary care including mental health according to actual guidelines and covering the whole lifespan are often not implemented. Recent literature points to impairment of quality of life and mental health in individuals with DSD. Transition from adolescence to adulthood is especially difficult. Peer groups and patient organizations are not involved regularly. **Methods:** Patients with rare genital and other Mullerian malformations presenting from 01.01.2023 until 31.12.2023 at the department for women's health in Tuebingen were included in the project. Standard operating procedures concerning inter-/multidisciplinary care as well as patient education including partners and relatives, contact to peer groups, diagnostics and therapy etc. were developed. **Results:** Standardized diagnostic and therapeutic steps were used. n=334 patients with rare genital malformations and in total 478 including all Mullerian anomalies were included. Among these were 196 with MRKH syndrome, 5 with gonadal dysgenesis, 5 with congenital adrenal hyperplasia, 8 with complete androgen insensitivity syndrome, 13 with Turner syndrome, 29 with isolated vaginal aplasia, 25 with bicornuate uterus, 111 with (sub)septate uterus, 5 with OHVIRA syndrome and others. 47 of the patients were seen and treated by the psychologist/

psychiatrist, in 74% a psychological diagnosis was detected and 68% of them underwent psychotherapy. 21 were surgically treated together with pediatric surgery and urology. Standardized psychosocial care was implemented after first contact, peri operatively and at any time on demand. **Conclusion:** Optimized care of children, adolescents and adults with DSD including mental health issues is needed worldwide. Transitional concepts, standardized diagnostic and therapeutic steps can prevent misdiagnoses and malpractice. Education of patients and their partners and relatives as well as inclusion of peer- and patient groups can support medical therapies. Personalized medicine at specialized interdisciplinary centres can thereby be an option also in the field of rare diseases.

## ST22-02

### The German model to integrate psychosomatic medicine in national somatic treatment guidelines

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**Background and aims:** Guidelines are systematically developed statements that reflect the current state of knowledge to support decision-making by physicians and other health professionals and patients/citizens for appropriate care for specific health problems. They should be based on a systematic review and evaluation of the evidence and a consideration of the benefits and harms of alternative approaches. The scientific societies form the Association of the Scientific Medical Societies in Germany (AWMF). Membership of the AWMF is open to any non-profit scientific medical society in Germany that is dedicated to scientific issues in medicine, including its practical applications. The German College for Psychosomatic Medicine (DKPM) and the German Association for Psychosomatic Medicine (DGPM) are the mandated societies. A central coordinating office monitors the national ongoing processes on the development of somatic treatment guidelines. Aiming at the integration of psychosomatic issues in every appropriate guideline two to four representatives are delegated to support the development processes. As we have two psychosomatic societies with different scientific and professional scopes, we are able to ensure profound input and content in guidelines. Currently, members of the two societies are co-working in the development of 26 national somatic treatment guidelines to ensure evidence based patient centred psychosomatic approaches in somatic medicine. **Conclusion:** To ensure evidence based psychosomatic contents in somatic guidelines coordinating and monitoring routines have to be established. Challenges like determining and motivating appropriate persons for guideline work or the neglect of psychosomatic issues of somatic societies have to be overcome.

## P01-01

### Latent structure of irritable bowel syndrome: taxometric analysis among Japanese adolescents

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**Background:** Irritable bowel syndrome (IBS) is a functional bowel disorder in which abdominal pain or discomfort is associated with changes in defecation and/or bowel habits in the absence of organic disease. With a prevalence of 6%-14%, IBS is a very common functional gastrointestinal disorder (FGID) in Japan. Since various factors, including childhood abuse, stress, heredity, and diet, are associated with the development of IBS, it is believed that IBS symptom severity fits a continuous spectrum. However, several subtypes of IBS have been defined, involving constipation and diarrhea, and the possibility that IBS types exhibiting qualitative differences may exist cannot be ruled out. It is, thus, clinically important to elucidate the latent structure of IBS. Although only one study has investigated whether functional dyspepsia (FD), another typical FGID, is categorical or dimensional, to our knowledge, IBS has not been similarly examined. In the present study, we investigated whether IBS is categorical or dimensional using taxometric analysis among Japanese university students.

**Methods:** Data from 898 university students (461 females and 437 males) were included in the analysis after excluding those with missing values from among 1,221 university students. The mean age was 19.32 years (SD=1.08). IBS symptoms severity was measured using the Japanese version of the Birmingham IBS Symptom Questionnaire. The following three subscale scores were obtained: diarrhea/pain, constipation, and interference with daily activities. Using these three subscale scores, a taxometric analysis was performed twice, with 10% and 15% designated as taxon groups, given the known prevalence of IBS in Japan. **Results:** In the results of both analyses, the category or dimensionality of MAMBAC was ambiguous, whereas dimensional patterns were clearly identified for MAXEIG and LMode. The mean comparison curve fit index was less than 0.45, suggesting that it is appropriate to consider IBS in dimensions rather than categories. **Conclusion:** The present study showed that IBS, similar to FD, can be considered to be dimensional rather than categorical. Because dimensional structures have also been suggested for medically unexplained physical symptoms, a common mechanism may exist among these somatization disorders

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## P01-02

### Psychosomatic clinical model in functional GI disorders: Up to the mind, down to the gut

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**Background:** The psychosocial aspects of patients with FGIDs are complicated, but there is one thing in common, i.e. irrational understanding or interpretation of the symptoms by themselves and hard to accept psycho-social re-attribution. A stepped non-psychiatric oriented psychosomatic clinical model has been developed. **Methods:** The specified steps and implications are as follows: 1) Establish a therapeutic relationship; 2) Establish a link between mind and gut; 3) Develop "three diatheses" for medication of antidepressants; 4) Modified gastrointestinal tract-specific cognitive behavioural therapy; 5) Extended reattribution; 6) Extended psychotherapy. The basic concept of symptom-centered, stepped reattribution model is mind-body integration rather than mind-body separation. **Results:** Aimed at solving the GI-related psychological problems, a symptom-centered, stepped reattribution model significantly improved patients' acceptance for psychosomatic intervention including low dose antidepressants and psychotherapy, or referral in need. **Conclusion:** Biological gastroenterologists need to learn something from psychologist and psychiatrist to treat patients psychosomatically. Physicians should not go extreme from non-disease in biological gastroenterology to mental disorder in conventional psychiatry. Up to the mind first is needed for a gastroenterologist to understand those functional GI symptoms. Jump symptoms reattribution to mind is hard to accept for patients with FGIDs though correct theoretically. The reattribution model or the process need modifying to be back to the gut, i.e. attention to patient's attention first is most important to medically specific empathy.

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## P01-03

### Clinical characteristics and personality traits in patients with psychogenic nonepileptic seizures

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**Aims:** To study the clinical characteristics and personality traits of patients with psychogenic nonepileptic seizures. **Methods:** This study was a prospective study, included 41 patients with PNES aged 14-34 years who visited the Department of Neurology, Xuanwu Hospital, Beijing, China from January 2021 to December 2023. The demographic information and clinical case records of patients were collected, and the Minnesota Multiphasic Personality Inventory (MMPI) was used to assess the personality characteristics of patients. The demographic data, clinical characteristics and personality characteristics of PNES patients were analyzed. **Results:** In this study, 58.5% of the PNES patients were women, 41.5% were men, 61% were

multi-child families, 39% were single-child families, 51.2% were rural residents, and 48.8% were urban residents. 63.4% of the students and workers were affected by PNES symptoms, and 36.6% of the students and workers were able to persist in learning. The attack frequency of PNES is mainly severe daily, and the attack time varies from a few minutes to several hours. There were 9 patients with epilepsy, 8 patients with anxiety, 7 patients with insomnia, and 6 patients with depression. Among them, 30 patients received anti-epileptic drugs and other treatments. All PNES symptoms were divided into five categories, including motor symptoms 41.3%, sensory symptoms 21.7%, no response 17.4%, abnormal behavior 10.9%, and visceral symptoms 8.7%. The seizure factors were divided into 9 susceptibility factors, including 6 disease genetic qualities, 40 predisposing factors, 22 learning and working difficulties, and 12 chronic stress maintenance factors. Compared with epilepsy group, PNES group had higher scores of Hypochondriasis [(66.35 ± 1.82) points vs (61.18 ± 1.78) points], Hysteria [(65.62 ± 1.36) points] in MMPI of. The score of (50.79 ± 1.49) and N neuroticism [(69.15 ± 1.70)] was than that of epilepsy (61.00 ± 1.75) Patients ( $t=2.040, 3.371, 3.348; P<0.05$ ). **Conclusion:** PNES has special demographic characteristics, and its personality is characterized by high hypochondria, hysteria and neuroticism. Exercise induced PNES is the most common type of seizure, and the duration and frequency of symptoms vary greatly. Epilepsy is considered to be the most common comorbidity of PNES, and the proportion of patients receiving drug treatment is high.

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## P01-04

### Altered interoceptive sensibility and its role on central sensitization to pain in vulvodynia.

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**Background and aims:** The individual level of confidence about bodily perceptions and efficiency in decoding bodily signals is crucial to forming an efficient body representation; it is called interoceptive sensibility. Interoceptive sensibility is a trait-like feature of the self-perceived tendency to focus on interoceptive signals. High expressions of this trait entail being able to efficiently detect and regulate symptom-related distress by controlling bodily sensations, reducing the tendency to worry about uncomfortable symptoms, and having a significant impact on symptom management. Studies highlight interoception's role in sexual functioning, with lower awareness possibly linked to sexual difficulties. Interoceptive sensibility was never explored in vulvodynia, which is a chronic pain disease about which dysregulation of pain processes at the level of the central nervous system (i.e., central sensitization) was suggested. Indeed, evidence considered the pain experience in vulvodynia as an effect of central sensitization, meaning a pain hypersensitivity of the central nervous system accompanying peripheral tissue injury or inflammation that was a direct result of augmentation of sensory signaling in the central nervous system. In this

cross-sectional study, we aimed to provide evidence about the possible alteration of interoceptive sensibility and its role in central sensitization in vulvodynia. **Methods:** We measured the level of interoceptive sensibility through the Multidimensional Assessment of Interoceptive Awareness (MAIA) and the symptoms of central sensitization through the Central Sensitization Inventory in a sample of females with a diagnosis of vulvodynia. **Results:** We observed lower scores in the components of attention regulation, self-regulation, and trusting, measured by MAIA, while higher scores in the components of noticing and not-worrying. According to our regression model, a lower level of trust and a higher level of emotional awareness (from MAIA) predicted a higher number of central sensitization symptoms in our sample. Interoceptive sensibility seems altered in vulvodynia; such an alteration may play a crucial role in central sensitization in vulvodynia. **Conclusion:** Our novel evidence opens new perspectives for clinical management and research in vulvodynia, encouraging future investigation into interoception in this (still neglected) syndrome, especially taking into account its negative impact on quality of life and bodily experience.

## P01-06

### Do psychosomatic diagnoses influence psychological distress and well-being in patients with fibromyalgia?

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**Background:** Fibromyalgia (FM) is defined as a central sensitization syndrome characterized by neuro-circuit dysfunction; delineated by chronic and widespread musculoskeletal pain, fatigue, alterations in sleep and cognitive disturbance. In this field, the presence of additional psychosomatic disorders can contribute to creating a more complex and heterogeneous clinical picture.

**Methods:** FM patients (N=78) were recruited at the Rheumatology Unit of the Academic Hospital Careggi (Florence, Italy). The Diagnostic Criteria for Psychosomatic Research-Revised Semi-Structured Interview (DCPR-R SSI) and the PsychoSocial Index (PSI) were used. Spearman correlation analysis and multiple regression analysis were run. **Results:** The sample included 75 women and 3 men; average age was 56.17 years (SD=13.09). Most of the subjects had a partner (n=51; 65.3%); 41% of patients had high school diploma, 30.8% had middle school diploma, 24.3% had master degree and 3.8% of patients had primary school diploma. At the time of evaluation, 43 subjects had a job (55.2%) vs 35 subjects who were not working (44.9%; 23.1%=unemployed 20.5%=retired; 1.3%=student). The results showed a significant positive correlation between the number of psychosomatic diagnosis diagnosed via the DCPR-R and the level of PSI stress ( $p<0.05$ ;

$\rho=0.320$ ), psychological distress ( $p<0.001$ ;  $\rho=0.497$ ), abnormal illness behavior ( $p<0.05$ ;  $\rho=0.346$ ) and a significant negative correlation with well-being ( $p<0.001$ ;  $\rho=-0.584$ ) and quality of life ( $p<0.05$ ;  $\rho=-0.352$ ). The multiple regression showed that having more than one DCPR-R diagnosis was strongly linked with the presence of abnormal illness behavior ( $p<0.05$ ) and well-being ( $p<0.05$ ). **Conclusion:** Having multiple DCPR-R diagnoses increase patients' stress, psychological distress and decrease well-being and quality of life in FM patients. Investigating these aspects, through a multidisciplinary assessment and a biopsychosocial approach, under comprehensive psychosomatic principles, seems to be necessary for understanding a complex functional disorder as FM in a more heterogeneous prospective.

## P01-07

### The structure of somatic symptoms in patients with somatic symptom disorder: an exploratory graph analysis

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**Background:** Accumulated evidence has suggested that the experience of somatic symptoms entails both sensory (specific distress) and affective (general distress) aspects. However, this division has not been established in individuals with somatic symptoms

disorder (SSD), a condition marked by considerable psychological distress and maladaptive behaviors associated with physical symptoms. **Aims:** The present study aimed to investigate the structure of somatic symptoms among patients with SSD from a network perspective. **Methods:** This is a secondary analysis of a multicenter cross-sectional study of general hospital outpatients in China, which comprised 236 subjects with SSD. Hierarchical exploratory graph analysis (HEGA) was used to model the somatic symptoms measured by the Chinese version of the Patient Health Questionnaire (PHQ-15). **Results:** HEGA identified a bifactor structure with one general and three specific factors (i.e. gastrointestinal, pain and fatigue, and cardiopulmonary). The results of the lower order structure showed limited stability. **Conclusion:** The results align with previous findings in other populations, indicating that somatic symptom perception in somatic distress disorder may involve a combination of general and symptom-specific distress. The exploratory nature of the study warrants further research.

### P01-08

#### Long-term course of functional/dissociative seizures (FDS): influencing factors for a better quality of life

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**Background:** The long-term course of functional/dissociative seizures (FDS) and quality of life has not yet been sufficiently investigated. There are inconsistent results, particularly with regard to the predictors of a good health-related quality of life. The aims of the study were 1. to investigate the frequency of seizures over a mean follow-up period of 5.6 years and a range of 1–14 years, and 2. to identify predictors of good quality of life. **Methods:** Patients who were treated in a specialized neurological unit between 2000 and 2013, diagnosed with functional/dissociative seizures (FDS) were examined in a survey using a questionnaire in 2014. The variables collected were sociodemographic data, disease-related data, data on previous treatments, as well as seizure frequency and quality of life. **Results:** Of the n=443 eligible patients, n=63 returned the questionnaire and n=50 could be included in the current study. Compared to the onset of their disease, 72% of participants reported a reduction in seizure frequency. At the time of the survey, only 36% were seizure-free and slightly less than half of the study participants stated that their health-related quality of life was “good” or “very good”. In the regression analysis, seizure frequency and employment at the time of the survey, as well as seizure frequency at onset were the only three significant predictors of better health-related quality of life. **Conclusion:** Even after an average of 5.6 years (range 1–14 years) after inpatient treatment, the participants’ quality of life is severely restricted. The frequency of seizures (at the onset and at the time of the survey) and current employment status were identified as predictors of better quality of life. Both seizure frequency and employment status are variables that can be targeted during psychotherapeutic treatment and should be considered in light of these results.

### P01-09

#### Psychological distress and subjective well-being in a high-risk surgical patient treated with a multimodal prehabilitation program

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**Background:** Multimodal Prehabilitation (MP) consists of preoperative medical, functional, nutritional, and psychological interventions to facilitate surgical recovery. Cognitive restructuring (CR) is a well-known psychotherapeutic ingredient of cognitive-behavioural psychotherapy aiming at treating psychological distress. It might be a valuable intervention to propose in this clinical context. **Case:** A 56-year-old woman was scheduled to undergo robotic subtotal gastrectomy due to a gastric cancer, preceded by neoadjuvant chemotherapy. Before starting chemotherapy, the patient was referred to the MP Center of the Careggi Hospital (Florence, Italy) for a baseline evaluation (T0). The 6-minute walk test was used to assess functional capacity (FC), the Patient-Generated Subjective Global Assessment questionnaire (PG-SGA) to evaluate nutritional status, self-report questionnaires to assess anxious and depressive symptoms (Hospital Anxiety and Depression Scale-HADS, Major Depression Inventory-MDI), psychological distress (Symptom Checklist-90-Revised Global Severity Index-SCL-90-R-GSI), and subjective well-being (World Health Organization Five Well-Being Index-WHO-5). Then, a personalized MP program, including medical optimization, exercise, nutritional support, and a weekly CR session was prescribed for the entire duration of the preoperative period (including during neoadjuvant therapy). The patient was reevaluated preoperatively (T1), and 4 weeks after surgery (T2). The Kellner’s scale of change was also administered at T1. **Results:** At T0, the patient’s FC and nutritional status were preserved (6-minute walking distance 618 m, and PG-SGA A/1, respectively); mild anxiety (HADS-A 8) and depression (HADS-D 5) symptoms were identified. The patient reported concerns about changes of her physical appearance due to cancer treatment, and about cancer progression. After 7 weeks of MP (6 CR sessions) (T1), FC and nutritional status were maintained despite chemotherapy. Anxious and depressive symptoms decreased (HADS-A -37.5%, HADS-D -20%, MDI -67%, respectively), psychological distress and patient’s well-being improved (SCL-90-R-GSI -48%, WHO-5 +114%, respectively). The Kellner’s scale score was 2, indicating a good response to CR. Compared to

T0 and T1, postoperative (T2) anxiety, depression, psychological distress, and patient well-being continued to improve. **Conclusion:** CR therapy might be a promising psychological intervention to use in the context of a MP program.

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### P01-10

#### Efficacy of transcutaneous vagal nerve stimulation in reducing postoperative pain among patients with trauma history

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**Background:** Individuals with trauma in history are at three times higher risk of developing symptoms of chronic pain (CP) later in life compared to people without trauma experience. CP is a complex condition influenced by biological, psychological, and social factors. Neuromodulation techniques, such as transcutaneous vagus nerve stimulation (tVNS), present a new, non-pharmacological approach to treating CP by inducing analgesic effects and the release of anti-inflammatory neurotransmitters and neuropeptides. It can target specific neural pathways involved in pain perception and modulation, offering a tailored approach to address these complexities. Studies on tVNS analyzing the association of childhood trauma with the efficacy of tVNS are missing. This study aims to fill this gap. **Methods:** This is a pilot randomized controlled trial involving 60 participants divided into three groups: intervention, sham intervention, and treatment as usual. The intervention involves two to four daily stimulations lasting from 40–60 minutes per tVNS stimulation over the days following surgery. Data collection occurs at three time points: upon admission, at discharge, and three months post-intervention. Pain characteristics and severity will be measured with the McGill questionnaire (MPQ) and numeric rating scale (NRS), mental health indicators with the Patient Health Questionnaire (PHQ), anxiety disorders with the Generalized Anxiety Disorder Questionnaire (GAD) and childhood trauma with the Childhood Trauma Questionnaire (CTQ). **Results:** First results will be provided at the conference. Outcome measures will include pain ratings (MPQ, NRS), mental comorbidities (PHQ-9, GAD-7) and trauma assessment (CTQ). **Discussion:** This study will fill existing gaps in understanding neuromodulation effects on acute and CP, particularly in patients with trauma experiences. Furthermore, this study will show whether tVNS efficacy varies based on childhood trauma experiences and

associated brain alterations. Findings will allow patient-centered treatment plans, including tVNS within a multicomponent treatment setting for patients with a trauma history. As a next step, it needs to be tested whether trauma-specific psychotherapy can improve the efficacy of tVNS.

### P01-11

#### Illness behaviour and fibromyalgia

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**Background:** Fibromyalgia (FM) is a syndrome characterized by both somatic and psychic symptoms: widespread musculoskeletal pain, fatigue, disrupted or non-restorative sleep, stiffness, mood disorder and cognitive impairment. A consensus as regards a comprehensive diagnostic approach is far to be reached, as FM could be considered a pain or a mental disorder, according to rheumatological or psychiatric perspective. **Methods:** The rheumatological approach frequently focuses mainly on pain, duration of pain and the absence of a disorder that would otherwise explain the pain. As regards the psychiatric perspective, the DSM approach to somatisation doesn't consider important features concerning psychological factors affecting medical conditions and abnormal illness behaviour, which might be relevant for the diagnostic and therapeutic processes. Conversely, many recent research evidences, on uncertainty in taxonomy, on heterogeneity of FM and on the usefulness of clustering different subgroups of FM, seem to suggest the importance to investigate psychosomatic factors and coexisting psychosocial issues of the patients, to fully capture the complexity of FM. **Results:** A first step in this direction could be considered the use of the Diagnostic Criteria for Psychosomatic Research (DCPR), a conceptual framework, but also an operational tool, that could represent an attempt to exceed some limits of the traditional psychiatric classification system. Studies on FM patients suggested that the usage of DCPR may help in better recognizing and characterizing the patients, and hence in planning tailored interventions. A further advancement, however, could be the reevaluation of the concept of illness behaviour, a cultural perspective that allows to take all these aspects into consideration (diagnostic uncertainty, wide and varied symptom spectrum, diagnostic framework linked to the observation perspective, coexisting psychosocial aspects), thus providing a more unifying vision of the FM. **Conclusion:** By illness behaviour we mean the way in which symptoms are perceived, evaluated, and acted upon by a person who recognizes some pain, discomfort, or other signs of organic malfunction. The varying way individuals respond to bodily indications, how they monitor internal states, define and interpret symptoms, make attributions, take remedial actions and utilize various sources of informal and formal care, could help the clinician to better understand the nature and course of FM and provide an individualized therapy.

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## P01-12

### The possibility of Kanshoho, a novel muscular relaxation technique, in managing fibromyalgia

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**Background:** Fibromyalgia is a chronic and unmanageable disorder characterized by intense pain. The condition is managed with a mix of pharmacotherapy, psychotherapy, and exercise therapy, but it frequently does not respond well to treatment. Kanshoho is a novel technique for muscular relaxation, and its underlying mechanism requires more investigation. The technique entails exerting a consistent force of 100 g to 500 g on a specific skeletal muscle using the practitioner's fingertip, within an area of approximately 1.0 cm<sup>2</sup>. This is done while the muscle is gradually contracted for two seconds and then slowly stretched for two seconds, in a repetitive manner, in order to achieve muscle relaxation. Now, we present a case of a fibromyalgia patient whose pain was noteworthy alleviated and medication dosage could be reduced by employing Kanshoho within an outpatient clinic. **Case presentation:** The patient, a 55-year-old female, received a diagnosis of fibromyalgia from a specialist at a different institution. Her primary treatment consisted of medication, namely duloxetine 60 mg, pregabalin 300 mg, tramadol 100 mg, and clonazepam 0.5 mg. The visual analogue scale (VAS) showed a decrease from 90 mm to 70 mm, however, the symptoms that were being assessed had not shown any improvement for a period of over six months. The patient experienced intense pain in the back of the neck and lower back, which was most pronounced upon awakening and severely limited her mobility in the morning. The medication was considered adequate, and the treatment was started using Kanshoho every 1 or 2 weeks, with each session lasting 15-20 minutes. On both the initial and following visits, the pain in the same region substantially diminished with Kanshoho that specifically targeted the posterior neck area, primarily the upper trapezius muscle. Following the third visit, the primary focus of treatment shifted towards utilizing Kanshoho specifically targeting the lumbar area, particularly the oblique abdominal muscles. As a result, the patient's pain has greatly reduced and her oral medicine has been

considerably decreased. In addition, patients demonstrate notable enhancements in anger, despair, and diminished vitality as measured by the Profile of Mood States 2nd Edition (POMS2). **Conclusion:** Kanshoho, a novel muscular relaxation technique, shows potential as a viable option for treating fibromyalgia.

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## P02-01

### Application of Psychosomatic assessment with DCPR in Functional GI disorders

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**Background:** Psycho-social factors may not only have a physiological impact on the gastrointestinal tract, but also affect the subject's somatic experience, interpretation and, henceforth, the quality of life in patients with functional gastrointestinal disorders (FGIDs). Different from mental disorders in the psychiatric department, patients with FGIDs have psycho-social problems but most of them do not meet the diagnostic criteria of mental disorders. A new tool of psychosomatic assessment different from conventional psychometric is needed. The Diagnostic Criteria for Psychosomatic Research (DCPR) is helpful to identify and assess these sub-clinical syndromes. **Methods:** From February 2023 to February 2024, 99 patients who met the Rome IV Criteria for FGIDs accepted psychosomatic assessment. In addition, PHQ-9, GAD-7 and GIQLI were applied simultaneously. **Results:** The prevalence of DCPR syndromes was 1.2 times that of such conventional psychological assessment as PHQ-9, GAD-7. Multiple linear regression analysis suggested that anxiety, depression, somatization and DCPR syndromes were independent risk factors of gastrointestinal quality of life. **Conclusion:** DCPR as a psychosomatic assessment can find application in clinical practice of FGIDs, as it seemed more sensitive to screening psycho-social aspects. DCPR is more acceptable and is of substantial help for physicians to set up empathy with patients and improve individualized clinical strategies of psychosomatic intervention.



## P02-02

### Effective psychological interventions focused on diabetes distress of adults living with diabetes mellitus: a scoping review

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**Background:** Diabetes distress, a psychological burden, significantly affects the quality of life and diabetes conditions of persons living with diabetes mellitus. Caring for diabetes distress has the potential to improve psychological and physiological health-related outcomes. However, little is known about effective psychological interventions focused on diabetes distress. The aim of this scoping review is to identify practical methods associated with effective psychological intervention focused on diabetes distress.

**Methods:** Four databases (CiNii, J-stage, APA PsychNet, and PubMed) were searched for studies that reported valid outcomes related to diabetes distress from psychological interventions focused on diabetes distress in adults living with diabetes mellitus, with results reported from January 2000 to April 2024. The studies included were randomized controlled trials and restricted to the Japanese and English languages. A total of 136 studies were extracted. Finally, seventeen articles which met the detailed eligibility criteria were selected by reading the full text. **Results:** The main participants were persons with “poorly controlled” diabetes mellitus, persons with diabetes mellitus with impaired awareness of hypoglycemia, persons with diabetes mellitus and “depression” or diabetes distress, and adolescents and young adults with type 1 diabetes mellitus. The intervention programs included both individual and group sessions that combined face-to-face meetings, telehealth monitoring, telephone calls or home visits. Practitioners were trained diabetes educators such as nurses, physicians, nutritionists, psychologists, and peer leaders. Program goals were to improve self-management and quality of life. Practical methods applied included cognitive behavior therapy, motivational interviewing, decision-making, mindfulness, acceptance commitment therapy, and the empowerment approach, as well as person-centered approaches. Recently, collaborative care with a variety of educational programs by several types of trained diabetes educators, including with peer leaders, have also taken place. Psychologists participated as practitioners as well as staff supervisors. **Conclusion:** Each program appeared to be a unique intervention influenced by environments, cultures, community, or Covid-19. Long-term follow-up studies and case studies may be needed to understand the details of the psychological meaning of psychological interventions.

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## P02-03

### Intervention with cognitive behavioral therapy and yoga for school refusal children in Japan

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**Background:** School refusal among children is a significant issue in Japan, affecting their academic performance and overall well-being. Currently, 1.7% of elementary school students and 6% of junior high school students in Japan refuse to go to school, and the number is increasing every year. Anxiety and apathy are reported to be the main reasons for school refusal. Thus, addressing the psychological factors that contribute to school refusal is crucial for effective intervention. Cognitive behavioral therapy (CBT) has been a standard treatment, and mindfulness-based practices like yoga are gaining recognition for their potential benefits. This trial aimed to evaluate the effectiveness of a yoga-based intervention combined with treatment as usual (TAU) in reducing anxiety symptoms in children with school refusal, compared to TAU alone. **Methods:** Participants were children aged 10-15 years who had missed at least 30 days of school. 46 participants were divided into an intervention group, receiving mindfulness yoga alongside TAU, and a control group receiving only TAU. TAU here was cognitive-behavioral therapy based on self-monitoring and behavioral activation or anxiety exposure methods to modify lifestyle and improve anxiety. The yoga program was originally developed for school refusal children. The mindfulness yoga intervention consisted of a fourweek program with daily home practices no more than 20 minutes a day, featuring video sessions that guided children through breathing exercises, relaxation, and gentle physical movements. Changes in anxiety levels were measured using the Spence Children's Anxiety Scale-Child (SCAS-C) scores, and additional measures including depressive symptoms, behavioral changes, sleep quality, and school attendance. **Results:** SCAS-C scores decreased statistically significantly in the standard treatment group and in the yoga group as a whole. Thereby confirming the effectiveness of the standard treatment group in improving anxiety in truant children. There were no significant differences in anxiety levels or school attendance between the mindfulness yoga group and the TAU group. A mixed-effects modeling analysis of the six subscales of the SCAS-C showed a significant reduction in fear of physical injury

in the yoga intervention group compared to the standard treatment group. **Conclusion:** This study may help to propose a treatment program for truant children that combines yoga with cognitive-behavioral therapy as its core.

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## P02-04

### Psychotherapeutic interventions against war-induced anxiety

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**Background:** The current wars in the Ukraine and in Gaza cause great fears and reactivate traumatic experiences in victims of violence. How can psychotherapy deal with this issue? **Methods:** Sample: 4 women and 1 man (between 50 and 83 years) suffering from increased symptoms of posttraumatic stress disorder (PTSD) and in need of multidimensional stationary psychotherapy. Patients remember e.g. death of a sister by a grenade in World War II, torture and sexual violence in concentration camps in former Yugoslavia, trauma after surviving massacres in Kosovo or after seeing civilians and fellow soldiers die in Afghanistan. Qualitative interviews by psychotherapists, 60 minutes or longer, at the beginning of the treatment; Beck Depression Inventory (BDI). **Results:** Bad news from Ukraine and Israel/Gaza reactivated past traumatic experiences of war-related violence. Panic attacks are triggered e.g. by pictures of war in media coverage, wailing of sirens, planes flying at low altitude. Patients received support in coping with fears, panic attacks and depressive mood by individual and group psychotherapy, relaxation techniques and body experience. To deal with states of dissociation and overwhelming anxiety, they learned to develop psychological emergency kits. Levels of fear and depression decreased. **Conclusion:** Current wars do not only cause new, but also reactivate old traumata. Persons with PTSD going back as far as World War II and experiencing retraumatization should be identified in their need of help and offered psychotherapeutic support to relieve their fears.

## P02-05

### Post-traumatic stress disorder and Ulysses Syndrome after migration in refugees and asylum seekers in Spain and Ireland as host countries

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**Background:** A high percentage of refugees and asylum seekers in host countries have psychological disorders, frequently including post-traumatic stress disorder (PTSD). Post-migratory factors related to the presence of PTSD and Ulysses Syndrome, manifested through the existence of extreme migratory mourning, have been related to physical, psychological and social impairment, while being difficult to be assessed, detected and classified through standard medical and psychological protocols. **Methods:** 56 refugees (mean age=33.7, SD=11.1, 31.57% women) settled in Spain and Ireland with protection measures, were evaluated using the Post Migration Living Difficulties Scale and the Harvard Trauma Questionnaire under a biopsychosocial approach. **Results:** Evaluated refugees had been exposed to a mean of 15.1 (SD=7.0) traumatic situations in conflict contexts. All of them had been in mortal danger. 32.1% had suffered episodes of torture (Mean=5.8, SD=4.9), and 30.4% suffered from PTSD with a mean of 4.18 (SD=1.7) post-traumatic symptoms. No differences were found based on gender, nationality, or host country. Traumatic and torture episodes, living in institutionalized centers, working conditions, physical health, and social and family relationships were associated to the presence of PTSD. **Conclusion:** A high suffering evidence was detected and associated with family separation, social status and risks of impaired physical health and social integration. Inconsistent results do not confirm previously hypothesized DSM-5 diagnosis of some mental disorders, but rather a case of migratory mourning in its extreme version or Ulysses Syndrome.

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### P03-01

#### The associations of health status and functional status with psychological distress in patients with heart failure

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**Background:** Heart failure (HF) is a condition characterized by the heart's inability to supply a suitable volume of blood required for the metabolic needs of the body. Psychological distress, including depression and anxiety, is highly prevalent in HF and is associated with enhanced risks of mortality and rehospitalization, the severity of physical symptoms, and the patients' quality of life. Although psychological factors, including health status perception, are considered better predictors of psychological distress in people with HF than functional status variables, literature on the topic is lacking. The purpose of this study was to investigate any possible relationships between functional status, health status, and psychological distress in HF. **Methods:** A total of 123 non-hospitalized outpatients diagnosed with chronic HF were included in the study. The New York Heart Association (NYHA) classification was used to assess functional status, while health status was measured using the Kansas City Cardiomyopathy Questionnaire (KCCQ). Psychological distress was evaluated using the Hospital Anxiety and Depression Scale (HADS). **Results:** Statistical analysis revealed significant correlations between psychological distress and health status, as measured by the KCCQ Total Symptom Score ( $F_{1,113} = 7.841; p = .006; \eta^2 p = 0.065$ ), Overall Summary Score ( $F_{1,113} = 10.602; p = .001; \eta^2 p = 0.086$ ), Quality of Life ( $F_{1,112} = 34.542; p < .001; \eta^2 p = 0.236$ ) and Symptom Burden ( $F_{1,112} = 4.070; p = .046; \eta^2 p = 0.035$ ) subscales. However, functional status did not show a significant association with psychological distress ( $F_{3,113} = 1.449;$

$p = .232; \eta^2 p = 0.037$ ). **Conclusion:** The results of this study highlight the importance of considering health status and psychological distress in the management of HF patients to improve their overall well-being and quality of life. Further research and interventions targeting patient-reported health status are thus required.

### P03-02

#### Are there differences in psychological characteristics and quality of life between upper and lower functional gastrointestinal disorders?

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**Aims:** This study aimed to identify the differences in the psychological characteristics of the anatomical location of functional gastrointestinal disorders (FGIDs) and the factors influencing the quality of life (QOL). **Methods:** 233 patients with FGIDs were classified into the upper gastrointestinal disorder (UGID; n=175) group and the lower gastrointestinal disorder group (LGID; n=58). Psychological characteristics and QOL were evaluated using validated questionnaires. **Results:** The LGID group demonstrated higher scores in "emotional depression" of depressive symptoms than the UGID group ( $t = -3.031, p < .01$ ). A significant difference was observed between groups in the significant others, a sub category of social support ( $t = 2.254, p < .05$ ). Significant differences were observed between the groups in hardiness ( $t = 2.259, p < .05$ ) and persistence ( $t = 2.526, p < .05$ ) in resilience, while the LGID group demonstrated significantly lower scores than the UGID group in negative affectivity in type D personality ( $t = -1.997, p < .05$ ). Additionally, the LGID group demonstrated lower QOL than the UGID group ( $t = 2.615, p < .05$ ). The stepwise regression analysis on QOL involved depression, resilience, social support, and childhood trauma which accounted for 48.4% of the total QOL explanatory variance. **Conclusion:** Psychological characteristics and QOL significantly differed when FGIDs were classified according to anatomical location. Thus, psychological interventions customized for each type of FGID may be necessary for effective treatment.

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### P03-03

#### Understanding the temporal dynamics between depression and kidney disease diagnoses

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**Aims:** To explore the temporal dynamics between diagnoses of depression and kidney disease, shedding light on their interplay and implications for holistic patient care. **Methods:** We analyzed the pooled data from cross-sectional surveys of the Korea National Health and Nutrition Examination Survey (KNHANES) conducted from 2007 to 2021. Data on depression and kidney disease for participants aged 19 and above were collected based on information provided by the participants. **Results:** The study investigates the chronological sequence of diagnoses between depression (Dep) and kidney disease (KD). Notably, it observes distinct patterns in the age of diagnosis for both conditions relative to each other. Specifically, the age at which individuals are diagnosed with Dep, but not KD, is 46.8 years, whereas the age of KD diagnosis in the absence of Dep is slightly older at 47.2 years. Conversely, for individuals with both Dep and KD, the age of KD diagnosis precedes that of Dep, with respective mean ages of 50.5 years and 54.4 years. Significantly, the study reveals a notable age disparity in Dep diagnosis between individuals with and without KD, with mean ages of 4.4 years and 46.8 years, respectively ( $t=-3.63$ ,  $p=0.000^{***}$ ). Additionally, there's a significant age difference between the diagnosis of KD in individuals without Dep and the diagnosis of Dep in individuals with KD, suggesting potential delays in diagnosing both conditions when they coexist. This phenomenon implies a reciprocal relationship, where the presence of one condition may impede the timely diagnosis of the other. Interestingly, this temporal delay appears to be more pronounced in Dep diagnosis (7.6 years vs. 3.3 years). Moreover, logistic regression analysis reveals an odds ratio (OR) of 2.573 for Dep in individuals with KD, indicating a higher likelihood of Dep among those with KD. Similarly, the OR for KD in individuals with Dep is 2.584, suggesting a higher likelihood of KD among individuals with Dep. **Conclusion:** In summary, the study underscores the importance of understanding the temporal dynamics between Dep and KD diagnoses, which may have implications for early detection and intervention strategies for individuals with both conditions.

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### P03-04

#### Psychosomatic aspect in diagnosis and management of cardiac arrhythmias

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Cardiovascular disease is the leading cause of death, illness, and poor quality of life globally, and it is a concern for both the World Health Organization (WHO) and health insurance systems. Under normal circumstances, a healthy heart may exhibit mild beat-to-beat variability (R-R intervals), or a fluctuation in the interval of time between each heartbeat. While stress is a normal part of life, it can lead to a number of issues if it persists over an extended period of time. Stress can strike at any time or location. Atrial fibrillation events can happen after physical or psychological stress in 2-30% of cases; in fact, 1-30% of these episodes might happen after eating, sleeping, vomiting, or coughing. Thus, psychosomatic problems should be investigated as part of arrhythmia management in order to provide appropriate care and enhance the quality of life for individuals experiencing arrhythmias. To improve the quality of life and offer proper treatment for those with arrhythmias, psychosomatic issues should be looked into as part of arrhythmia management.

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### P03-05

#### Affect regulation capabilities, romantic attachment and quality of life in women suffering from systemic sclerosis: insights for a model of multidisciplinary care

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**Background:** Systemic sclerosis (Ssc) is a rare multisystem autoimmune connective tissue disease that affects the skin and internal organs. Patients with Ssc experience changes in physical appearance, pain, fatigue and difficulties in carrying out daily activities with a negative impact on quality of life (QoL) both physical and mental. Alexithymia, defined as an affect regulation disorders, represents a risk factor for the positive management of stressful life experiences, as facing a rare immune condition can be considered. In the international literature, there is a paucity on investigation on this topic as well as on romantic attachment in this peculiar

clinical population. The aim of this study is to investigate the associations between alexithymia, romantic attachment dimensions and QoL in women with Ssc. **Methods:** Fifty women with Ssc were recruited from patients consequently admitted to the Department of Vascular Medicine and Autoimmunity at Sandro Pertini Hospital in Rome. Participants completed the following tests: a socio-demographic questionnaire; the 20-item Toronto Alexithymia Scale (TAS-20); The Experiences in Close Relationship-Revised (ECR-R); The World Health Organization Quality of Life Questionnaire Brief Version (WHOQOL-BREF). **Results:** Participants reported a mean age of 52.98 years (sd=12.87) with 74% of them having a mean time passed since the Ssc diagnosis  $\geq 5$  years. Results: TAS-20 total showed negative associations with physical ( $r=-.353$ ), psychological ( $r=-.672$ ), social ( $r=-.505$ ), environmental ( $r=-.499$ ) and total ( $r=-.303$ ) QoL dimensions (all  $p<.001$ ). ECR-R Avoidance showed negative associations with psychological ( $r=-.492$ ), social ( $r=-.359$ ) and environmental ( $r=-.366$ ) QoL as well as ECR-R Anxiety with psychological ( $r=-.337$ ), social ( $r=-.296$ ) dimensions of QoL (all  $p<.001$ ). **Conclusion:** Present findings highlight that greater difficulties in affect regulation as well as higher levels of anxious and avoidant romantic attachment are associated to a worsen quality of life in women with Ssc. Within a biopsychosocial model of care, these results sustain the importance of tailoring psychological interventions focused on the promotion of emotional regulation capabilities and couple intervention to promote Ssc patients' wellbeing.

### P03-06

#### Clinical characteristics of type 2 diabetes outpatients with comorbidity depression in the general hospital and prediction model reconstruction after regression

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**Background:** Type 2 diabetes mellitus (T2DM) and major depression (MDD) are common public health problems with high comorbidity and bidirectional effects. The relationship between emotional symptoms and metabolic indicators in diabetes patients needs to be further studied. **Methods:** This study included 200 patients with T2DM who were enrolled in the Endocrinology Clinic of Peking Union Medical College Hospital. The social demographic and clinical data were collected. This study was

carried out in the framework of the International Depression and Diabetes study. **Results:** Twenty-six patients had T2DM and MDD, of which 46.2% had comorbid anxiety disorders and significantly higher rates of comorbid peripheral neuropathy ( $P < 0.001$ ), cardiac problems (Myocardial infarction history,  $P = 0.003$ ; Other heart problem,  $P = 0.045$ ), hypertension ( $P < 0.001$ ), and hyperlipidemia ( $P < 0.001$ ) than those of diabetic patients without depression. Patients with concurrent comorbid depression and high disease stress had significantly higher HbA1c concentrations than those with non-comorbid depression and low diabetes-related stress (8.9% vs. 7.4%,  $P = 0.012$ ). In the logistic regression analysis, peripheral neuropathy, heart problems, hypertension, hyperlipidemia, and diabetes-related stress were risk factors for comorbidities. When the kernel parameter  $\sigma=8$ , the identification rate of the SVM model was the highest, and the area under the curve value was 0.84. **Conclusion:** Diabetic patients with comorbid depression have significantly higher glycated hemoglobin levels and higher incidences of diabetic complications. The onset of depression can be predicted based on somatic conditions and diabetes-related stress in diabetic patients.

### P03-07

#### Psychosocial factors in the treatment of oral psychosomatic disorders

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**Background:** Psychosomatic disorders related to disorders of the oral cavity are frequently encountered but often difficult to treat. **Method:** We assessed the psychosocial status of patients with oral psychosomatic disorders (e.g., burning mouth syndrome, atypical odontalgia, or oral cenesthopathy). Patients' social backgrounds were investigated before treatment, and psychological states such as anxiety, depression, alexithymia, alexisomia, perfectionism, health status, sleep quality, and tendency to catastrophize were assessed using questionnaires. Psychosocial factors affecting responsiveness to treatment were extracted, and the relationship between psychosocial factors and treatment course was analyzed.

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**P03-08****Gender difference in correlation between mental symptoms and 10-year cardiovascular risk in schizophrenia.***Xiaoying Jin<sup>1</sup>, Chenghao Lu<sup>3</sup>, Shen Li<sup>2</sup>, Jie Li<sup>1</sup>*<sup>1</sup>Department of Psychiatry, Tianjin Anding Hospital, Mental health center of Tianjin Medical University, Tianjin, China<sup>2</sup>Psychoneuromodulation Center, Tianjin Anding Hospital, Mental health center of Tianjin Medical University, Tianjin, China<sup>3</sup>Institute of Mental Health, Tianjin Anding Hospital, Mental health center of Tianjin Medical University, Tianjin, China

**Background:** People with Schizophrenia have a shorter life expectancy than the general population, Cardiovascular disease (CVD) is the leading cause of death. However, the current consensus on the correlation between psychiatric symptoms and cognitive function with FRS remains inconclusive, and there has been a lack of research addressing gender differences in this association. This study is focused on investigating the relationship between clinical characteristics and 10-year cardiovascular risk in individuals of different genders with Schizophrenia. **Methods:** 802 patients with a diagnosis of Schizophrenia were included in the sample of this study. The Positive and Negative Syndrome Scale (PANSS) was administered to each patient to assess symptom severity of schizophrenia. To evaluate the patient's cognitive function, the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) was utilized. The Framingham risk score (FRS) was employed to estimate the participant's 10-year CVD risk. **Results:** The patients had a 10-year CVD risk of  $11.76 \pm 8.99\%$  and an estimated vascular age of  $58.18 \pm 15.46$  years. Multivariate linear regression analysis showed that FRS increased with the increase of BMI, Blood Pressure, Glucose, Total Cholesterol and Triglyceride levels, the relationship with HDL was inverse. The general psychopathological scale score was negatively associated with FRS (male:  $B = -0.086$ ,  $P = 0.013$ ; female:  $B = -0.056$ ,  $P = 0.039$ ). Negative scale score (male:  $B = -0.088$ ,  $P = -0.024$ ; female:  $B = -0.022$ ,  $P = 0.499$ ) and total PANSS score (male:  $B = -0.042$ ,  $P = -0.013$ ; female:  $B = -0.023$ ,  $P = 0.100$ ) showed a negative association with FRS only in males. No correlation has been found between the total RBANS score and its sub-scores with FRS. In addition, only in patients over 60 years old, general psychopathology ( $B = -0.168$ ,  $P = 0.001$ ) and PANSS total score ( $B = -0.057$ ,  $P = 0.041$ ) may reduce FRS, and immediate memory ( $B = 0.073$ ,  $P = 0.025$ ) may be associated with higher FRS. **Conclusion:** A significant correlation was observed between the 10-year cardiovascular risk and general psychopathological symptoms in this study. Notably, we found that there was a negative correlation between negative symptoms and FRS only in males. Suggesting that we should take differentiated interventions to reduce the risk of CVD in patients of different genders in clinical practice.

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**P03-09****The relationship of cardiovascular disease risk, clozapine antipsychotic use and cognitive function in a large Chinese schizophrenia cohort: a cross-sectional study***Chenghao Lu, Xiaoying Jin, Shen Li, Jie Li*

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**Objective:** The pivotal role of antipsychotics, especially clozapine, in managing cardiovascular disease (CVD) risk and cognitive function in schizophrenia (SCZ) patients necessitates a thorough exploration of their intricate relationship. We aimed to examine the relationship between clozapine use and CVD risk, as well as cognitive function, within a sizable Chinese SCZ cohort. **Methods:** A cohort comprising 765 patients was stratified based on clozapine usage. Demographic characteristics, clinical data, and glycolipid metabolic parameters were collected. Framingham Risk Score and vascular age were calculated utilizing gender-specific Cox regression calculators. Cognitive function and psychiatric symptoms were assessed using the Repeatable Battery for Assessment of Neuropsychological Status (RBANS) and the Positive and Negative Syndrome Scale (PANSS), respectively. **Results:** Among the SCZ patients, 34.6% (265/765) were clozapine users. Clozapine users exhibited lower systolic blood pressure, high-density lipoprotein cholesterol and total cholesterol (all  $p_s < 0.05$ ). Furthermore, clozapine users exhibited higher PANSS scores, along with lower scores in RBANS scores (all  $p_s < 0.05$ ). Correlation analysis revealed positive correlation between CVD risk in non-clozapine users and negative symptom scores ( $r = 0.074$ ,  $p = 0.043$ ), and negative correlation with positive symptom scores and RBANS scores ( $r = -0.121$ ,  $p = 0.001$ ;  $r = -0.091$ ,  $p = 0.028$ ). Multivariate stepwise regression analysis indicated that RBANS attention scores as predictive factors for increased CVD risk in clozapine users ( $\beta = -0.12$ , 95%CI = -0.11, -0.03,  $p < 0.01$ ). **Conclusion:** SCZ patients using clozapine exhibit more severe clinical symptoms and cognitive impairments. Attention emerges as a predictor for increased CVD risk in clozapine users.

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**P03-10****Psychosocial characterization of Italian transplantation candidates using Stanford Integrated Psychosocial Assessment for Transplantation (SIPAT)***Alberto Olivero, Marco Miniotti, Paolo Leombruni*

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**Background:** The main guidelines in the field of organ transplantation emphasize the importance of adequately assessing psychosocial aspects for listing candidates for organ transplantation. The aim of such assessment is to explore the psychosocial issues relevant to the candidate, with the objectives of determining a candidate's suitability for organ transplant in situations of organ scarcity, addressing ineligibility issues to facilitate listing, and improving transplant

outcomes and patient quality of life. Despite numerous studies, none have conclusively demonstrated the importance of psychosocial factors in predicting outcomes such as mortality or organ failure. **Methods:** Among the developed tools, SIPAT has shown utility in standardizing pre-transplant psychosocial assessments and has been utilized in various studies, demonstrating promising potential to enhance the evaluation of organ transplant candidates. SIPAT is a semi-structured interview designed to explore various aspects related to the patient's psychosocial well-being in the context of transplantation. It comprises 18 items divided into different domains, including the patient's readiness for transplantation, social support, psychological stability, psychopathological status, and lifestyle, including substance use. Given the increasing interest in SIPAT for standardized psychosocial assessments of transplant candidates and its potential to facilitate data sharing and comparison among different centers, our project aims to integrate SIPAT into the daily clinical practice of our transplantation psychology unit. This integration aims to standardize the assessment of transplant candidates, characterize different populations of organ transplant candidates, and evaluate whether the dimensions examined by this tool can predict transplant outcomes, such as mortality, organ failure, rejection, adherence, and complications. Preliminary data from our project will be presented at the ICPM 2024 congress.

### P03-11

#### Cardiovascular psychophysiology in subjects with self-harm

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**Background:** Studies have demonstrated that difficulties in emotion regulation and the urge to self-harm may be associated with changes in cardiovascular processes, including an increase in heart rate (HR) [1] and a decrease in heart rate variability (HRV) [2]. HRV can be considered as a measure of cardiac regulatory capacity

in the context of the endogenous stress response (HPA axis) [3]. However, there have been few studies investigating whether the course of therapy might have an effect on HRV. **Methods:** We therefore analysed changes in HRV over the course of therapy in patients with borderline personality disorder (BPD) during participation in a dialectical behaviour therapy (DBT) programme and changes in HRV in subjects with non-suicidal self-injury (NSSI) compared to healthy controls during an experimental stress paradigm (pain) using functional magnetic resonance imaging (fMRI). **Results:** The HR (resting state ECG) of N = 63 (mean age: 26.7 years) patients diagnosed with BPD and N = 55 (mean age: 26.5 years) psychiatric control patients were analysed at admission and discharge in the inpatient setting. In addition, the HRV of 40 subjects with NSSI (mean age: 19.6 years) and 46 healthy control (HC) subjects (mean age: 19.4 years) was measured during a pain paradigm (thermal pain, heat stimulus). **Conclusion:** The results demonstrate a clear change in HR in patients with BPD during the course of therapy, even in the absence of cardiotropic medication. Furthermore, a tendency towards reduced HRV was observed in subjects with NSSI compared to HC during the pain paradigm. Although it cannot be definitively excluded that disorder-specific factors may also be involved, this observation may be indicative of the potential value of targeting parasympathetic dysregulation (i.e., increased HR and decreased HRV) as a therapeutic approach for individuals with self-harm.

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### P03-12

#### Taking my life into my own hands again – A meta-synthesis of qualitative studies examining aspects of a good life with heart disease

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**Background:** Quality of life (QOL) contrasts biophysiological parameters in medicine with patients' subjective experience. Broadly defined, it includes the subjective evaluation of one's position in life. However, QOL is usually reduced to health related

QOL, which is defined by physical, psychological, and social well-being. This leaves large areas of life as well as its temporal structure unconsidered. In the case of chronic illness, which influences patients' entire life, this is detrimental. To gather a holistic perspective on the experience of living well with chronic illness, the philosophical concept of a good life is promising. **Objective and methods:** For better understanding ideas of a good life in adults with heart disease we conducted a meta-synthesis of qualitative studies examining the good life from the patients' perspective. A systematic literature search on medical and psychological databases included the search terms heart disease, quality of life and qualitative methods. Purposeful sampling followed intensity and maximum variation criteria. Included studies were evaluated in terms of their methodological quality by using the CASP tool. Based on high-quality articles, a code system was developed using Interpretative Phenomenological Analysis. Additive codes were formulated based on moderate-quality articles. Lower quality articles were used to validate the code system. **Results:** A total of 46 studies were included. From patients' view, suffering from chronic heart disease means breaking with "normal" life (1). Being confronted with their own mortality patients lose trust in and feel alienated from their bodies. A basic condition to leading a good life therefore seems to overcome bodily doubts (2). During this process, supportive relationships keep patients grounded (3). Being overprotected, however, reinforces patients' experiences of having lost normality. Therefore, patients have a strong will to take their lives into their own hands again (4). In negotiating disruptions and potentials, patients develop an awareness and appreciation of their priorities in life (5). **Conclusion:** Treatment of chronic heart disease should encompass the negotiation of consistency and disruptions in patients' lives, while appreciating the strong will for self-determination.

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## P04-01

### Study of factors contributing to hypoglycemia in individuals with anorexia nervosa

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**Aim:** In individuals with anorexia nervosa (AN), hypoglycemia is a serious physical complication. As such, it is clinically important to understand the factors contributing to hypoglycemia. This study aimed to investigate factors contributing to blood glucose levels in individuals with AN. **Methods:** Participants were individuals with AN admitted to the Department of Psychosomatic Medicine at our hospital between 2011 and 2022. Clinical data at the time of admission were extracted from the medical records. Clinical data items included sex, age, height, weight, casual blood glucose, albumin, aspartate aminotransferase (AST), alanine aminotransferase (ALT),  $\gamma$ -glutamyltransferase ( $\gamma$ GTP), and prothrombin time (PT)% of the blood examinations. Multiple regression analysis was performed with blood glucose level as the dependent variable and weight, BMI, albumin, AST, ALT,  $\gamma$ GTP, and PT% as independent variables. SPSS ver. 28 was used for statistical analysis. **Results:** Participants were 34 females. Age  $38.4 \pm 15.6$  (years), BMI  $13.0 \pm 2.8$  kg/m<sup>2</sup>, and blood glucose  $77.2 \pm 25.9$  mg/dl. Ten patients had blood glucose (mg/dl) below 70 and 24 patients had above 70. Multiple regression analysis showed that variables other than PT% were excluded by stepwise method. Adjusted R<sup>2</sup> value was .238, standardized coefficient beta for PT% was .511, and significance probability was .002. **Conclusion:** The results suggest an association between blood glucose levels and PT% in individuals with AN. The PT% may be a potential indicator of AN severity.

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## P04-02

### Development of the Index for gastrointestinal cognition and behavior

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**Aim:** To develop the gastrointestinal cognition behavior index (GCBI), and to examine its reliability and validity, for providing an assessing instrument of gastrointestinal cognition and behavior. **Methods:** According to the literature review, expert evaluation and in-depth interview, the item pool of GCBI was established. The Data was collected from 323 healthy people in Changzhou of Jiangsu Province by convenient sampling, a total of 307 valid questionnaires of GCBI were collected. 98 of them were tested by Gastrointestinal Quality of Life Index (GIQLI). 50 of them were retested 2 weeks later. Items screening were tested by employing exploratory factor analysis. The criterion validity was tested by Pearson correlation analysis, and the reliability of the scale was



evaluated by Cronbach's  $\alpha$  coefficient and retest reliability. **Results:** Based on exploratory factor analysis, a total of 7 items were assigned into 2 factors with KMO value of 0.86 and chi-square value in Bartlett's sphericity test of 1953.42 ( $P < 0.001$ ). Confirmatory factor analysis suggested common factors of GCBI explained 84.30% of the total variance and factor loadings ranged from 0.72 to 0.91. Cronbach's  $\alpha$  coefficient of total GCBI was 0.90, Cronbach's  $\alpha$  coefficient of each dimension was 0.87 to 0.91 respectively ( $P < 0.001$ ). Retest reliability of total GCBI was 0.98, each dimension was 0.97, 0.99 respectively ( $P < 0.001$ ). There was a significant negative correlation between GCBI and the factors of GIQLI ( $P < 0.001$ ). **Conclusion:** The GCBI has been tested with good property of reliability and validity, which make it a suitable instrument for evaluating gastrointestinal cognition and behavior. (Clinical trial registry: The First People's Hospital of Changzhou, number: MR-32-24-003544).

#### P04-03

### Two cases of pregnant women with anorexia nervosa requiring perinatal nutritional management

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**Case 1:** A 33-year-old woman who had been underweight (37 kg, BMI 15.8) and had episodes of binge-eating and vomiting before her second pregnancy. She had amenorrhea, and she became pregnant with her second child through frozen-thawed embryo transfer. The purging behavior persisted during pregnancy, necessitating hospitalization for nutritional management at 31 weeks of pregnancy in the obstetrics department of our hospital. She was referred to our department for managing her nutrition. We recommended an intake of 2000 kcal/day, but the oral intake remained around 1300 kcal/day, and with the addition of peripheral intravenous nutrition, we managed to administer approximately 1900 kcal/day. She gave birth at 37 weeks of pregnancy and was discharged with a plan to continue treatment for AN in our outpatient department.

**Case 2:** A 32-year-old woman who had been underweight (45 kg, BMI 17.3) and had episodes of binge-eating and vomiting before her first pregnancy. She became pregnant with her first child through in vitro fertilization. The fetus was diagnosed with a ventricular septal defect, and delivery at our hospital was planned. Her dietary intake decreased during her third trimester, and at 33 weeks of pregnancy, she was admitted to the obstetrics department of our hospital and referred to our department, suspecting an eating disorder. We recommended a nutritional intake starting at 1500 kcal/day, but the intake, including intravenous nutrition, remained around 1000 kcal/day. After 35 weeks of pregnancy, she developed lower limb edema and hypertension and diagnosed with hypertension due to pregnancy. The labor was induced at 36 weeks of pregnancy. After discharge, the patient was referred to a department of psychosomatics medicine in another hospital where the patient lived near for continued treatment as an AN.

**Discussion:** Both cases were underweight before pregnancy, with no prior assessment of eating disorders during prenatal checkups.

For effective perinatal management, recognizing the potential for untreated AN in pregnant women is essential. Additionally, achieving the recommended energy intake was challenging, mostly due to difficulties in obtaining consent for enteral nutrition. The progress in infertility treatments may have contributed to more pregnancies among AN patients, underscoring the need to accumulate clinical data and develop optimal treatment strategies for the perinatal management of these patients.

#### P04-04

### Prevalence of distorted body image in young Koreans and its correlates.

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**Aims:** To define the prevalence of distorted body image in 10 to 24-year-old Koreans and determine its relationship with sex, age, body weight status, and disordered eating behaviors. **Methods:** A total of 3,227 young Koreans were recruited from elementary, middle, and high schools, as well as from universities. The participants completed a self-reported questionnaire on body image, eating behaviors (Eating Attitude Test-26), and body weight status. **Results:** The prevalence of a distorted body image in males was 49.7% and that in females was 51.2%. Distorted body image was more frequent in adolescents (age, 10–17 years) than in young adults (age, 18–24 years). The highest prevalence (55.3%) was reported in female elementary school students (age, 10–12 years). Distorted body image was associated with disordered eating behaviors and abnormal body weight status. **Conclusion:** These results suggest that distorted body image is a public health problem, given its high frequency in young Koreans, and that it is associated with abnormal body weight status and disordered eating behaviors.

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## P04-05

### Development and validity of lifestyle scale for psychiatric patients with metabolic syndrome

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**Background:** This study examines the applicability of the “Lifestyle Evaluation Tool for Patients with Metabolic Syndrome (LET-PMS) questionnaire” to psychiatric patients with metabolic syndrome which was originally developed for the general population.

**Methods:** A cohort of 320 patients diagnosed with schizophrenia spectrum disorder (N=190), bipolar spectrum disorder (N=65), and depressive disorder (N=65) participated in this study. They underwent assessment using 36 items from the LET-PMS questionnaire and various established scales. The evaluation encompassed psychometric properties, including reliability analysis, exploratory factor analysis, and confirmatory factor analysis.

**Results:** We refined the LET-PMS questionnaire by eliminating six items through a reliability test. The resultant questionnaire exhibited 6 factors. The overall Cronbach's alpha value was 0.896, with factor-specific reliability coefficients ranging from 0.730 to 0.859. Confirmatory factor analysis of the adapted LET-PMS yielded a 0.069 (between 0.05 and 1.1) root mean square error of approximation, Goodness of fit and comparative fit indexes were 0.815 and 0.821, respectively. Consequently, all 30 items met the criteria for suitable configuration. **Conclusion:** “Lifestyle Evaluation Tool for Psychiatric Patients with Metabolic Syndrome (LET-PPMS)” questionnaire demonstrated suitability for psychiatric patients with metabolic syndrome, exhibiting robust internal consistency and sound structural validity.

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## P04-06

### Insights from motor imagery approach: how to (not) explore body representation in anorexia nervosa?

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**Background:** Individuals with Anorexia Nervosa (AN) tend to assume a third-person perspective rather than a first-person perspective when they imagine their body in action, in line with the concept of self-objectification. **Methods:** Here, we summarize data collected via motor imagery tasks, in this clinical condition and provide a reflection on what the data might be telling us. In our experiments, we focused on the biomechanical constraints effect, a classic effect found in the traditional Hand Laterality Task: people are more accurate and faster in laterality judgments when body parts are shown in a position which is easy and comfortable to reach, mirroring the physical body constraints. This effect is conceived as a proxy of a body representation centred on the first-person perspective, hence proving useful to understand the impact of AN on body representation. In our experiments, participants with AN solved the task by adopting a noncanonical approach. In addition, the biomechanical constraints effect was not consistently observed. **Conclusion:** We discuss this evidence focusing on the role of the psychopathological symptoms characterizing body representation in AN. We also reflect on the efficacy of experimental methodologies used to detect alterations in body representation in this clinical condition. Our considerations have research and clinical implications for eating disorders, pointing towards the need to carefully rethink translation of tasks across diseases.

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## P04-07

### Exploring the impact of early emotional abuse on eating disorder psychopathology: a multiple mediation model

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**Background:** Childhood emotional abuse (EA) is a well acknowledged risk factor promoting the association between any type of childhood maltreatment and eating disorder (ED) psychopathology. This study investigated the association between EA and ED specific symptoms exploring multiple potential mediators to better understand this complex relationship. **Methods:** The study sample included 151 individuals with Anorexia Nervosa (AN), 115 with Bulimia Nervosa (BN), and 108 healthy participants. Before entering treatment programs, participants completed the following questionnaires: the Childhood Trauma Questionnaire, the Toronto Alexithymia Scale, the Behavioral Inhibition System/ Behavioral

Approach System, BAS, and the Eating Disorder Inventory-2. A multiple mediation model was run including EA as independent variable, eating symptoms as dependent variables, and ineffectiveness, sensitivity to punishment, alexithymia, and impulsivity as mediators. **Results:** In individuals with AN impulsivity emerged as mediator between EA and desire for thinness and bulimic behaviors. In those with BN sensitivity to punishment mediated the relationship between EA and dissatisfaction with body image. In both clinical groups, ineffectiveness and difficulty identifying emotions were mediators of the relationship between EA and eating-related symptoms. No mediation effect was observed in healthy controls, although a total effect of EA on dissatisfaction with one's body was observed. **Conclusion:** Impulsivity, sensitivity to punishment, ineffectiveness, and alexithymia may make individuals with childhood EA more vulnerable to ED psychopathology, with some differences between AN and BN. Addressing these psychological problems and their connections with early emotional abuse may represent treatment targets for individuals with EDs and a history of childhood trauma.

#### P04-08

### Serum zonulin levels among patients with anorexia nervosa in relation to the pro-inflammatory cytokinetumor necrosis factor-alpha levels

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**Background:** In recent years, the bidirectional relationship between the brain and the gut within psychiatric disorders has increasingly captured scientific interest. Zonulin, a regulator of intestinal permeability, plays a crucial role at the interface of this interaction. Similar to various psychiatric conditions, previous studies have linked intestinal permeability to inflammation in anorexia nervosa. To the best of the authors' knowledge, this study is the first to assess the relationship between serum zonulin and TNF- $\alpha$  levels in acute anorexia nervosa (AN). **Methods:** Serum levels of Zonulin and TNF- $\alpha$  of 40 patients diagnosed with AN and 40 matched healthy controls (HC) were analyzed. **Results:** The serum zonulin concentration was significantly lower in patients with AN than in HC, while TNF- $\alpha$  serum levels in the AN group were significantly higher than in the HC one. These differences could be explained by some clinical parameters. **Conclusion:** Additional research utilizing different assessment techniques is needed to further investigate intestinal barrier function in AN.

#### P04-09

### Predictors of weight loss and weight loss maintenance in children and adolescents with obesity

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**Background and aims:** In order to achieve better treatment results in the context of childhood obesity, it is necessary to identify predictors of treatment success [1]. Thus, the aim was to conduct a predictor analysis for weight loss and weight loss maintenance based on new hypotheses [2]. **Methods:** Data analysis utilized records from hospitalized children and adolescents with obesity (mean age  $13.4 \pm 1.9$  years; mean length of stay:  $38 \pm 9.1$  days). Inpatient weight loss averaged  $0.33 \pm 0.14$  BMI-SDS z-score. Data were collected at admission (T1), discharge (T2), and up to 24 months thereafter (T5), illustrating the therapeutic process ( $\Delta T2T1$ ). Predictors of weight loss ( $\Delta T2T1$ ) and weight loss maintenance ( $\Delta T5T2$ ) were examined, categorized as demographic, psychometric and sociometric data, physical condition, autonomic nervous system functions, and eating behavior. Subgroup analyses of predictors were conducted sequentially, and hierarchical mixed models were applied as needed, employing systematic variable selection. **Results:** Demographic, psychometric, sociometric data, and autonomic nervous system functions did not predict weight loss. Nonetheless, prior body condition (prior BMI-SDS:  $r = 0.08$ ,  $p = .0[AW1] 07$ ) and body dissatisfaction ( $r = 0.002$ ,  $p = .091$ ) positively predicted weight loss, indicating a motivational effect and potential for change. Exploratory analysis identified physical condition (existing strength:  $r = -0.048$ ,  $p = .008$ ; low motor performance:  $r = 0.002$ ,  $p = .002$ ; and endurance:  $r = 0$ ,  $p = .004$ ) and eating behavior (energy density of consumed food:  $r = -0.001$ ,  $p = .047$ ) as potential predictors. The maintenance of weight loss was positively associated with initial favorable attitudes towards a healthy diet ( $F(1,99.3) = 7.2$ ,  $p = .009$ ) and initial salt sensitivity ( $F(1,100) = 4.25$ ,  $p = .042$ ). Additionally, improvement of body perception ( $F(1,74) = 9.04$ ,  $p = .004$ ) and selected heart rate variability markers (rise in heart rate under stress:  $F(1,74) = 16.61$ ,  $p < .001$ ; difference in the proportion of high-frequency heart rate between stress and recovery:  $F(1,74) = 6.39$ ,  $p = .014$ ) exhibited predictive significance. **Conclusions:** The results provide potential approaches for improving therapies for weight reduction and weight loss maintenance.

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## P04-10

### Promoting positive mental health for sustainable eating behaviors: the PROMISE study in patients with obesity

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**Background:** A significant increase in obesity and overweight rates, strongly associated with unhealthy and non-sustainable eating habits, has been observed in the last decades. Despite the existence of standardized treatments for obesity, several psychological factors, including altered psychological well-being levels, dysfunctional eating styles and cognitive justification mechanisms use, often hinder the achievement of treatment goals. The present study is aimed at testing the effects and the effectiveness, both post-treatment and at 1-month follow-up (FU) of a psychological group intervention based on the principles of Well-Being Therapy (WBT) combined with a basic nutritional intervention (BNI) with a specific focus on the topic of sustainable eating, compared to BNI only, in terms of weight loss, promotion of healthy and sustainable eating behaviors and optimal psychological functioning in patients with obesity. **Methods:** 40 patients with obesity recruited at Sant'Orsola Hospital in Bologna will be randomly assigned to the experimental group (WBT+BNI) (n=20) or to the control group (BNI) (n=20). To assess anthropometric variables, eating habits and psychological functioning during the three time-points, both groups will fill in a self-report online questionnaire including Sustainable and Healthy Dietary Behaviors (SHDB) questionnaire, Psychological Well-Being Scale (PWBs), Dutch Eating Behavior Questionnaire (DEBQ), Depression and Anxiety Stress Scale (DASS-21) and an ad-hoc form to assess the use of cognitive justification mechanisms. **Results:** It is expected that patients in the WBT+BNI group will achieve a greater weight-loss, engage in more sustainable and healthier eating behaviors, show more balanced levels of PWB and reduced levels of psychological distress, dysfunctional eating styles and dysfunctional justification mechanisms use compared to the BNI group, both post-treatment and at 1-month FU. **Conclusion:** Since altered psychological well-being levels, dysfunctional eating styles and justification mechanisms often represent an obstacle to the achievement of treatment goals in patients with obesity, the inclusion of these variables in multi-disciplinary interventions for obesity might have important

clinical implications. In addition to this, considering the central role of non-sustainable eating in this condition, treatment plans might benefit from interventions specifically aimed at promoting more sustainable and healthier diets.

## P04-11

### Influencing factors for emergency presentations of adolescent patients with anorexia nervosa in a child and adolescent psychiatry

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**Background:** Anorexia nervosa (AN) is a mental illness with a high mortality rate that often begins in adolescence and affects both body and mind. Since the outbreak of the COVID-19 pandemic, there has also been an increase in diagnoses of eating disorders, with more severe courses and a higher number of inpatient treatments. Emergency presentations due to eating disorders increased dramatically and have not fallen back to pre-pandemic levels to date. Among other things, an increased quantity of psychiatric comorbidities was recorded in the emergency presentations of anorexia patients, which indicates more complex illnesses. In particular, the family structures of the affected patients show a particularly high level of stress as a result. The general mental state of patients with AN could also influence whether a family presents as an emergency. Furthermore, escalations in the home environment, parental helplessness and stress, severe and rapid weight loss, or even refusal to eat can lead to emergency presentations in child and adolescent psychiatry. This study aims to investigate the factors that influence emergency presentations in patients with AN in order to expand knowledge of the risk factors and develop possible prevention approaches. This could facilitate the development of measures to provide these patients with assistance at an early stage, thus improving the quality of care they receive. This would permit both patients and their caregivers to receive timely assistance before an emergency presentation becomes necessary. **Methods:** In the study, all patients of the Department of Psychiatry, Psychosomatics and Psychotherapy in Childhood and Adolescence at the University Hospital of Tübingen with a diagnosis of AN (F50.0 and F50.1) are recorded retrospectively. The survey period covers the years 2021, 2022, and 2023. Patients are divided into emergency and regular presentations and compared with regard to the following factors: psychological stress, symptoms, media consumption, parental stress, suicidal tendencies, danger to others, aggressiveness, weight loss, personality traits and socio-demographic data. Pseudonymised information is included from the parents/guardians, patients and treatment providers. **Results:** The results will be available and presented at the time of the conference. **Conclusion:** Ideally, the results can be used to develop support measures for affected families in order to provide support at an earlier stage and prevent a crisis from escalating.

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### P04-12

#### Knowledge and attitudes toward eating disorders among health professionals

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**Background:** Eating disorders (EDs) are complex illnesses that require a multidisciplinary treatment approach with involvement of health professionals from different medical and psychological specialties. This study aimed to explore attitudes toward EDs and knowledge of diagnosis, aetiology, and management of EDs among health professionals. **Methods:** A new questionnaire was validated and administered to residents and consultants working in disciplines involved in the management of EDs. Health professionals participating into the study were grouped in the following areas: internal medicine, general practitioners, psychiatric area, psychological area, and surgical area. One-way ANCOVA and chi-square tests were employed to compare knowledge and attitudes toward EDs among the study groups. **Results:** The final version of the questionnaire consisted of 54 items assessing stigma, treatment, physical complications, diagnosis, and aetiopathogenesis of EDs. For all health professionals, the most deficient area was aetiopathogenesis, while the best one was management of physical complications. A gap in the knowledge of diagnosis, aetiopathogenesis

and treatment emerged in non-mental health professionals. Psychotherapy effectiveness and the role of family members in the therapeutic process were not sufficiently acknowledged; general psychological factors contributing to the onset of EDs were not recognized. Stigma was found primarily among surgeons, although all non-mental health professionals considered those patients different from the others and responsible for their abnormal eating behaviors. **Conclusion:** These findings outline that inadequate knowledge and impaired attitudes toward EDs occur among health professionals. This type of stigma may impair early diagnosis and treatment of EDs. Educational programs should provide continuous education to update and improve the knowledge of EDs among non-mental health professionals.

### P04-13

#### Energy requirements for weight gain in patients with anorexia nervosa: a study from a Japanese medical prison

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**Aim:** This study aimed to determine the amount of excess calories required for a weight gain of 1 kg in the recovery period of patients with anorexia nervosa (AN) and to identify factors influencing weight gain. **Methods:** Forty-one patients with AN in a Japanese medical prison were included in the study. All the data were collected from the medical charts. Body composition was measured using multifrequency bioelectrical impedance devices (InBody 770<sup>®</sup>) and body weight. Daily caloric intake was determined by calculating the amount of leftover food and resting energy expenditure was calculated using Scalfi's formulation. These were then used to calculate daily excess energy and excess energy for 1-kg weight gain (EE1). Additionally, the relationship between EE1 and initial body composition values, body mass index, and AN subtype explored. **Results:** After identifying and excluding EE1s for two outliers out of 41 patients, the mean EE1 was 12777 kcal/kg, with a range of 6636–22064 kcal/kg, indicating substantial individual variability. Significant correlations were found between EE1 and body fat mass, body fat percentage, soft lean percentage, and body water ratio. **Conclusion:** Our findings suggest that patients with AN may require more calories than healthy women, particularly those with less fat and more muscle who may require a greater energy intake for weight gain.

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## P04-14

### Real-life data on longitudinal perception of portion size in patients with anorexia nervosa

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**Background:** Energy intake is critical for managing healthy body weight. In patients with anorexia nervosa (AN), there is a significant reduction in energy intake, often associated with consuming smaller portion sizes. Literature confirms that patients with AN have a distorted perception of portion size, leading to a systematic overestimation of portion size and consequently, underconsumption of food. Selecting appropriate portion sizes plays a decisive role in the nutritional therapy of AN. The aim of this study was to investigate the perception of portion sizes in patients with AN at the beginning and during the course of their inpatient weight loss treatment under real-life conditions. **Methods:** Patients with AN were asked during their inpatient stay to rate the perceived portion size of their lunch using visual analogue scales (VAS). This assessment was conducted shortly after each lunch, 5 days a week throughout their inpatient stay. Portion sizes were adjusted as needed during therapy. Additionally, mood, perceptions of hunger, appetite satiety and flavour were recorded. **Results:** A preliminary investigation of 11 patients revealed no significant improvement in the perception of an appropriate portion size. However, as portion sizes were systematically increased, the discrepancy between perceived and actual portion sizes decreased. Patients perceived the portions to be larger when they had reduced appetite, weaker hunger sensation, poor taste perception, strong satiety, and negative mood. **Conclusion:** Normalization of portion size perception could not be demonstrated in patients with AN undergoing inpatient treatment. This could jeopardize the long-term success of treatment. Data from a larger sample are currently being analysed, and initial results will be presented at the conference.

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## P05-01

### Assesment of the severity of psychopathological symptoms of combatants

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**Background/Aims:** Combat stress is accompanied by the action of stress factors that threaten the lives of servicemen and negatively affect their health, reduce the success of activities or lead to their disruption, cause losses in units. Combat distress leads to non-psychotic mental disorders that violate the normative performance of military duties, contribute to the emergence of non-specific pre-clinical psychological manifestations, mental changes and

disorders. The objective was to assess of the severity of pathopsychological symptoms among military personnel on the basis of the medical and psychological rehabilitation department. **Methods:** The SCL (Symptom Checklist Symptom-90-Revised) was used, which contains 90 items that allow to assess the symptoms of 50 psychiatric patients. Each of the 90 questions was evaluated on a five-point scale (from 0 to 4). The value of the PST index (number of positive answers) was assessed for the 4 scales of somatization, obsessive-compulsiveness, anxiety, and depression. **Results:** The Global Severity Index to measure psychological distress was calculated. The value of Positive Symptom Total index (PST) reports number of self-reported symptoms. The largest number of positive responses was obtained for the scales of somatization (32%), depression (28%), anxiety (24%) and obsessive-compulsiveness (14%). **Conclusion:** The obtained data are recommended to be taken into consideration and can be very useful in understanding the clinical structure of combat stress. Positive Symptom Distress Index (PSDI) could be used to measure the intensity of symptoms as an indicator of the type of response to the interaction.

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## P05-02

### Dysphagia caused by perospirone plus fluvoxamine in an old patient with hypoproteinemia

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**Background:** Antipsychotic medication use commonly produce extrapyramidal side effects. Among them, dysphagia is a relatively rare presentation. **Methods:** We reported here an old patient with relapsed generalized anxiety disorder with major depression for 4 months. He suffered from a week of gradually swallowing difficulty after taking perospirone (2mg per day) and fluvoxamine (100 to 200mg per day) for 17 days. **Results:** Meanwhile, he was in a state of hypoproteinemia after poor feeding of 1 month after his dental disease, as well as multiplicities of infections (pneumonia, urinary infection, interal fungal infection) and diabetic ketoacidosis on admission. Eight weeks later, he gradually recovered after changing his drugs to dutoxetine. No anticholinergic agent was prescribed as he was under delirium in acute phase. Brain MRI had ruled out the possibility of acute cerebrovascular disease. **Conclusion:** By reviewing the management of this case, clinical doctors might draw more attention on the interaction among psychoactive drugs, especially under the state of hypoproteinemia.

## P05-03

### Associations of childhood maltreatment and genetic predisposition with subsequent risk of arrhythmias

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**Background:** Emerging evidence has linked childhood maltreatment with cardiovascular disease risk; however, the association between childhood maltreatment and cardiac arrhythmias remains unclear. **Aims:** To examine the associations between childhood maltreatment and incident arrhythmias, and whether a genetic predisposition to arrhythmias modifies these associations. **Methods:** This prospective analysis included 151,741 participants from the UK Biobank (mean age 55.8 years, 43.4% male). Childhood maltreatment, including five types, was measured using the Childhood Trauma Screener (CTS). Incident arrhythmias (atrial fibrillation [AF], ventricular arrhythmias [VA], and bradyarrhythmia [BA]) were documented through linked hospital admission and death registry. Weighted AF genetic risk score was calculated. **Results:** During a median follow-up of 12.21 years (interquartile range, 11.49-12.90 years), 6,588 AF, 2,093 BA, and 742 VA events occurred. Cox proportional hazard models were used to estimate hazard ratios (HRs) for incident arrhythmias. Compared with the absence of childhood maltreatment, having 3-5 types of childhood maltreatment was associated with an increased risk of incident AF (HR, 1.23; 95% CI 1.09-1.37), VA (HR, 1.39; 95% CI 1.03-1.89), and BA (HR, 1.32; 95% CI 1.09-1.61) after adjusting demographic, socioeconomic and lifestyle factors. The associations between cumulative type of childhood maltreatment and the risk of AF ( $P_{\text{overall}} < 0.001$ ;  $P_{\text{nonlinear}} = 0.674$ ) and BA ( $P_{\text{overall}} = 0.007$ ;  $P_{\text{nonlinear}} = 0.377$ ) demonstrated a linear pattern. There was a gradient association between childhood maltreatment and AF risks across the intermediate and high genetic risk groups (both  $P_{\text{trend}} < 0.05$ ) but not within the low genetic risk group ( $P_{\text{trend}} = 0.378$ ), irrespective of non-significant interaction effect ( $P_{\text{interaction}} = 0.204$ ). **Conclusion:** Childhood maltreatment was associated with higher risks of incident arrhythmias, especially AF and BA. Genetic risk of AF did not modify these associations. **Funding:** This work was supported by the National Natural Science Foundation of China (grant number 32100880) and Guangzhou Research-oriented Hospital. The funders had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript. This research was conducted using the UK Biobank Resource under Project (No. 59117).

## P05-04

### How meaning in life and vitality are associated with posttrauma outcomes: a systematic review

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**Background and aims:** When confronted with a traumatic event, people may suffer from adverse posttraumatic outcomes, such as posttraumatic stress disorder (PTSD) or complex PTSD (CPTSD). Positive psychology research has shown that meaning in life and vitality are potentially correlated protective factors against negative developments following trauma exposure that can lead to PTSD or CPTSD. This systematic review aimed to synthesize global empirical research findings, emphasizing the impact of meaning in life and vitality on both PTSD and CPTSD. **Methods:** A search of empirical studies was performed within the Embase, Scopus, and Web of Science core collection databases, as well as PsycInfo, using the PRISMA checklist. A total of 29 studies were included after a systematic exclusion process. **Results:** The collective findings from 22 studies examining meaning in life and five studies focusing on vitality revealed a consistent negative association with symptoms of PTSD. No study that explored the associations among meaning in life, vitality, and CPTSD was found. In contrast to vitality, meaning in life has been extensively studied in relation to traumatic stress worldwide, and few discrepancies in results were found. **Conclusion:** This systematic review identified the need to intensify scientific efforts in capitalizing on meaning in life as a possible target for psychological interventions, especially for trauma survivors globally, and to consider vitality as a protective factor that needs more empirical attention in relation to posttraumatic stress. Furthermore, there is a need for studies that encompass diverse target samples and employ longitudinal study design to examine the associations between protective factors and CPTSD.

## P05-05

### Association of early traumatization with psychological symptom burden and work-related self-efficacy

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**Background:** Complex post-traumatic stress disorder (cPTSD) characterizes the impact of persistent and repetitive, or enduring traumas on mechanisms of self-organization. Individuals with cPTSD often show poorer prognosis in terms of sustaining employment. However, research regarding the impact of cPTSD on

occupational functioning is limited. Meta-analytic findings indicate that individual work-related self-efficacy is an important prognostic factor for a swift return to work (RTW). The aim of this study is to gain insights into the effects of early traumatization on psychological symptom burden and work-related self-efficacy in a preclinical occupational sample. **Method:** Data collection was conducted as part of the multicenter randomized controlled clinical trial FRIAA. The Childhood Trauma Screener (CTS) was used to assess early traumatic experiences. Self-assessment of work-related self-efficacy was conducted using the German version of the Return-to-Work Self-Efficacy Scale (Lagerveld et al., 2010). **Results:** Out of 547 participants, 221 (40%) reported neglect and/or abuse in childhood. These individuals showed significantly higher levels of depression, generalized anxiety, and somatic symptoms. There was a statistically significant difference in the ability to set boundaries between participants with elevated CTS scores and those with non-elevated CTS scores. No significant differences were observed in the remaining items and the total score. **Discussion and conclusion:** The results not only indicate higher symptom burden in the subsample with self-reported early trauma exposure but also show a correlation between trauma exposure and the capability to set boundaries, a crucial facet of self-efficacy. Thus, work-related self-efficacy emerges as a potential key link between symptomatology and occupational challenges, thereby presenting a promising target in rehabilitative interventions for individuals with cPTSD.

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## P05-06

### The functional and structural alterations in brain regions related to the fear network model in panic disorder: a resting-state fMRI and T1-weighted imaging study

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**Background:** Abnormal functional connectivity (FC) within the fear network model (FNM) has been identified in panic disorder (PD) patients, but the specific local structural and functional properties, as well as effective connectivity (EC), remain poorly understood in PD. This study aimed to investigate the structural and functional patterns of the FNM in PD. **Methods:** Magnetic resonance imaging data were collected from 33 PD patients and 35 healthy controls (HCs). Gray matter volume (GMV), and degree centrality (DC), regional homogeneity (ReHo), and amplitude of low-frequency fluctuation (ALFF) were used to investigate the group differences in the local structure and functional characteristics of brain regions in the FNM. Subsequently, FC and EC based on abnormal regions with local structure and functional characteristics were further examined. The relationship between neuroimaging features and clinical data in the PD group was evaluated using correlation analysis. **Results:** PD patients exhibited preserved GMV, ReHo, and ALFF in the brain regions of the FNM compared with HCs. However, and increased DC in the bilateral

amygdala was observed in PD patients. The amygdala and its sub-nuclei exhibited altered EC with rolandic operculum, insula, medial superior frontal gyrus, supramarginal gyrus, opercular part of inferior frontal gyrus, and superior temporal gyrus. Additionally, Hamilton Anxiety Scale score was positively correlated with EC from left lateral nuclei (dorsal portion) of amygdala to right rolandic operculum and left superior temporal gyrus. **Conclusion:** Our findings revealed a reorganized functional network in PD patients involving brain regions regulating exteroceptive-interoceptive signals, mood, and somatic symptoms.

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## P05-07

### Distinct brain network topological properties and structural-functional connectivity coupling in panic disorder

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**Background:** Increasing studies have observed altered topological properties in the brain network in panic disorder (PD). However, the synchronous changes and correlations between the structural and functional networks are still not fully elucidated. **Methods:** The study utilized diffusion tensor imaging and resting-state magnetic resonance imaging data to construct the structural and functional networks from 30 PD patients and 31 healthy controls (HCs). Graph theory analysis was employed to investigate the topological properties of brain networks, including global and nodal metrics. Additionally, the structural-functional connectivity coupling was further calculated. The study also explored potential associations between clinical characteristics and complex brain networks. **Results:** No significant differences in topological properties were observed in the structural brain network between the PD and HC groups. However, PD patients demonstrated higher local efficiency, clustering coefficient, and normalized characteristic path length of the functional network compared to HCs. Moreover, PD patients exhibited increased coupling strength between structural and functional connectivity. The identified higher local efficiency and clustering coefficient in the functional network were found to be positively correlated with state anxiety. Additionally, a positive correlation was observed between the trait anxiety and the increasing clustering coefficient in the functional network. **Conclusion:** Our findings demonstrated distinct topological properties and coupling patterns of brain networks in PD, revealing the potential mechanisms underlying clinical manifestations and offering novel insights for improved early diagnosis and treatment strategies.



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## P05-08

### Are Nummenmaa's emotional body maps compatible with a model suggesting that there are only 4 basic emotions, while disgust and shame are hybrid emotions?

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**Background:** Observations from clinical family practice, a brief literature review and a summary presenting the concept of primary (basic) emotions are presented. Proposed is a model suggesting that anxiety is the emotion before an event with an uncertain outcome, anger the emotion promoting action and self-defence; with sadness and joy being the emotions felt after the event. **Aims and objectives:** To establish a scale that would determine the closeness of two emotions. To consider the following conjectures: 1) Disgust is an emotional blend of anxiety and anger?, and 2) Shame is an emotional blend of anger and sadness? To theorise a model of feelings and emotions. **Methods:** The Nummenmaa body maps were subdivided into 16 bodily areas. Using the scale provided, according to its colour a value was given to each bodily area for each of the emotions under analysis. A closeness gauge for measuring the difference between emotions was established. Eight pairs of emotions were chosen as comparative markers. They were Fear/Anxiety and Depression/Sadness as 2 emotions compatible with being different degrees of the same emotion. Four pairs Anxiety/Neutral, Anger/Neutral, Sadness/Neutral and Depression/Neutral denoting distinct emotions from the Neutral. Happiness/Sadness as opposite emotions. Fear/Anger was included as cluster analysis put these two emotions very close to each other. The emotional closeness of the calculated blend with its known measured counterpart for disgust and shame were made. **Results:** The emotional closeness of opposite emotions, i.e., happiness/sadness is 11.66. The emotional closeness of a single emotion from the neutral position is in the range 5.04-8.60. The emotional closeness of fear/anger was 5.07. Emotions on the same emotional dimension were 2,41(fear/anxiety)-4.25(depression/sadness). The emotional closeness between Disgust (measured) and Disgust (calculated blend of Anxiety/Anger) was 2.23-3.10. The emotional closeness between Shame (measured) and Shame (calculated blend of Anger/Sadness) was 2.92-3.55. **Discussion and conclusion:** Shame (measured) and Shame (calculated from Anger/Depression) were closer to each other than the closeness of depression/sadness. Disgust (measured) and disgust (calculated from Anxiety/Anger) was comparable in closeness to anxiety/fear. Therefore it is feasible for both disgust and shame to be hybrid emotions. These results are compatible with a theory of there being four primary emotions, anxiety, anger, sadness and joy.

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## P06-01

### Mixed models predictions of HgIAc1 levels in patients with type 2 diabetes and comorbid depression from the TELE-DD Trial

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**Background/Aims:** Type 2 diabetes (T2D) and Depressive Disorder (TD) show bidirectional relationship: Diabetic patients have an increased risk of depression, and the presence of depression is associated with poor glycemic control (1,2). The study aimed at modeling HgIAc1 levels through innovative mixed models by using TELE-DD trial main outcomes. **Methods:** TELE-DD Project was developed as a three-phased prospective study: Phase II includes a randomized controlled trial (RCT) on a sample of 428 T2D-TD comorbid patients (3) from the baseline population analysis (Phase I) (4) to show the effectiveness of a psychoeducational telephonic intervention based on motivational interviews to reduce nonadherence and improve prognosis in people with concurrent T2D-TD. Taking subjects (ID) as random effect, and (control-intervention) Group (Control Group-Intervention Group), Measures (0-6-12-18 months follow-up measures), measures of Diabetic Distress Scale (DDS) (5), Treatment adherence (MBG) (6) and TD(PHQ2) as fixed effects, we fitted predictive models of HgIAc1 as response variable by using Restricted Maximum Likelihood method (REML) in SPSS and RStudio ('lme4' R library). Likelihood Ratio Test (LRT) to compare goodness of fit between models, Intraclass Correlation Coefficient (ICC) for random effects and fixed effects estimations significance

for fixed effects were used. **Results:** Null Model (with ID) showed 1.51 as variability due ID and ICC=.68, thus 68% of the total variance is attributable to subjects. Models including ID+Group (IDG), IDG+DDS, IDG +MBG, IDG+PHQ (mod1\_3) and interactions, had less variability due ID (1.28,1.25,1.27 and 1.30), but lower ICC's (.66 for mod1\_3 and .64 for the rest) and showed significant coefficient estimations ( $p<.001$ ). Models including ID+Measures (IDM), IDM+DDS, IDM +MBG, IDM+PHQ and interactions, showed variability due ID around 1.51-1.54 but ICC around 72-73% and significant coefficient estimations ( $p<.001$ ) except for MBG ( $p=.11$ ). Models including ID+Measures+Group (IDMG), IDMG+DDS, IDMG+MBG, IDMG+ PHQ, showed variability due ID: 1.3, ICC: 70% and significant estimations ( $p<.001$ ). Post-hoc tests showed no differences between 12 and 18 month measures ( $p>.05$ ) but differences between the other follow-up measures. Significant LRT were found for all the comparisons between models ( $p<.001$ ). **Conclusions:** High ICC values supported the inclusion of ID as a random effect. Group, Measure, DDS, MBG and PHQ provide good models to HglAc1 predictions.

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## P06-02

### Association between lipid parameters and severity of depressive symptoms in patients with first-diagnosed drug-free major depressive disorder

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**Aims:** The objective of this research was to examine the correlation between lipid parameters and the severity of depressive symptoms in patients with first-diagnosed drug-free (FDDF) MDD in Chinese.

**Methods:** From 2016 to 2018, a total of 1718 individuals diagnosed with FDDF MDD were recruited. Detailed sociodemographic details and anthropometric measurements were gathered from each patient. An assessment of anxiety and depressive symptoms was conducted using the HAMA and the HAMD-17, respectively. Furthermore, thyroxine hormones, fasting blood glucose (FBG) levels, and lipid profiles were ascertained using blood samples taken by a trained clinician. Univariate and multivariate linear regression analyses were then employed to ascertain if there was an association between patient lipid profiles and depressive symptom severity. Additionally, a two-segmental linear regression analysis was used to investigate threshold effects. **Results:** Subsequent to adjusting for covariates, multivariate linear regression analysis unequivocally demonstrated a positive correlation between total cholesterol (TC), triglyceride (TG), and low-density lipoprotein cholesterol (LDL-c), but not high-density lipoprotein cholesterol (HDL-c), and the manifestation of depressive symptoms in patients with FDDF MDD. Intriguingly, the relationship between TC, TG, LDL-c, and depressive symptoms exhibited a non-linear pattern. By employing a two-segmental linear regression model, distinct inflection points at 6.17 mmol/l for TC, 1.80 mmol/l for TG, and 4.12 mmol/l for LDL-c were unveiled. At values higher than each inflection point, we observed a positive association between TC, TG, LDL-c, and depressive symptoms (all  $P < 0.05$ ). However, this relationship between lipids and depressive symptoms appears to plateau at values higher than each inflection point (all  $P > 0.05$ ). Notably, the correlation between HDL-c and depressive symptoms, on the other hand, appeared to exhibit a “U”-shaped pattern, where 1.10 mmol/l was found to be optimal. **Conclusion:** Our investigation shed light on the intricacies regarding the association between lipid markers (TC, TG, LDL-c, and HDL-c) and the severity of depressive symptoms in patients with FDDF MDD, thereby offering valuable insights into the underlying mechanisms involved.

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## P06-03

### Coping strategies and counseling partner: key factors in depression among adult women in Japan

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**Background and aims:** The recent increase in serious depression and suicide rates among adult women is a critical national and global issue. This study investigates the correlation between the coping strategies and choice of counseling partner with severe depression among adult women in Japan. **Methods:** A secondary analysis of an anonymous, web-based survey targeting Japan's general adult population (the cross-sectional data) was conducted. As it is recommended that psychological developmental tasks should be considered in discourses on mental health, women aged 20–64 were divided into two groups, as 20–39 and 40–64, based on Erikson's theory. Data were analyzed using logistic regression, with depression severity (K6:10 points as cutoff) as the dependent variable and coping strategies, counseling partner, and basic demographics (employment and partner status, and living situation) as independent variables. The University's Ethical Review Committee granted approval. **Results:** Of the 1276 responses analyzed (99.9% validity rate), 322 (25.2%) were aged 20–39, and 954 (74.8%) were aged 40–64. For both age groups, "perspective changing" was associated with non-severe depression (OR = 0.74, 95% CI:0.571–0.966; OR = 0.75, 95% CI:0.639–0.870), while "emotional suppression" linked to severe depression (OR = 1.44, 95% CI:1.112–1.863; OR = 1.70, 95% CI:1.470–1.957). In the 40–64 age group, consulting a partner/spouse or coworkers correlated with non-severe depression (OR = 0.63, 95% CI: 0.458–0.874; OR = 0.64, 95% CI: 0.463–0.894), whereas seeking advice from internet/social networking services or professionals was associated with severe depression (OR = 2.43, 95% CI: 1.242–4.770; OR = 1.74, 95% CI: 1.132–2.668). The 20–39 age group had no association between depression and counseling partners. **Conclusion:** Adopting a positive perspective may mitigate depression, while emotional suppression exacerbates it across both age groups. Notably, for those aged 40–64, consulting with familiar individuals, including professionals, tended to reduce depression, contrasting with the younger group's tendency. Therefore, it is crucial to tailor interventions for depression to specific age groups and to design different coping strategies and counseling systems for them. Support for acquiring coping strategies that express their emotions rather than suppress them and changing their perspective so that they can focus on positive aspects is also important.

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## P06-04

### Classifying suicide attempts from suicidal ideation among adolescents using machine learning

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**Aims:** Suicide is a leading cause of death among adolescents and its prevalence among young people has steadily increased in recent years. This study aimed to identify patterns of risk factors that differentiate adolescents who experienced suicidal thoughts from those who attempted suicide using six different machine learning (ML) algorithms for Korean adolescents using data from online surveys. **Methods:** Data were extracted from the 2011–2018 Korea Youth Risk Behavior Survey (KYRBS), conducted annually since 2005 by the Korean Ministry of Education, Ministry of Health and Welfare, and Korean Disease Control and Prevention Agency. The pipeline was solely generated from classic ML (CML) methods, namely logistic regression (LR), random forest (RF), artificial neural networks (ANN), support vector machines (SVM), and extreme gradient boosting (XGB). **Results:** Among the 69,840 adolescents included in the analysis, 13,288 cases (19.0%) were identified as having made a suicide attempt. Prediction models using seven relevant features calculated by Boruta algorithm were developed and five features (drug experience, current smoking, grade, current alcohol drinking and sadness or hopelessness) were identified as the most important predictors. The performance of the six ML models on the balanced testing dataset was good, with area under the receiver operating characteristic curve (AUROC) and area under the precision-recall curve (AUPRC) ranging from 0.66 to 0.73. **Conclusion:** The developed and validated SA prediction models can be applied to detect high risks of SA. This approach could facilitate early intervention in the suicide crisis and may ultimately contribute to suicide prevention for adolescents.

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## P06-05

### Psychometric properties of the Korean version of Functioning Assessment Short Test in bipolar disorder

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**Aims:** The Functioning Assessment Short Test (FAST) is a relatively specific test for bipolar disorders designed to assess the main functioning problems experienced by patients. This brief instrument includes 24 items assessing impairment or disability in 6 domains of functioning: autonomy, occupational functioning, cognitive functioning, financial issues, interpersonal relationships, and leisure time. It has already been translated into standardized versions in several languages. The aim of this study is to measure the validity and reliability of the Korean version of FAST (K-FAST). **Methods:** A total of 209 bipolar disorder patients were recruited from 14 centers in Korea. K-FAST, Young Mania Rating Scale (YMRS), Bipolar Depression Rating Scale (BDRS), Global Assessment of Functioning (GAF) and the World Health Organization Quality of Life Assessment Instrument Brief Form (WHOQOL-BREF) were administered, and psychometric analysis of the K-FAST was conducted. **Results:** The internal consistency (Cronbach's alpha) of the K-FAST was 0.95. Test-retest reliability analysis showed a strong correlation between the two measures assessed at a 1-week interval (ICC = 0.97;  $p < 0.001$ ). The K-FAST exhibited significant correlations with GAF ( $r = -0.771$ ), WHOQOL-BREF ( $r = -0.326$ ), YMRS ( $r = 0.509$ ) and BDRS ( $r = 0.598$ ). A strong negative correlation with GAF pointed to a reasonable degree of concurrent validity. Although the exploratory factor analysis showed four factors, the confirmatory factor analysis of questionnaires had a good fit for a six-factors model (CFI = 0.925; TLI = 0.912; RMSEA = 0.078). **Conclusion:** The results of this study suggest that K-FAST has good psychometric properties and may be a reliable and valid tool for measuring functioning in Korean patients with bipolar disorder. In this study, the concurrent validity of the K-FAST was demonstrated based on its correlations with the GAF. Concurrent validity with the GAF scale showed a highly significant negative correlation. This result indicates that patients with high functioning evaluated using K-FAST had higher scores on the GAF scale. In conclusion, the Korean version of FAST has good psychometric properties. It is a

reliable and valid instrument to evaluate functional impairment in bipolar disorder. Therefore, the use of FAST in BD patients will help to assess their functioning in various domains and in develop more individualized treatment plans.

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## P06-06

### A study on the correlation between non-suicidal self-injury and vmPFC neurometabolism in adolescent bipolar depression patients

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**Aim:** To explore the possible relationship between non-suicidal self-injury (NSSI) behavior and neurometabolism in the ventromedial prefrontal cortex (vmPFC) of adolescent bipolar depression (ABD) patients using proton magnetic resonance spectroscopy (<sup>1</sup>H-MRS) technology. **Methods:** Firstly, 40 adolescent bipolar depression patients who visited the outpatient department and did not receive electroconvulsive therapy, psychotropic drug therapy, or systematic psychotherapy for 6 months before hospitalization from March 2022 to September 2023 were selected. The NSSI diagnostic criteria provided by DSM-5 were used to conduct semi-structured interviews with all participants. According to the presence or absence of NSSI, there were 21 cases in the group with NSSI and 19 cases in the group without NSSI. Secondly, Demographic data such as age, gender, only child status, age of onset were collected through a general situation survey. The HAMD and YMRS were used to assess the psychological well-being of the participants. Using the Ingenia 3.0T magnetic resonance scanner, a chief imaging technician conducted anatomical localization of the vmPFC brain regions in all subjects, followed by <sup>1</sup>H-MRS scanning to quantitatively analyze the ratio of N-acetyl-L aspartic acid (NAA)/creatinine (Cr), choline complex (Choline, Cho)/Cr, myo inositol (mI)/Cr, and the above results were statistically analyzed. **Results:** 1. There was no statistically significant difference ( $P > 0.05$ ) in the age, gender, only child status, residential status, education level, age of onset, and HAMD score between patients in the NSSI group and those without NSSI group. 2. The NAA/Cr of patients with NSSI was lower than that of patients without NSSI, and the difference was statistically significant ( $P < 0.05$ ). There was no statistically significant difference in Cho/Cr and mI/Cr between the group with NSSI and the group without NSSI ( $P > 0.05$ ). 3. There was a significant positive correlation between Cho/Cr and HAMD scores in patients with NSSI ( $P < 0.001$ ), while there was no significant correlation between other indicators ( $P > 0.05$ ). **Conclusion:** 1. Reduced NAA metabolism in the vmPFC brain area of adolescent bipolar depression patients with NSSI. 2. The level of membrane phospholipid breakdown metabolism in the vmPFC brain area of adolescent bipolar depression patients with NSSI may increase with the severity of depression.

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## P06-07

### Persistence of embitterment symptoms after the remission of major depressive disorder: outcomes of a 1-year follow-up

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**Background:** Major depressive disorder (MDD) and post-traumatic embitterment disorder (PTED) are highly comorbid psychiatric disorders. However, the mechanism by which psychiatric disorders affect each other's course is unknown. Thus, this study aimed to investigate how PTED symptoms in remitted MDD patients change over a 1-year period. **Methods:** We designed a prospective, observational study with varying follow-ups over a 1-year period in a naturalistic setting of the psychiatric outpatient unit. In total, 317 patients who achieved remission of major depressive episode (MDE) were analyzed, where a PHQ-9 < 10 was defined as remission of MDE. All patients were given treatment as usual for MDE. Embitterment symptoms were collected using a PTED self-rating scale. At each visit, data using the PHQ-9, PHQ-15, and the PTED self-rating scale were collected. For all collected data, a paired t-test was conducted to analyze the changes of mean scores between baseline and each visit time. **Results:** Remitted MDE patients had significant embitterment symptoms. In post hoc analysis, anger and revenge symptoms did not improve during the all observational period. Physiological symptoms and post-traumatic stress disorder-related symptoms were improved for a short duration and persisted afterward. Embitterment and unfair feelings showed delayed improvement in treatment. Rumination and avoidance were decreasing continuously. **Conclusion:** In remitted MDE patients, the overall symptoms of comorbid PTED decreased for a short while before persisting again. Each embitterment symptom progresses differently, and the symptoms associated with anger and revenge do not improve at all. Further research is needed to determine the mechanism by which these symptoms clinically affect MDE recurrence or relapse.

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## P06-08

### Social capital as a protective factor against depression among inhabitants of the Ladakh highlands

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**Aims:** Several studies have reported a correlation between low-pressure, hypoxic environments and depression, but our previous study of older adults living at a high altitude in Ladakh found low rates of depression. However, people of Ladakh have strong social support and religious beliefs, so we were unable to statistically demonstrate an association between depression and social support and religious beliefs in Ladakh. In this study, we conducted a survey to examine the low prevalence of depression from a social capital (SC) perspective. **Methods:** In August 2019, during a medical examination in Domkhar village, Ladakh, India (elevation 3000-4000 m), we surveyed 140 residents (66.4% female, mean age 63.3

years). Participants completed a questionnaire, and a score of 5 or above on the Patient Health Questionnaire-9 (PHQ-9) indicated a tendency toward depression. We compared SC indices between groups exhibiting depressive tendencies and those without. **Results:** All residents displayed high SC, religious belief, and social support indices, with only 12 individuals (7.4%) exhibiting signs of depression. Analysis unveiled correlations between depressive tendencies and various factors including age, residence type, marital status, subjective health, family satisfaction, living arrangements, subjective well-being, structural SC, and cognitive SC. **Conclusion:** Despite residing in one of the world's most challenging environments, Ladakh's inhabitants rely on Tibetan Buddhism and strong interpersonal connections to foster substantial social capital. These bonds serve as emotional anchors and potentially mitigate the risk of depression.

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## P06-09

### Trajectories of psychopathology among youth with physical illness

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**Aims:** The objectives of this study were to characterize 24-month trajectories of psychopathology and identify youth, parent, family, and neighbourhood characteristics associated with each identified trajectory in a clinical sample of Canadian youth with physical illness. **Methods:** Data come from a longitudinal study of 263 youth aged 2–16 years diagnosed with a chronic physical illness and their parents. Participants were recruited from outpatient clinics at a pediatric hospital and assessed at baseline, 6, 12, and 24 months. Parents reported on youth psychopathology over the follow-up using the Emotional Behavioural Scales (EBS). Latent class growth analysis was used to identify trajectories of psychopathology. Baseline predictors of trajectory group membership were investigated using multinomial logistic regression. **Results:** Three distinct psychopathology trajectories best fit the data; the model had a BIC of -3579.70 and average posterior probabilities of 0.97. The trajectories were classified as, low-stable (LS; 58% of the sample), moderate-stable (MS; 34%), and high-decreasing (HD; 8%). Youth who were older (HD: OR= 1.36), had higher levels of disability (HD: OR= 1.31 and MS: OR= 1.15), had parents with greater psychological distress (HD: OR= 1.11 and MS: OR= 1.04), and came from households with higher incomes (HD: OR= 4.38) were more likely to experience worse psychopathology trajectories (i.e., members of MS or HD trajectories). **Conclusion:** Parent-reported youth psychopathology was generally low over 24 months, though over one-third had symptoms that reflected at least borderline clinical psychopathology. Child disability and parent psychopathology emerged as key predictors, offering opportunities for potential intervention. Findings suggest the importance of identifying at-risk youth, necessitating screening among older youth, those with disability, and parents who are struggling with mental health. Addressing these latter two factors within family-centred care is essential for promoting optimal mental health outcomes for youth with physical illness.

## P06-10

### Latent transition analysis of youth psychopathology classes

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**Aims:** The objectives of this study were to examine if youth transition to different psychopathology statuses over two years and the predictors of these transitions. Examining the stability and change of youth psychopathology aids in discerning whether certain behaviours are transient developmental fluctuations or signs of persistent psychopathological issues. **Methods:** Data for this study come from a clinical longitudinal study which included 263 youth aged 2–16 years diagnosed with a chronic physical illness and their parents who were assessed at baseline (T1), six months (T2), 12 months (T3), and 24 months (T4). Parents reported on youth psychopathology using the Emotional Behavioural Scales (EBS). Latent profile analysis identified psychopathology subgroups and latent transition analysis quantified the probability that youth remained within or transitioned across psychopathology subgroups. **Results:** Four psychopathology subgroups were identified: low psychopathology (LP-T1: 67.7%, T2: 62.4%, T3: 72.2%, T4: 65.8%), primarily internalizing (PI-T1: 19.8%, T2: 27.4%, T3: 17.9%, T4: 16.3%), primarily externalizing (PE-T1: 10.6%, T2: 7.6%, T3: 6.8%, T4: 14.4%), and high psychopathology (HP-T1: 1.9%, T2: 2.7%, T3: 3.0%, T4: 3.4%). As expected, homotypic continuity was lower for the PI, PE, and HP subgroups compared to the LP subgroup. From T1 to T2, 85.7% of youth remained in the HP subgroup. Between T2 and T3, 70.6% of youth remained in the HP subgroup. Between T3 and T4, 59.8% of youth remained in the HP subgroup. Many children classified in the PI and PE subgroup transitioned to the LP subgroup over time. However, those classified in the HP subgroup later in the study were more likely to have persistent psychopathology, with 100% remaining in either the PI, PE, or HP subgroup. Child age and sex, child disability, parent psychopathology, and family socioeconomic status were significant predictors of transitioning across latent classes. **Conclusion:** Findings indicate that for most youth, psychopathology tends to be transient, as they may shift between various mental health challenges over time. However, a small proportion of youth with HP (<5%) had persistent problems, demonstrating an at-risk state for these individuals. These results demonstrate the clinical importance of focusing resources on early identification of persistent psychopathology in youth to enhance their care.

## P06-11

### A systematic review of loneliness as a risk factor for depression in older people with diabetes

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**Background:** Diabetes and depression as major global health problems have a bidirectional relationship (1), while feelings of loneliness are associated with depression. However, there is a lack of information on the influence of loneliness on the onset of depression in older people with diabetes (2,3). **Methods:** PRISMA statement and guidelines were used, performing a structured search in x databases. Methodological quality was analyzed using xx. with keywords: ((loneliness) OR (isolation)) AND ((diabet\*) AND (depress\*)) in three databases, 19 relevant articles were finally included. Inclusion criteria were: Subjects 65+ years of age; diabetes, depression, and loneliness data are present; longitudinal studies not centered on questionnaires, scales, or test validation. **Results:** Of the 19 articles included in this study, three describe risk factors for older people's vulnerability to loneliness; three examine the main risk factors for depression in older people, three results indicate diabetes preceding or being a risk factor for loneliness, two find that loneliness is a risk factor for diabetes; one that diabetes is a risk factor for depression; other two that depression is a risk factor for diabetes; and finally seven studies indicate that loneliness is a risk factor for developing or exacerbating depression, one giving a bidirectional relationship before loneliness and depression; one where depression led to loneliness, and finally two mentioned that loneliness or isolation influenced diabetics to show signs of depression, or exacerbate depression. **Conclusion:** Only two (4,5) of the selected studies suggest that loneliness affects the development of clinical depression or exacerbates depressive symptoms in people with diabetes. There was insufficient evidence to date to show that loneliness is a risk factor for depression in older people with diabetes. Despite this outcome, we detected the need for social support for older people suffering from depression, diabetes, and loneliness. Prevention of mental disorders and chronic diseases in older people should also be increased.

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## P06-12

### Treatment adherence in the older adult with type 2 diabetes and comorbid depression: an umbrella review

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**Background/Aim:** Type 2 diabetes mellitus and depressive disorder are two chronic diseases that have a negative impact on quality of life and life expectancy (1). The bidirectional relationship between depression and diabetes is widely documented (2). The literature states that depression may increase the risk of type 2 diabetes, decreasing adherence to treatment (3). The objective was to analyze adherence to treatment of older adults with type 2 diabetes and depression through a systematic umbrella review. **Methods:** The PRISMA 2020 statement and guidelines were followed (4).

Using the keywords and Boolean operators: (Treatment Adherence OR compliance) AND Diabet\* AND Depress\* in three databases, 15 systematic reviews were finally included. **Results:** Depression in type 2 diabetes was found to be related to poor adherence to treatment, in addition to being affected by other predictors such as advanced age, multimorbidity and polypharmacy. Also, the importance of patient education was highlighted, as well as taking advantage of the technology that surrounds us today to promote adherence to treatment. **Conclusion:** Type 2 diabetes mellitus and depressive disorder are two closely related entities that overlap frequently. The coexistence of both diseases is associated with poorer treatment adherence and, therefore, with greater difficulties in managing the disease. The concurrence of this comorbidity and treatment nonadherence is associated with a higher risk of chronic and acute complications, and a considerable increase in morbidity and premature mortality risk.

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## Systematic review of emergency services and urgent care of adults with diabetes mellitus and comorbid depression

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**Background:** Diabetes and depression are the two diseases with the highest prevalence at present (1). Their comorbidity has been investigated for long and is associated with worse prognosis (2). However, there are few studies that have previously approached their comorbidity jointly with emergency services or urgent care (3). Therefore, in this systematic review we aimed to investigate how both diseases are related to emergency department visits, and the acute processes that can arise from this comorbidity. The objective was to review the published literature on patients with diabetes and comorbid depression and their relationship to emergency services or urgent care. **Methods:** Systematic review was based on the PRISMA guidelines (4), performing a structured search in Pubmed, Scielo, Dialnet and Cochrane Library Plus scientific literature databases. Inclusion criteria were: studies with patients older than 18 years, comorbidity of diabetes mellitus with depression, studies developed in hospital emergency services or urgency assistance. Methodological quality was analyzed using the McMaster structured form and criteria. **Results:** Based on the 26 selected articles, the use of emergency services by patients with comorbid diabetes and depression was higher than of those with one disease only and were related to higher rates of hypo- and hyperglycemia, treatment nonadherence, poor disease self-management, higher mortality, suicide rates, and psychiatric events. **Conclusion:** Patients with diabetes and depression had higher rates of emergency room visits and hospitalization, as well as a higher number of incidence rates, and increased risk of acute adverse events and premature death.

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## P07-01

### Bridging gaps in knowledge: a comprehensive study on the care situation of cancer survivors in Germany

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**Background:** Cancer survivors in Germany face significant challenges due to inadequate information and support, which may affect long-term disease and treatment outcomes. This study, based on a comprehensive survey of 3000 cancer survivors with different tumor entities, aims to identify knowledge gaps in the care situation, with a special focus on the needs of long-term survivors in different life domains. **Methods:** The survey covered key topics including diet, exercise, caregiving, sleep, cognition, health-related quality of life, and somatic late effects. Special attention was given to communicating with long-term survivors, especially those with a migration background, who face unique challenges. To address psychological and physical distress, age- and subgroup-specific strategies were developed and will be



empirically tested. **Results:** The ongoing analysis of study findings is establishing a foundational basis for the formulation of recommendations and future guidelines in the care of cancer survivors. Preliminary survey results emphasize the critical importance of maintaining a high level of adherence to late follow-up examinations and adopting behavioral recommendations for lifestyle and preventive health care. The overarching principle of 'do not harm' underscores the significance of these findings. Additionally, initial observations highlight the necessity for tailored strategies to address the unique needs of diverse survivor groups, presenting a key area for ongoing investigation. **Conclusion:** As this research unfolds, its overarching goal is to address existing knowledge gaps and lay the groundwork for an enhanced, needs-oriented care approach for both primary and secondary cancer survivors. The emphasis on age- and subgroup-specific strategies remains a central theme in the ongoing development of recommendations. The significance of adherence to follow-up examinations, currently highlighted in the study, is anticipated to play a pivotal role in shaping comprehensive healthcare strategies. Thus, this ongoing research project is poised to make a substantial contribution to the improvement of healthcare practices and the overall quality of life for the specific group of cancer survivors under investigation.

## P07-02

### OKRA - Orientation compass for breaking bad news in pediatric oncology

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**Background:** In pediatric oncology, breaking bad news (BBN) is perceived as particularly challenging<sup>1</sup>. Failure to address the specific needs of pediatric patients/children and their relatives can negatively impact on both the BBN recipients and providers (e.g., physicians). Pediatric-specific BBN support tools lack in Germany<sup>2</sup>. Systematically developed, proven support tools are lacking, but could have a positive impact on all those involved<sup>3</sup>. The project OKRA – Orientation Compass for BBN in the pediatric oncology – aims to develop a tool to prepare, guide and further support BBN providers. We present the first phase of a two-phase project, funded by the German Leukemia Research Aid. **Methods:** OKRA's first phase consists of a Participatory Group Delphi (PGD). Multiperspective knowledge was systematically generated through interviews, focus group discussions and surveys. Qualitative thematic analyses are applied, supported by MAXQDA. Four groups participated: (1) experts from own experiences (organizations representatives on behalf of affected children and their parents), (2) BBN providers from pediatric oncological teams and representatives of national professional societies, (3) psychosocial supporters (e.g., counselors), and (4) health system researchers. Following five steps, this PGD culminated in the formulation of theses for the high-level management of BBN. **Results:** Fourteen organizations

were actively engaged in this PGD. After exploring the emerging themes around the categories preparing, delivering, and following up a BBN the OKRA theses were formulated. **Discussion and Conclusion:** A systematically designed tool for BBN preparation, delivery, and follow-up in pediatric oncology is of outstanding interest. For providers, it may reduce emotional distress and lead to improved quality of care. For recipients, a well performed BBN may impact on their ability to cope with the disease and increase psychosocial well being. Exploring the detailed requirements from multiple perspectives leads to a comprehensive understanding of the issues to be addressed around the BBN. The PGD results in pediatric oncology-specific theses that build the foundation for the BBN guiding tool OKRA.

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## P07-03

### The potential of a compact, art therapy intervention to stabilize Children of Cancer Affected Parents (Child-CAP)

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**Background:** In the event of a parent being diagnosed with cancer, fundamental changes may result for the entire family. Especially minor children withdraw their needs to show and discuss their worries and fears with their parents, to avoid additional burdens for them. According to a study by the U.S. National Center for Health Statistics currently about 5-15% of all children in western industrial countries have parents with critical diseases. In Germany alone there are 50,000 children and teenagers that are affected yearly by newly diagnosed cancer of a parent. It is also known, that these children have a high risk for subsequent mental-health problems. It is known from studies with affected families, that these children generally are therapeutically supported not before they

show mental affection or overload. A preventive treatment method is still missing but urgently required. To address this problem, we created “Child-CAP: a First Aid Kit for Children of Cancer Affected Parents”, to support families during this challenging time. **Intervention:** As part of the project, a compact art therapy intervention is tested, evaluated and further developed. The aim of the study is to develop and establish a method to support children in this challenging situation, to prevent and reduce high mental stress levels of children and teenagers. The support is divided into two therapy components consisting of a collage-based art therapy intervention and a short, clearly structured art therapy method using at home. **Study procedure:** Patients with children aged 4-17 years can be specifically informed about Child-CAP. To measure the success of the art therapy intervention, we will conduct a mixed methods study. We use the Strength and Difficulties Questionnaire (SDQ) and the Inventory for the Assessment of Quality of Life in Children and Adolescents (ILK) at the start and end of the sequence, to determine the change of children’s burdens and behavior ( $N \geq 100$ ). In addition to that we use guide-based interviews as qualitative method ( $N \geq 15$ ) to determine children’s expectations and their experienced and perceived stress. A “treatment-as-usual” control group is planned, including all families who do not wish to use the support of Child-CAP.

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## P07-04

### Child-CAP: Needs-oriented psycho-oncological support for children of cancer affected parents - a study protocol

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**Background:** Parental cancer may change family life fundamentally. The focus is shifted towards medical interventions and treatments that are scheduled by others. The family’s financial and time resources are reduced over a long period of time. The children are usually forced to cope with new demands placed on them. Psychological overload of the children is common and around 10% of all affected children suffer from a mental illness. Currently, only a very small fraction as low as 3% of families feel that they have received adequate advice and support in dealing with the disease inside the family. According to the S3 guideline on psycho-oncology, not only the patients but also their relatives should have access to quality-assured psycho-oncological treatment services in all phases of the disease. **Research question and study design:** Child-Cap: a first aid kit for children of cancer affected parents. How do we recognize the need for and effectiveness of psycho-oncological support for children of cancer affected parents? The study will be conducted as a mixed-methods design. Patients with children and adolescents aged 4-17 years are specifically informed about the program of Child-CAP with the four components: 1) Psychoeducation: Dealing with parental cancer within the family; 2) Short psychotherapy intervention to activate and strengthen resources of the child; 3) Parent consultation to support their child in transferring the resource-strengthening interventions; 4) Catamnesis. Intra-family stress is assessed in a pre-post comparison ( $N \geq 100$ ) employing the Hornheider Screening Instrument (tumor patient), the Distress Thermometer (parents), the Strength & Difficulties Questionnaire (SDQ) and the Inventory for the Assessment of Quality of Life in Children and Adolescents (ILK). The subjective benefit from the interventions is recorded quantitatively in a questionnaire developed for this purpose. In addition, the experience of the interventions is surveyed qualitatively in a guided interview on the areas of “intra-family prerequisites”, “resource activation”, “psychoeducation”, “impact on the family system” and “further need for intervention” ( $N \geq 15$ ). A control group with “treatment-as-usual” is planned. Families who do not wish to be offered “Child-CAP” will be included in the control group.

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### P08-01

#### Impacts of post-COVID-19 conditions and neuropsychiatric symptoms in a sample of Japanese individuals: A mixed-methods study

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**Background:** Within the Japanese society, characterized by a high-context culture, personal challenges are often hidden, resulting in significant psychological hardships during the COVID-19 pandemic, particularly for those experiencing post-COVID-19 conditions (PCC). This study explores the unique challenges faced by Japanese individuals with PCC. **Methods:** Adults 16 years and older with confirmed PCC diagnoses from a national patient registry were recruited. 46 completed a paper questionnaire, while 20 had a 60-minute semi-structured interview with a single physician. Patients' perspectives on the psychological distress associated with PCC, with a particular emphasis on neuropsychiatric symptoms, were thoroughly assessed. Both quantitative and qualitative analysis was performed, with NVivo software used for thematic analysis. All participants gave written and IRB-approved consent. **Results:** Among the 46 surveyed participants, 28 (60%) were female with median age 44.5 (IQR 35-51). Fourteen (30%) were unemployed, 19 (44%) had low household income, while only 8 (17%) received financial assistance. Depression, anxiety, and insomnia were widely present (78%, 89%, 67%, respectively), and 10 (21%) initiated psychiatric treatment in response to the COVID-19 infection. Overall symptom count decreased over time, with 11.5 (IQR 6-16) in the past to 5.5 (IQR 2-11) at the time of participation. Two most prevalent symptoms were fatigue and brain fog, both affecting over 90% of patients. Complete remission of fatigue was achieved in 9 (20%), with median duration of 13 (IQR 10-19) months to remission. Similarly, complete remission of brain fog was seen in 13 (30%), with a comparable duration. Brain fog impaired patients' work, decision-making, and self-expression

abilities, with 76%, 69%, and 69% reporting inability, respectively. Cluster analysis of 20 patient interviews identified 4 distinct themes: healthcare issues, emotional distress, distress related to social perception, and mental health stigma. **Conclusion:** The current findings provide insights into the experience of Japanese individuals regarding the influence of PCC on daily life. Psychosocial distress can be attributed to both the symptoms themselves and the lack of access to effective treatment. Additionally, the expectations placed on patients can impact how they are perceived socially and contribute to the stigma surrounding their condition. These can be considered as possible areas for interventions.

### P08-02

#### Risk factors and outcomes of delirium in hospitalized patients with coronavirus disease 2019 (COVID-19): Results from a retrospective cohort study

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**Background:** Delirium is a common and burdensome condition among patients hospitalized with COVID-19. This study aims to investigate the impact of risk factors and outcomes, particularly on long-term mortality and length of hospital stay. **Methods:** A total of 1,031 adult patients with COVID-19 who admitted to two tertiary hospitals in South Korea from July 2020 until January 2023 were included in the study. Death data was acquired from September 2023 until October 2023. Multiple logistic regression analysis was used to investigate factors associated with delirium. Kaplan-Meier analysis was used to compare survival between the two groups. Cox proportional hazards regression model was used to determine factors associated with survival. **Results:** In this cohort, the prevalence of delirium was 11.64%. Average hospital stay was longer in the delirium group (25.79 days) compared to non-delirium group (10.81 days) ( $p < 0.001$ ). The mortality rate was higher in the delirium group (46.7% vs. 22.83%,  $p < 0.001$ ). In multiple logistic regression analysis, independent predictors of delirium included higher age (OR 1.04,  $p < 0.001$ ), COVID-19 severity (OR 3.42,  $p < 0.001$ ), and antipsychotics use before admission (OR 3.24,  $p = 0.018$ ). Unadjusted average survival time in the delirium group (21.31 months) was significantly shorter than the non-delirium group (25.60 months) ( $p < 0.001$ ). Cox regression analysis showed higher age (HR 1.04,  $p < 0.001$ ), higher Charlson Comorbidity Index (HR 1.38,  $p < 0.001$ ), opioid use before admission (HR 2.26,  $p < 0.001$ ), antiepileptics use before admission (HR 2.39,  $p = 0.023$ ), COVID-19 severity (HR 1.65,  $p < 0.001$ ), and opioid use during admission (HR 1.92,  $p < 0.001$ ) were significantly associated with mortality. In this analysis, a diagnosis of delirium was

not associated with increased mortality (HR 1.35,  $p=0.138$ ). **Conclusion:** Patients with delirium exhibited longer hospital stay and reduced survival, underscoring the severe implications of delirium among those with COVID-19. Age and COVID-19 severity predicted delirium and increased mortality risk, suggesting that overlapping risk factors mediate delirium's impact on mortality.

## P08-03

### Impact of remote teaching on Japanese medical university students' sleeping habits: A 6-year follow-up study

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**Background:** The coronavirus 2019 (COVID-19) pandemic has greatly changed our daily life. Many educational facilities have introduced remote teaching. This study aims to clarify the change of Japanese university students' sleeping habits before and after the COVID-19 pandemic. **Methods:** The subjects were medical students at Aichi Medical University. We used data from an ongoing longitudinal sleeping habits survey. For the participants who enrolled in the university during 2018–2023, multilevel analyses of sleeping duration during weekdays and weekends across 6 years were conducted, adjusting sex, place of stay, sleep problems and lifestyle habits. **Results:** Among the students enrolled in the university, the data of 677 in 2018, 657 in 2019, 398 in 2020, 384 in 2021, 284 in 2022, and 680 in 2023 was available for analysis. The mean sleep duration during weekdays (in minutes) was  $407.6 \pm 60.3$  in 2018,  $406.9 \pm 63.0$  in 2019,  $417.3 \pm 80.9$  in 2020,  $421.7 \pm 68.0$  in 2021,  $393.4 \pm 56.7$  in 2022, and  $408.6 \pm 62.6$  in 2023. The mean sleep duration during weekends (in minutes) was  $494.5 \pm 82.5$  in 2018,  $488.3 \pm 87.9$  in 2019,  $462.3 \pm 96.4$  in 2020,  $477.4 \pm 73.1$  in 2021,  $457.0 \pm 78.2$  in 2022, and  $482.7 \pm 71.9$  in 2023. The multilevel analysis of sleep duration, whose model used 1470 data among 1879 data, revealed that sleep duration was related to place of stay, and survey year. Moreover, sleep duration during the weekdays in 2020 was significantly longer than in 2018, 2019 and 2022. but there was no significant difference between 2021, 2023, and 2020. It was longer among those living alone than in those staying at their family home. The multilevel analysis of sleep duration, whose model used 1473 data among 1879 data, showed that sleep duration during weekends was related to gender, doing something always before going to bed, drinking habit and survey year. Sleep duration during weekends in 2020 was shorter than in 2018, 2019 and 2023, although there was no significant difference between 2021, 2022 and 2020. Additionally, sleep duration during weekends was longer in female students than in male students, and longer among students who consistently do something before going to bed, and the students with drinking habits. **Conclusion:** Students' sleep duration during weekdays was longer and their sleeping duration during weekends was shorter under the COVID-19 pandemic, and they were reversed after the pandemic.

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## P08-04

### Associations of doctors' decision-making and negative emotion with thoughts on scientific evidence under different vaccination recommendation conditions

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**Aims:** This study investigated whether negative feelings and convictions about decision-making by Japanese physicians were associated with conditions regarding COVID-19 vaccination recommendations, and their personal attributes and thoughts on scientific evidence. **Methods:** In September 2023, 524 physician monitors (448 men, 76 women, mean age  $\pm$  standard deviation =  $55.5 \pm 9.0$ ) registered by a research company were surveyed. Three conditions for vaccination recommendations were set: A. Able to decide whether to recommend vaccination to patients as a doctor; B. Unable to decide, but follow the decision of their institution; and C. Able to decide in a situation involving a recommendation from their institution [1]. Negative emotion and convictions in decision-making ("best judgment" and "willingness to self-determination") were set as outcomes, and their differences were investigated among the conditions of recommendations. In addition, the associations of negative emotion and conviction in decision-making with personal attributes (sex, age, and medical office affiliation), and thoughts on scientific evidence (understanding/emphasizing statistical data, emphasizing scientific evidence/clinical experience) were investigated with adjustments for the order of presentation of the recommendation conditions. This study was approved by the Ethical Review of Research Involving Human Subjects at the Center for Infectious Disease Education and Research (CiDER), Osaka University. **Results:** In all cases ( $n=524$ ), only "willingness to self-determination" differed significantly between the three conditions ( $p=0.024$ ; post-hoc, n.s.), but with a smaller effect size partial  $\eta^2$  of  $\leq 0.009$ . Stratified analyses by sex, medical office affiliation, and age (median=57, divided into two groups) also showed some significant differences, but all the effect sizes were small ( $\leq 0.013$ ). Negative emotion in Case C was associated with age ( $p=0.040$ ,  $\beta=-0.092$ ). Similarly, "best judgment" in Case C was associated with "better understanding of statistical data than the general public" ( $p<0.001$ ,  $\beta=0.202$ ) and medical office affiliation ( $p=0.004$ ,  $\beta=-0.124$ ). **Conclusion:** Our results suggest that promoting an understanding of statistical data may increase physicians' confidence in their judgment when making decisions regarding COVID-19 vaccination recommendations.

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### P08-05

#### The influence of physical activity on depressive symptoms in patients with chronic fatigue syndrome/myalgic encephalomyelitis

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**Background:** The long-term health effects of the COVID-19 pandemic have once again stimulated discussion and clinical research into chronic fatigue syndrome (CFS)/myalgic encephalomyelitis (ME). This chronic disease, which usually occurs post-viral, describes a severely limiting fatigue lasting at least 6 months, which makes everyday, social, professional and private activities significantly more difficult or even impossible and cannot be relieved by rest. While the exact causes of CFS/ME are being discussed, it is clear from current studies that this multisystemic disease often comes with comorbidities, particularly affective disorders. Furthermore, it is assumed that previous depressive episodes may be associated with a higher risk of developing CFS/ME, as common neuroinflammatory signaling pathways have been identified. At the same time, it is known that people with a high level of physical activity are less likely to suffer from depression. The effectiveness of physical activity as a treatment for depression may be comparable to that of antidepressants. Based on this theoretical background, this study aims to investigate whether physical activity affects moderate to severe depressive symptoms and perceived limitations in everyday life in adult patients with clinically diagnosed CFS/ME. An additional aim is to examine whether increased physical activity also correlates with a decrease in the perceived restriction caused by chronic fatigue in everyday life or, on the contrary, leads to more post-exertional malaise, so-called “crashes”, for those affected. **Methods:** The data are collected by the ongoing research study to determine the effectiveness of therapy procedures in patients with CFS/ME at the University Hospital Zurich. The large-scale study includes data from women and men between the ages of 18 and 55 with clinically diagnosed CFS/ME, a score of  $\geq 36$  points on the Fatigue Severity Scale and with psychiatric clinical stability in the last 3 months. Self-rated depressive symptoms are assessed with the Patient Health Questionnaire PHQ-9 with a score  $\geq 10$  corresponding to moderate to severe depressive symptoms. Two study blocks of 18 participants each are expected to be completed and results presented at the congress. **Conclusion:** The results of this study should make an informative contribution to

the identification, differentiation and treatment of the often co-associated depressive phenotype in CFS/ME and thus to promote a better understanding of the clinical needs of those affected.

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### P08-06

#### How to cope with Long COVID - coping strategies of people affected by Long COVID: Results of a qualitative interview study on psychosocial effects and needs in long-term consequences of COVID-19

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**Background:** Persistent somatic and psychological symptoms following a Sars-CoV-2 infection can result in serious health restrictions and have a drastic effect on quality of life and social participation of those affected. As there are as yet no adequate therapeutic approaches, our focus is on identifying individual stress factors, the resulting needs and requirements, and the methods used by those affected to cope with the persistent burden of the disease and its long-term stressors. **Methods:** The surveyed sample (n=40) consists of affected persons (>18 years, without severe psychiatric illness) who suffer from persistent symptoms and psychosocial stress after COVID-19. The semi-structured interviews were conducted primarily by telephone using an interview guide. Based on the Transactional Stress Model according to Lazarus and Folkman 1984 and the Coping Scale COPE according to Carver

et al. 1989, the qualitative interview analysis focused on the various and individual coping attempts and methods of the interviewees. **Results:** The evaluations show that the level of suffering and the stress levels described are individually high to very high. There is a range of physical and psychological complaints - fatigue-associated complaints, cognitive disorders, fears and worries are mentioned particularly frequently. Based on Lazarus' stress model, those affected primarily report emotion-oriented coping methods such as emotional support or self-care. Pacing, self-help or avoidance as problem-oriented methods were also used by those surveyed. Withdrawal from working life and social isolation, lack of recognition and stigmatization are cited as psychosocial burdens. Needs are therefore expressed in terms of greater visibility, education, understanding and a return to social and working life. **Discussion:** With the help of our interview data, individual coping patterns in dealing with post-viral phenomena in COVID-19 can be better understood. Symptoms, complaints and attempts to cope with them occur to varying degrees and in many different ways in our surveyed sample. It is therefore all the more relevant to provide those affected with tailored support in their coping methods to alleviate symptoms, improve their quality of life and enable them to participate in society again.

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## P08-07

### Perceived burden of health policy measures has a greater impact on hospital staff's mental health than perceived meaningfulness

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**Background:** The negative impact of the covid-19 pandemic on mental health has been thoroughly studied. The severity of health policy measures was an important influencing factor [1]. Often information about the preventive value of such measures was provided to increase public approval. This study investigates whether the subjectively perceived meaningfulness and burden of health policy measures influence the mental health of hospital staff. In addition, it is investigated whether an interaction effect between subjective meaningfulness and subjective stress can be found. **Methods:** This study is part of a larger cross-sectional online survey. 765 employees of a maximum care hospital in Germany participated during the third wave of the covid-19 pandemic. Mental health was measured using the Depression-Anxiety-Stress Scale (DASS) [2]. Subjective meaningfulness and burden of twelve current health policy measures were measured on a 5-point Likert Scale from 0 = very burdening/not meaningful to 4 = not burdening/very meaningful. In a linear regression model we first examined the effect of the evaluation of the measures controlling for different covariates (e.g., demographics, pre-existing illnesses, alcohol use). In a second model we investigated a possible moderating effect. **Results:** A representative sample of the hospital staff

participated in our survey. Whereas a higher burden through health policy measures was associated with more depressive, anxiety and stress symptoms ( $p < 0.001$ ), subjective meaningfulness did not show an association with mental health in the same model. Also, no moderating effect of the subjective meaningfulness on the impact of the subjective burden on mental health could be found. **Conclusion:** This study suggests that the subjective burden of health policy measures is an important influencing factor on mental health. Interventions mainly aimed at providing information about the meaningfulness of policies might not be sufficient to alleviate the subjectively perceived burden and thereby reduce associated psychological symptoms. Further research is necessary to study the causality of the effect, examine potential underlying mechanisms and develop strategies to improve political communication.

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## P11-01

### Development and validation of the efficacy of a personalized information-provision and exercise coaching app for menopausal women on quality of life

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**Aims:** Women globally face menopausal symptoms, affecting 85% during transition, with one-third experiencing severe symptoms. These greatly impact their lives and productivity, highlighting the necessity for precise management across menopausal stages. This study aims to develop a digital health care system for menopausal women (Menopause Assistant Manager; MAMA<sup>®</sup>) providing personalized information, exercise coaching, and medication management and to assess its efficacy on quality of life. **Methods:** Experts in psychiatry, gynecology, and psychology developed a personalized digital application for managing menopausal symptoms. Forty-eight participants were enrolled, with 24 in the intervention (MAMA) group and 24 in the control group. The MAMA group used the mobile application for 8 weeks, while the control group received no intervention. Both groups continued their usual treatments throughout the study. Clinical symptom assessments,

including the Kupperman Index (KI), World Health Organization Quality of Life Brief Version (WHOQOL-BREF), Menopause Rating Scale (MRS), Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), Patient Health Questionnaire-15 (PHQ-15), Menopause Emotional Symptom Questionnaire (MESQ), and Subjective Memory Complaints Questionnaire (SMCQ) were conducted before and after the intervention. **Results:** The MAMA group demonstrated significant improvements in WHOQOL-BREF-physical health ( $F = 4.84$ ,  $p < 0.05$ ), WHOQOL-BREF-environment ( $F = 5.01$ ,  $p < 0.05$ ), GAD-7 ( $F = 5.53$ ,  $p < 0.05$ ) and PHQ-15 ( $F = 4.14$ ,  $p < 0.05$ ), compared to the Waitlist group. No significant differences between the two groups were observed in scores of the other scales. Changes in WHOQOL-BREF-physical health scores were negatively correlated with PHQ-15 scores ( $\rho$  (rho) = - 0.53,  $p < 0.01$ ). **Conclusion:** The MAMA intervention enhanced overall quality of life in women experiencing menopausal symptoms, especially in the physical health and environment domain, as well as anxiety and physical symptoms. Improved treatment accessibility through the digital health program also boosted environmental domain in quality of life. Exercise therapy within the application notably improved physical symptoms, while psychological content likely contributed to reduced anxiety, fostering a sense of universality regarding menopausal symptoms.

## P11-02

### Efficacy of cognitive behavioral therapy for Korean perimenopausal women: randomized controlled trials

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**Aims:** Therapeutic interventions are crucial for perimenopausal women, given the challenging physical and psychological symptoms they face. This study focused on the development and efficacy verification of cognitive behavioral therapy (CBT) designed for Korean perimenopausal women. **Methods:** A CBT protocol for perimenopausal women was newly developed based on theoretical evidence. Forty menopausal women were randomly assigned to the CBT group ( $n = 19$ ) or treatment as usual (TAU) group ( $n = 21$ ). Participants in the CBT group underwent 60-minute weekly sessions for eight weeks. The TAU group received standard care from gynecologists. Participants completed the Menopausal Rating Scale (MRS), World Health Organization Quality of Life Brief Version (WHOQOL-BREF), Patient Health Questionnaire-9, Generalized Anxiety Disorder-7 (GAD-7), Patient Health Questionnaire-15 (PHQ-15), Menopause Emotional Symptom Questionnaire (MESQ), and Subjective Memory Complaints Questionnaire at baseline and follow-up. **Results:** The CBT group showed significant improvement in MRS ( $F = 4.18$ ,  $p = .048$ ),

WHOQOL-BREF (7.60, .009), GAD-7 (4.61, .038), PHQ-15 (5.49, .025), and MESQ scores (7.19, .011) compared with the TAU group. In the CBT group, changes in GAD-7 scores were correlated with PHQ-15 ( $\rho = 0.57$ ,  $p < .05$ ), MESQ (0.57,  $< .05$ ), and WHOQOL-BREF scores (-0.53,  $< .05$ ). **Conclusion and clinical implications:** CBT improved menopausal symptoms, emotional symptoms, anxiety, and quality of life. The CBT showed a therapeutic effect through the following mechanism: reducing anxiety by changing perceptions of menopause through education and training for coping with various menopausal symptoms and improving self-efficacy in symptom management.

## P11-03

### Longitudinal study on the occurrence of fear of childbirth in the middle and late trimester of primipara

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**Aims:** To understand the occurrence of fear of childbirth in the middle and late trimester of primipara, and to explore the influencing factors of persistent fear of childbirth in primipara.

**Methods:** Childbirth Attitudes Questionnaires in Chinese were used to access Childbirth Attitudes Questionnaires, including 343 cases of first-time parturient in a top-three hospital in Inner Mongolia from December 2022 to September 2023. The CAQ investigated the fear of childbirth in the first trimester (14 weeks) and the third trimester (38 weeks). **Result:** Of 291 primiparas who completed both surveys, 198 (68%) had fear of childbirth in the second trimester, 152 (52.5%) had fear of childbirth in the third trimester, and 114 (75.0%) had fear of childbirth in both stages. There was a significant difference in the occurrence of fear of childbirth in the middle and third trimesters of pregnancy ( $2=7.086$ ,  $P < 0.05$ ). Education level, family per capita income, conception method, unplanned pregnancy, and spouse being an only child are the risk factors for persistent fear of childbirth in the second and third trimester of pregnancy. **Conclusion:** The incidence of fear of childbirth is high in the middle and late pregnancy, and the fear of childbirth is persistent during pregnancy. Medical staff should pay more attention to the fear of childbirth of primipara, and establish a fear of childbirth assessment - intervention - reassessment system to promote the mental health of primipara and ensure the safety of mother and child.

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## P11-04

### Study on development trajectory and influencing factors of fear of childbirth in primipara

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**Aims:** To analyse the development trajectory and influencing factors of fear of childbirth in primipara, to provide theoretical guidance for medical workers to identify high-risk groups and implement precise intervention. **Methods:** The subjects of the study were selected from a hospital from December 2022 to September 2023. Basic information, fear of childbirth, social support and coping style were evaluated at 14 weeks gestation by general data questionnaire, Childbirth Attitudes Questionnaires, Perceived Social Support Scale and Trait Coping Style Questionnaire, and their fear of childbirth was assessed at four follow-up visits. The latent category growth model was used to identify the development trajectory of fear of childbirth. And analyse the influencing factors of different development trajectories. **Results:** There are three heterogeneous trajectories of fear of childbirth, namely, “constant fear of childbirth” (Account for 10%), “rising fear of childbirth” (Account for 27%) and “fear of childbirth” (Account for 63%). They had lower education level (OR=5.287), lower per capita income (OR=8.528), unplanned pregnancy (OR=3.602), spouse being an only child (OR=3.712), and less social support (OR=0.965). It can significantly increase the probability of primipara entering the Trajectory of constant fear of childbirth; Artificial insemination (OR=13.837), poor relationship with spouse (OR=9.973), low social support (OR=0.926), and negative coping (OR=1.170) significantly increased the likelihood of first-time mothers entering the trajectory of rising fear of childbirth. **Conclusion:** There is heterogeneity in the development trajectory of fear of childbirth in primipara. Education level, family per capita income, unplanned pregnancy, spouse being an only child, conception method, relationship with spouse, social support and coping style were the influencing factors of the heterogeneous development trajectory of fear of childbirth.

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## P11-05

### Sex differences in loneliness, social isolation, and their impact on psychiatric symptoms and cognitive functioning in schizophrenia.

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**Background:** Social isolation and loneliness, objective and subjective features of dysfunctional social relationships, are more prevalent in patients with schizophrenia (SCZ) than in the general population. This study aimed to explore sex differences in loneliness and social isolation among Chinese chronic SCZ patients, and to investigate their relationships with psychiatric symptoms and cognitive functioning. **Methods:** A total of 323 SCZ patients,

comprising 136 males and 187 females, were recruited. Psychopathology, cognitive functioning, loneliness, social isolation were assessed using the Positive and Negative Syndrome Scale (PANSS), the Repeated Battery for Assessment of Neuropsychological Status (RBANS), the UCLA Loneliness Scale (Version 3) and the Social Isolation Index (ISI). **Results:** Male patients exhibited higher UCLA total score and social isolation score compared to female patients ( $ps < 0.05$ ). In male patients, both loneliness and social isolation significantly predicted PANSS total score ( $ps < 0.01$ ), N subscore ( $ps < 0.05$ ) and G subscore ( $ps < 0.05$ ). For female patients, loneliness (not social isolation) significantly predicted immediate memory ( $p < 0.001$ ), language ( $p = 0.013$ ), delayed memory ( $p = 0.017$ ), and RBANS total scores ( $p = 0.002$ ). Further examination of loneliness components in female patients revealed that personal feelings of isolation were negatively associated with language ( $p = 0.001$ ) and a negative correlation exists between lack of collective connectedness and delayed memory ( $p = 0.048$ ). **Conclusion:** Loneliness and social isolation are more pronounced in male SCZ patients than in female patients. Both loneliness and social isolation are positively related to psychiatric symptoms in male patients, while loneliness is negatively associated with cognitive functioning in female patients.

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## P12-01

### The impact of computerized cognitive flexibility training on symptoms and social functioning in children with attention deficit hyperactivity disorder

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**Aims:** Through computerized cognitive flexibility training interventions for children with ADHD, this research investigates the intervention effects on children with ADHD. **Methods:** 188 ADHD participants were randomized into computer intervention, medication treatment, or waitlist control groups for an 8-week treatment period. Symptom Screening Scale (SNAP-IV) and Conners' Parent Symptom Questionnaire (PSQ) measured clinical symptoms, Wisconsin Card Sorting Test (WCST) assessed cognitive flexibility, the N-back task evaluated working memory, the Stroop task assessed response inhibition, and Weiss Functional Impairment Rating Scale-Parent Report (WFIRS-P) measured social functioning. Using the Pearson correlation method to analyze the impact of neuroticism on the effectiveness of the computerized intervention group. **Results:** 1. Post-intervention, the computer group showed significant improvement in hyperactivity-impulsivity on SNAP-IV ( $P < 0.05$ ), with medication showing greater effects on inattention and oppositional defiance compared to computer intervention ( $P < 0.01$ ). Both interventions resulted in reduced PSQ scores for learning problems, impulsivity-hyperactivity, and the hyperactivity index from baseline, with medication showing greater improvement in learning problems and the hyperactivity index ( $P < 0.05$ ). The computer group exhibited significant improvements in WCST performance (PR, PRE, CC, PCLR) beyond those seen in the medication group ( $P < 0.001$ ,  $P < 0.01$ ). Stroop task improvements were notable in the computer group but



did not differ significantly between groups ( $P < 0.05$ ). In the WFIRS-P, the computer group showed significant enhancements in life skills and social activities, while the medication group improved in learning and school, risky activities, and total score ( $P < 0.05$ ), with more pronounced improvements in life skills and social activities observed in the computer group ( $P < 0.05$ ). 3. Neuroticism showed a significant negative correlation with improvements in PR ( $P < 0.05$ ), PRE ( $P < 0.05$ ), PCLR ( $P < 0.01$ ), and social activities ( $P < 0.05$ ). **Conclusion:** 1. Computerized cognitive flexibility training can improve hyperactivity-impulsivity, cognitive flexibility, executive functions, and social functioning in children with ADHD. 2. Neuroticism can affect the intervention outcomes of computerized cognitive flexibility training in children with ADHD.

## P12-02

### Digital monitoring of inner tension and dissociation across an 8-week Dialectical Behavior Therapy program and its relationship with treatment success

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**Background:** Monitoring symptoms is an essential and time-consuming component of Dialectical Behavior Therapy (DBT). Monitoring inner tension and dissociation is of interest during DBT, as they serve as indicators of dysfunctional behavior. Yet, there is a limited understanding regarding its adherence in naturalistic settings and its influence on treatment outcomes. **Methods:** We offered the Insights-App (Montag et al., 2019) to patients running through an 8-week inpatient DBT program between February 2022 and June 2023 ( $N=99$ ) to monitor their momentary intensity of tension and dissociation (from 0-10) with digital reminders every 2 hours on their smartphones. General psychological distress (SCL-90), depression (BDI-II), and borderline-specific symptoms (BSL) were assessed before and after therapy, along with pre-therapy evaluation of self-harm patterns through a clinical interview. We explored relations of tension and dissociation with psychopathology and employed linear models to analyse the influence of monitoring on treatment success. **Results:** Individuals preferring digital monitoring ( $N=59$ ) showed reduced therapy discontinuation likelihood ( $X^2(1,99)=4.00, p=.046$ ). 55 patients used the digital monitoring on average on 22 treatment days ( $SD=17.38, Mdn=17$ ) within a mean treatment duration of 56 days and at a compliance rate of 33.5% ( $SD=30.57, Mdn=27$ ). Levels of inner tension indicating loss of control ( $>7$ ) declined over the initial three weeks of therapy. High state dissociation ( $>7$ ) was rarely observed ( $<1\%$ ). Mean ratings of inner tension correlated positively with BSL and SCL-90, while state dissociation correlated with

SCL-90 ( $\rho_s > .31, p_s < .030$ ). Inner tension and state dissociation were related to higher lifetime self-injury ( $\rho_s > .30, p_s < .005$ ), but not to suicide attempts or suicidal thoughts. Considering influential data, the total number of ratings moderately reduced depressive symptoms but did not yield benefits for SCL-90 and BSL. **Conclusion:** Choosing digital monitoring in our sample related to higher therapy adherence, whereas adherence to monitoring was no predictor for reduction in borderline-specific symptoms. Clinically relevant levels of tension and dissociation, which have been linked to psychopathology including self-injury, might not be adequately assessed through self-reporting alone, potentially leading to the underestimation of their prevalence due to low compliance rates or the inability to enter values at high levels.

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## P13-01

### Efficacy of a biopsychosocial intervention on clinical depression on patients with type 2 diabetes and comorbid depression: results from the TELE-DD trial

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**Background/objective:** Comprehensive evidence has shown a clear clustering of depression among patients with type 2 diabetes mellitus (T2DM). Diabetes distress shows an overlap with depression in these patients. Prior data highlights the convenience of seeking new therapeutic strategies based on a combined biopsychosocial approach (2). Psychoeducational interventions centered in diabetes distress could be a useful strategy in the management of this comorbidity (3). Thus, the aim of this study was to assess the effect of a psychoeducational telephonic intervention based on motivational interviewing and collaborative care on the diabetes distress of individuals with T2DM and concurrent depression. **Methods:** In the TELE-DD cohort study (4), a 2-arm randomized clinical trial was nested and conducted (usual care Vs Usual care). The main protocol was centered on monthly telephonic

interventions focused on a structured, individualized psychoeducational protocol that included motivational interviewing and collaborative care strategies. TELE-DD promoted treatment adherence, stimulated the patient-healthcare staff relationship, educated on healthy lifestyle behaviors, and provided patients with skills to manage emotional distress. Data were collected at baseline (T0), 6 months (T1), 12 months (T2), and 18 months after starting the intervention (T3). The Diabetes Distress Scale (DDS) were used to evaluate trial patients in every measure (T1-4) (5). **Results:** 428 individuals began the trial (225 in the intervention group and 203 in the control group). The DDS total mean score was similar at T0 between the control and intervention group but clearly decreased in the intervention group ( $p > .0001$ ), similar differences were found in DDS four subscales: emotional distress, physician distress, regimen distress, and Interpersonal Distress (all four:  $p > .0001$ ). **Conclusion:** Our study added values on the benefits of a telephonic psychoeducational intervention on reducing diabetes distress on individuals with T2DM and depression. Future research is needed to evaluate its long-term prognostic effects.

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## P13-02

### An umbrella review of psychological factors as predictors of loneliness in old-age

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**Background:** Loneliness in the elderly population is a growing problem in modern societies [1], increasing the risk and severity of physical and mental disease, and premature mortality. Most published articles have focused on assessing the consequences of loneliness [2], but there is little evidence regarding factors linked with its causality. The aim of this umbrella review is to assess the psychological risk and/or protective factors that may influence loneliness, causing an impact on the physical and mental health of individuals. **Methods:** A literature search was performed in February 2024, following PRISMA guidelines [3]. For this purpose, the WOS, Pubmed and PsycArticles databases were used. Boolean operators were used to group a series of terms referring to 1) loneliness, 2) risk or protective factors, 3) mental health and 4) old age. Two independent reviewers used inclusion and exclusion criteria to select articles, and the methodological quality of the included studies was assessed using the AMSTAR-2 tool [4]. **Results:** Of the 454 articles initially evaluated, 9 publications were included, providing a total of 16 risk and/or protective factors drawn from 483 studies in total. The results indicate a significant relationship between several psychological factors and loneliness. These factors include: mood state, anxiety, and several cognitive-type, among others. The contextual impact of social isolation caused by COVID-19 was also identified as a relevant risk factor. **Conclusion:** This is the first umbrella review showing the relationship between various psychological causal factors and loneliness in old-age. More longitudinal studies are needed to establish a stable causal relationship between the two concepts [5]. Governments and health systems should consider psychological, social and contextual risk and/or protective factors as one of the keys to prevent loneliness, and thus avoid all its consequences at the level of physical and mental health.

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## P14-01

### The non-linear correlation between the severity of alcohol consumption and depressive symptoms in the Chinese Wa ethnic minority

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**Aims:** The objective of this research was to illuminate the link between alcohol consumption and depressive symptoms in the Wa ethnic minority of China, a population where this relationship has been insufficiently explored. **Methods:** A cross-sectional analysis was conducted on a sample of 317 individuals from the Wa ethnic minority, a “direct fast-forward” group in Cangyuan County, between December 1, 2022, and February 28, 2023. Utilizing a multi-stage cluster sampling approach, participants were selected, each of whom exhibited an Alcohol Use Disorder Identification Test (AUDIT) score exceeding 0. Data were collected via face-to-face interviews employing a uniform questionnaire. Quantification of alcohol use was achieved through the application of the AUDIT, while the Patient Health Questionnaire (PHQ)-9 was employed to gauge depressive symptoms. The relationship between the severity of alcohol consumption and depressive symptoms was evaluated using a multivariable logistic regression model. Subsequently, potential non-linear associations were scrutinized through the application of a smoothing plot. **Results:** The study included 317 current drinkers (196 males [61.83%]; mean age  $41.78 \pm 12.91$  years), of which 94 (29.65%) exhibited comorbid depressive symptoms. Multivariable logistic regression analysis, adjusting for confounders, revealed that higher AUDIT scores were significantly associated with an increased probability of depressive symptoms (OR = 1.09, 95% CI: 1.02-1.18,  $P = 0.008$ ). The risk of depressive symptoms was notably greater in the group with possible alcohol dependence in contrast to the group at low risk (OR = 7.01, 95% CI: 1.66-29.62,  $P = 0.008$ ). The smoothing plot indicated a J-shaped non-linear relationship with an inflection point at an AUDIT score

of 15. To the left of this inflection point, no significant relationship was observed, whereas to the right, a positive correlation emerged (OR = 1.39, 95% CI: 1.11-1.74,  $P < 0.001$ ). **Conclusion:** The findings reveal a non-linear relationship between alcohol consumption and the probability of depressive symptoms within the Wa ethnic minority in China, with implications for the development of nuanced and effective treatment strategies tailored to this population.

## P14-02

### Disclosure of errors or adverse events in the surgical setting: related psychological factors and barriers

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**Aims:** A proper handling of errors and adverse events (AE), including a transparent disclosure, in the surgical field is not only essential for healthcare quality but also for the well-being of patients and their families and the involved healthcare providers. This systematic review analyses the state of the art related to psychological processes and dynamics of disclosure of errors and AE in the surgical setting. It focuses on the factors that influence error communication and the potential barriers to their disclosure. Furthermore, it also considers the psychological impact of AE and how their disclosure affects surgical staff. **Methods:** We conducted a systematic search of the electronic databases PubMed, PsycINFO, CINAHL and Web of Science Core Collection, without restrictions to publication date. We also searched additional sources and set up weekly search alerts. The search was conducted by two reviewers, who independently performed all methodological steps. **Results:** Of the 2672 retrieved records, 119 full-texts studies were evaluated and 33 articles included. When errors or adverse events occur, their impact on surgical staff can depend on various factors, such as age and work experience, and can be associated with clinical symptoms like anxiety, guilt, and fatigue. One of the most common reactions after an error or AE in surgery is the fear of future errors, reported by up to 82% of second victims. Error management and disclosure can be inconsistent, leading to emotional sequelae and a lack of job satisfaction (up to 86.5% and 48%, respectively). Across studies, enhancing the process of disclosing errors and AE was found to have a significant impact at various levels, from individuals to the entire system. **Conclusion:** Our

results show that effective error disclosure is connected to the personal and professional well-being of surgical staff, as well as the safety culture in healthcare institutions. However, the process of reporting errors or AE is inconsistent and lacks standardization. More preventive programs are needed to improve communication skills among surgical staff and patients and to provide the necessary tools for managing the complexities of the surgical field. Psychological support programs should aim to reduce emotional distress for second victims, while also considering the various psychological factors related to error disclosure.

### P14-03

#### The influence of digital literacy on intention to use digital healthcare among cancer patients and healthcare providers

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**Aims:** This study aimed to explore the awareness and demand for digital healthcare and to investigate factors influencing the intention to use digital healthcare among cancer patients and healthcare providers, focusing on digital health literacy. **Methods:** Utilizing data from the "Digital Healthcare Awareness and Demand Survey" conducted at Chung-Ang University Hospital's Digital Cancer Center in Seoul, Korea, from October 2023 to February 2024, this research involved 404 respondents, including 200 cancer patients and 204 healthcare providers. The survey measured the intention to use digital healthcare on a 5-point Likert scale, including demographic variables, digital healthcare awareness, digital healthcare understanding, and the Digital Literacy Scale (DLS). Hierarchical linear regression analyses were conducted to examine the influence of various factors on the intention to use digital healthcare. **Results:** Demographic factors revealed that females and participants with higher levels of education showed a higher intention to use digital healthcare, while married participants showed a lower intention. The study also identified a significant positive relationship between high digital literacy and intention to use digital healthcare, particularly the sub-factors of digital literacy value (DL-value) and digital literacy affect (DL-affect), suggesting that these aspects of digital literacy are crucial drivers of digital healthcare adoption. Furthermore, a higher understanding of digital healthcare was associated with an increased intention to use digital healthcare. The study uncovered a notably higher demand for digital healthcare around psychological issues, family and social support, and services among patients compared to healthcare providers. **Conclusion:** The study concludes that both digital literacy and digital healthcare understanding significantly influence the

intention to use digital healthcare. In order to effectively apply user-centered digital healthcare, it is necessary to identify and enhance the digital literacy of patients and healthcare providers, and to tailor services to meet their needs.

### P15-01

#### Effects of a psychoeducational program in patients with type 2 diabetes and depression: diabetes distress outcomes.

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**Background/objective:** Comprehensive evidence has shown a clear clustering of depression among patients with type 2 diabetes mellitus (T2DM). Diabetes distress shows an overlap with depression in these patients. Prior data highlights the convenience of seeking new therapeutic strategies based on a combined biopsychosocial approach (2). Psychoeducational interventions centered in diabetes distress could be a useful strategy in the management of this comorbidity (3). Thus, the aim of this study was to assess the effect of a psychoeducational telephonic intervention based on motivational interviewing and collaborative care on the diabetes distress of individuals with T2DM and concurrent depression. **Methods:** In the TELE-DD cohort study (4), a 2-arm randomized clinical trial was nested and conducted (usual care Vs Usual care). The main protocol was centered on monthly telephonic interventions focused on a structured, individualized psychoeducational protocol that included motivational interviewing and collaborative care strategies. TELE -DD promoted treatment adherence, stimulated the patient-healthcare staff relationship, educated on healthy lifestyle behaviors, and provided patients with skills to manage emotional distress. Data were collected at baseline (T0), 6 months (T1), 12 months (T2), and 18 months after starting the intervention (T3). The Diabetes Distress Scale (DDS) were used to evaluate trial patients in every measure (T1-4) (5). **Results:** 428 individuals began the trial (225 in the intervention group and 203 in the control group). The DDS total mean score was similar at T0 between the control and intervention group but clearly decreased in the intervention group ( $p > .0001$ ), similar differences were found in DDS four subscales: emotional distress, physician distress, regimen distress, and Interpersonal Distress (all four:

p>.0001). **Conclusion:** Our study added values on the benefits of a telephonic psychoeducational intervention on reducing diabetes distress on individuals with T2DM and depression. Future research is needed to evaluate its long-term prognostic effects.

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## P15-02

### Attempts to increase the participation rate of the mental health education “Successful-Self Program” for new career medical professionals

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**Background:** We have implemented a training for new multidisciplinary healthcare professionals, using “Successful Self”, a psychoeducational program to prevent psychosocial distress and also to educate team-based medical practice. We further developed this program and created one for new medical professionals with experience. A new employee training program using the “Successful-Self Program” has been practiced to nurture spiritual well-being and to teach interprofessional work. Participants showed positive changes in self-efficacy to overcome difficulties and self-efficacy regarding relationships with colleagues. The objective of this study is to consider ways to improve the participation rate of the psychoeducational program “Successful-Self.” **Method:** The participation rate of new medical professionals was observed. The training program took place two months after taking office in years X and in

X+1, and immediately after taking office in year X+2. **Results:** Sixteen (84.2%) out of 19 subjects participated the training in year X. Sixteen (66.6%) out of 24 subjects participated the training in year X+1. Twenty-five (96.2%) out of 25 subjects participated the training in year X+2. **Conclusion:** It is better to implement the training program immediately after taking office in order to increase the participation rate in the mental health education.

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## P15-03

### NEOup: Digitally supported patient-oriented interdisciplinary diagnostics and care for prematurely born children with a focus on psyche and somatics

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**Background:** Premature birth represents one of the greatest risks for the development of psychological and physical impairments. However, there is a lack of interdisciplinary studies and care concepts. The aim of the study was, on the one hand, to understand the psychological and physical development of premature babies in an interdisciplinary team consisting of employees from child and adolescent psychiatry, neonatology and neuropediatrics and to offer the children and parents interdisciplinary eHealth-supported diagnostics and advice which would be evaluated. In addition, the goal was to develop a diagnostic screening app in order to be able to detect psychological and physical problems as early and as low-threshold as possible. Furthermore, the investigation of the interaction between psychological and physical problems was of interest. **Method:** To establish the study design and the care concept, focus groups were first carried out with experts (affected families, aftercare team). Premature babies aged 2, 5 and 10 years

and their parents were then included in the study (30 per age group). At baseline, the parents and ten-year-old children filled out app screening questions about psychological and physical well-being for two weeks and basic questions. This was followed by a detailed psychological and physical diagnosis using questionnaires, tests and clinical interviews in the clinic. An interdisciplinary board consisting of employees from child and adolescent psychiatry, neonatology and neuropediatrics then met to analyze the diagnostic results of the children and families and develop treatment recommendations, which were then reported back to the families. 36 to 38 weeks after baseline, the families again completed the same diagnostic measurements, including app surveys, as at baseline. In addition, the study project was evaluated using questionnaires and focus groups with the study participants and board members. **Results:** The data is currently being analyzed and the first results will be presented at the conference. **Conclusion:** We assume that low-threshold app screening questions could later be used to identify risk groups for poorer psychological and somatic outcomes at an early stage in a stepped care approach. Furthermore, a positive evaluation could result in an interdisciplinary diagnostic and care concept for the clinic. In addition, the focus on the interaction between psyche and somatics in research and clinical practice could be strengthened.

#### P15-04

### The feasibility and effects of the progressive whole-body isometric resistance training on cardiac autonomic control in the community-dwelling elderly

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**Background:** Most senior adults with diseases may be too fragile to receive high-intensity resistance training to promote cardiac autonomic control (CAC). Therefore, our study adopted progressive whole-body isometric resistance training (PWIRT), with lower movement difficulty, fewer sets and repetitions, and lower training frequency. Moreover, it provides comprehensive training protection and assistance. This study aimed to examine the feasibility and effects of this PWIRT on CAC in community-dwelling elderly. **Methods:** Forty-three community-dwelling elderly were randomized to 12 weeks of PWIRT (28 participants,  $61.86 \pm 9.23$ ) or control group (15 participants,  $60.87 \pm 7.28$ ). All the participants

went through the autonomic nervous function assessment with an electrocardiogram and an impedance cardiography before and after training. **Results:** (1) Sympathetic nervous system (SNS) function: After training, PEP values were significantly decreased from  $107.70 \pm 14.91$  to  $99.61 \pm 14.43$  ms<sup>2</sup> in the PWIRT, rather than the control group. LVET values were significantly decreased from  $331.32 \pm 22.17$  to  $313.53 \pm 24.39$  ms<sup>2</sup> in PWIRT, rather than the control group. (2) Parasympathetic nervous system (PSNS) function: lnHF values were significantly decreased from  $4.32 \pm 1.05$  to  $3.77 \pm 1.04$  ms<sup>2</sup> in the control, rather than PWIRT group. Root mean square of successive differences (RMSSD) values were significantly decreased from  $19.59 \pm 8.73$  to  $15.35 \pm 7.70$  ms<sup>2</sup> in the control, rather than PWIRT group. **Conclusion:** This study using randomization supported the effects of the PWIRT on CAC, reflecting the increased cardiac SNS and maintained PSNS function. Most importantly, this PWIRT reached a 93.5% completion rate in the elderly.

#### P15-05

### Digital, Dynamic Health Monitoring (DDGM) among older adults: A pilot study in Stuttgart

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**Aims:** Healthy ageing in cities is not only important for older people, but also for society as a whole, as it leads to longer life expectancy and less use of medical resources. Recent epidemics such as COVID-19, but also other environmental influences such as heat waves, have shown how important it is to dynamically survey health determinants and healthcare. The aim of the present project was to conduct a pilot study on the continuous measurement of health and psychological problems (digital dynamic health monitoring, DDGM) among older people in Stuttgart, Germany. **Methods:** A random sample of 250 community members aged 60-80 years in Germany was recruited. A face-to-face interview with standardized questionnaires was conducted to collect information on health outcomes, including lifestyle, medical, social, and psychological factors in participants' lives. Participants receive health related questions every two weeks on randomly selected days and times over a one-year period. Participants will be reassessed after one year. **Results:** Data collection for the baseline interview has been completed. The dynamic assessment has started. Written informed consent has been obtained from all participants. Results from the current study regarding feasibility and trajectories of psychological problems will be presented at the conference. **Conclusions:** The results will provide important information for the implementation of such an approach on a broad basis. Such dynamic health monitoring is unique in Germany and will provide important information both for the city of Stuttgart and for other cities in Germany.

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## P15-06

### Evaluating the impact of guided relaxation techniques on stress biomarkers and well-being in full-time employees

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**Background:** Chronic stress in the workplace has emerged as a significant health issue, contributing to various psychological and physiological disorders. Extensive research has indicated that prolonged exposure to stress increases cortisol and other stress-related hormones, negatively impacting mental and physical health. This study aims to assess the effectiveness of daily engagement with guided relaxation techniques on stress biomarkers and overall well-being among full-time employees, employing both subjective assessments and objective biological measures. **Methods:** Fifty employees aged 20 to 50, of both genders, participated in this 30-day study. We conducted mood and health surveys, tracked physical activity via Fitbit, and collected hair samples for stress biomarker analysis (cortisol, DHEA, testosterone). Participants used a web system prototype for data entry, video viewing, and monitoring. They watched short videos on relaxation methods such as breathing and visualization before sleep. The study was approved by Shiga University's Ethics Committee. **Results:** 81.5% of participants understood and 64.2% found the relaxation videos useful. However, only 37.1% noted lifestyle improvements, and 22.3% felt better mentally. No significant changes were seen in mental health indicators from subjective questionnaires. Notably, cortisol, DHEA, and testosterone levels significantly decreased in hair samples. **Conclusion:** The findings suggest that while relaxation techniques can significantly influence stress-related biomarkers, they do not consistently translate into subjective improvements in mental health or lifestyle changes. The significant reductions in cortisol, DHEA, and testosterone levels in hair samples are indicative of a biological impact, yet the absence of a correlation between these changes and the frequency of engagement with the relaxation videos suggests that other factors, possibly external variables or individual differences, may influence these outcomes. Further research is necessary to confirm whether these biological changes can be directly attributed to the intervention and to explore the potential for personalizing relaxation techniques to enhance their effectiveness more broadly.

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## P16-01

### Study on the state identification model of cardiac neurosis with rigid-deficiency symptom patients based on LASSO regression

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**Aims:** To construct a diagnostic model for cardiac neurosis with rigid-deficiency symptoms using LASSO regression combined with Nomogram. **Methods:** Clinical data were collected from patients with cardiac neurosis who attended the Department of Psychosomatic Medicine outpatient clinic at Guang'anmen Hospital from 2014 to 2016. Variables included in the analysis were age, ethnicity, marriage, education, mental/physical work, BMI, palpitations, shortness of breath, chest pain, chest tightness, irritability, insomnia, dyspnea, fatigue and weakness, emotional tension, spontaneous sweating, depressed mood, good belching, Chinese medicine five-state personality, the Hamilton Anxiety Inventory-14-item scale, the Hamilton Depression Inventory-24-item scale and the Symptom Checklist-90. The influencing factors significantly associated with the diagnosis of rigid-deficiency symptoms were screened by LASSO regression, incorporated into a binary multifactor logistic regression analysis to construct a diagnostic model, and the model was evaluated for predictive discrimination and calibration, internally validated using 10-fold cross-validation, and visualized on a Nomogram. **Results:** The LASSO regression screened the five most significant variables associated with the diagnosis of rigid-deficiency symptoms as female, age, fatigue, belching, and Shaoyang points in the five personality states. The model AUC was 0.85 and the H-L test was 2.94 ( $p$  0.9824), suggesting good model differentiation and calibration, and the 10-fold cross-over internal validation results suggested an AUC of 0.82. **Conclusion:** The LASSO regression combined with Nomogram was used to initially construct a diagnostic model of rigid-deficiency symptoms in cardiac neurosis, laying the foundation for the subsequent standardization of rigid-flexible diagnosis.

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## P16-02

### Stress factors and their impact on mental health among child-rearing women in urban Tokyo

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**Aims:** In Japan, although support for the elderly is in place, there's a lack of childcare and income security for those raising children, contributing to the declining birthrate. Women's increased workforce participation hasn't reduced their primary responsibilities

for household and childcare. International surveys indicate a decreased societal belief in collective child-rearing, placing significant burdens on mothers. To address this, a mental health clinic for women, primarily targeting those in the child-rearing stage, has been established within a pediatric facility in urban Tokyo, aiming to analyze stress factors and mental health characteristics. **Methods:** Data from all patients (54 individuals) who attended our mental health outpatient clinic from November X to April X+1 were collected, with analysis focusing solely on patients who were in the child-rearing phase (49 individuals). **Results:** The prevalence rates were 41% for depression disorders, 22% for trauma- and stressor-related disorders, 14% for anxiety disorders, with bipolar disorders (12%), eating disorders (2%), and sleep disorders (4%) making up the remainder. Coexistence with physical illnesses was observed in over half of the cases, suggesting a predominantly psychosomatic pathology. The most common complaints were related to children at 71%, followed by work-related issues (41%), and partner-related issues (29%). Although 76% of the patients were dual-income, 84% reported that the patient primarily handled household and childcare responsibilities, highlighting a heavier burden on women in these domains. Of the patients, 20 (41%) felt a lack of psychological support, and despite 91% being in marital relationships, fewer than half perceived their spouses as supportive. **Conclusion:** The challenges faced by women in the parenting generation in urban settings underscore the importance of addressing work-life balance and providing adequate support networks. Failure to address these issues may exacerbate the risk of mental health disorders and psychosomatic conditions in this demographic. Efforts to promote accessible support systems and cultivate open communication channels are warranted to mitigate the impact of stressors on maternal well-being and overall family health.

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## P16-03

### Successful treatment of a young hypertensive patient with disease denial: psychotherapeutic ingredients from Chinese Medicine

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**Background:** Young patients who have recently been diagnosed with hypertension may deny the diagnosis and refuse to take medication, which can impede early intervention. Traditional Chinese Medicine (TCM) offers a psychosomatic approach that can be used as a reference. **Methods:** A patient who had been visiting multiple general hospitals for hypertension was referred to me due to poor medication response. Upon learning the severity of the condition, I refrained from providing the classic "disease education" to "persuade" the patient to take medicine, and instead concentrated on somatic complaints constipation, which is a common symptom among hypertensive patients. By providing herbal medicine to relieve this symptom, I was able to build a strong doctor-patient relationship. This allowed the patient to express their concerns and fears, which revealed substantial psychological symptoms of "overload allostatic" and behavioral symptoms of "disease denial". Then I shared the interpretation of hypertension from the perspective of TCM subtype diagnosis of "Hyperactivity of Liver Yang (HLY)", which covers both psychological and somatic aspects. **Results:** The patient consented to taking medication, and the treatment has been successful without any complications occurring yet. **Conclusion:** From the perspective of TCM, hypertension is not only indicated by the blood pressure values, but also by somatic symptoms such as constipation and psychological symptoms such as irritability, which better reflect the patient's experience of the disease. The TCM practice helps to establish better therapeutic relationships and shared models of disease interpretation, which are labelled as non-specific psychotherapeutic components in psychosomatic medicine practices (Fava G A et al., 2017).

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## P16-04

### Based on data mining to explore various TCM treatment rules of cardiac neurosis

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**Aims:** This paper aims to explore various TCM treatment rules of cardiac neurosis through data mining. **Methods:** Search the CNKI, Wanfang Database and VIP database for research on TCM treatment of cardiac neurosis from the establishment of the database to January 2024, extract basic information and establish an Excel syndrome prescription database. 1. R4.3.3 programming language and WPS Office (12.1.0.16412) were used to make the frequency statistics of TCM syndrome types, and the frequency statistics,



association rule analysis, cluster analysis and visual display of Chinese herbal medicine were carried out. **Results:** A total of 117 articles were included, involving 5305 patients, covering 45 types of TCM syndrome. The high frequency TCM syndrome types include syndrome of dual deficiency of the heart and spleen, syndrome heart yang deficiency, syndrome of liver depression and spleen deficiency, syndrome of heart blood stasis obstruction, syndrome of yin deficiency with effulgent fire and so on. Involving 133 prescriptions, 185 kinds of traditional Chinese medicine, a total frequency of 1580 times. The top 5 use frequency were bupleurum 68 times, angelica sinensis 62 times, poria cocos 62 times, ziziphus spinosus 46 times, white peony root 45 times. By association rule analysis, 6 drug combinations of 2 items, 14 drug combinations of 3 items, 6 drug combinations of 4 items, and 5 drug combinations were obtained by cluster analysis. **Conclusion:** The common TCM syndromes of cardiac neurosis are syndrome of dual deficiency of the heart and spleen, syndrome heart yang deficiency, syndrome of liver depression and spleen deficiency, syndrome of heart blood stasis obstruction, syndrome of yin deficiency with effulgent fire and so on. The use of traditional Chinese medicine mainly follows the rules of tonifying and replenishing the heart and spleen, tonifying yang and replenishing qi, suppressing the liver and reinforcing the spleen, activating blood and resolving stasis, nourishing yin and reducing fire, which are the basic treatment law of the same disease and different treatment for cardiac neurosis in traditional Chinese medicine.

#### P16-05

### The effect of seeking common ground while reserving differences training on parent-child relationships in non-suicidal self-harming adolescents

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**Aims:** To investigate whether seeking common ground while reserving differences (SCGRD) training is a positive facilitator of parent-child relationships in adolescents with non-suicidal self-injury (NSSI). **Methods:** Adolescent who engage in NSSI and experience parent-child relationship conflict were randomly assigned to either an intervention (N=47) or a control group (N=44). The intervention group received a psychological treatment consisting of the following steps: Establishing a therapeutic relationship; Learning the concept of SCGRD, related historical events, and their significance; Taking into account self-experience, recounting life events that exemplify SCGRD, and sharing feelings at that time and at this moment; Present perceptions and evaluations of parents and recount important life events objectively regarding the topic of 'My Parents in My Eyes'; Describe what your parents expect and want from you based on your personal experience regarding the topic of 'What My Parents Think of Me'; Debate with the topics "Why are parents so strict with us when we are children for the first time?" and "There is no perfection when we are parents for the first time"; In the concluding stage, group members report on the cognitive changes resulting from the concept of SCGRD, and the

changes in their feelings. The control group received routine treatment without any additional psychological interventions. A six-week qualitative study was conducted to evaluate patients' feelings towards parent-child relationship. **Results:** Compared to control group, patients in the intervention group had a more comprehensive and rational evaluation of the perception of the parent-child relationship and a stronger willingness to accept their parents. **Conclusion:** The concept of SCGRD, which originated in traditional Eastern civilizations, can be used as a cognitive therapy technique to improve parent-child relationships for minors with NSSI.

#### P17-01

### An intervention study of computerized delayed gratification training on impulsive behavior in children with ADHD

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**Aims:** To investigate the therapeutic effects of computerized delayed gratification training on impulsive behavior, clinical symptoms, behavioral problems, social functioning, and self-control in children with ADHD. **Methods:** One hundred and twenty-two children with ADHD who attended and were diagnosed at a tertiary hospital mental health center from January 2022 to December 2022 were selected and randomly divided into a training group and a medication group. Children with ADHD in the training group received computerized delayed gratification training; the medication group was given atomoxetine hydrochloride capsules. At baseline, the children were given a computerized delayed gratification training program by using a survey of general demographics, the SNAP-IV scale, the PSQ scale, WFIRS-P scale, DMSC-S scale and BIS-11 scale were used to assess impulsive behavior, clinical symptoms, behavioral problems, social functioning and self-control at baseline. After 8 weeks, the above assessments were repeated for both groups of children. A t-test was used to explore the differences between the general demographic information such as gender, age, height, weight and IQ of the children in the two groups. Repeated measures ANOVA was used to compare the differences between the two groups of children for each outcome indicator at baseline and after the 8-week intervention. **Results:** 1. The differences between the general data of age, gender, height, weight, IQ and personality of ADHD children in the training and medication groups were not statistically significant ( $P > 0.05$ ). 2. In terms of impulsive behaviors, the motor impulsivity and unplanned impulsivity factors were more significantly reduced in the training group compared to the medication group after 8 weeks of intervention, and the difference was statistically significant ( $P < 0.05$ ). 3. Pre- and post-intervention comparisons of ADHD children in the training group revealed that introversion and extroversion in personality traits were negatively correlated with low delayed gratification, and the difference was statistically significant ( $P < 0.01$ ). **Conclusion:** 1. Computerized delayed gratification training improved motor impulsivity more significantly in ADHD children. 2. Introverted and extroverted personalities have an effect on the intervention effectiveness of computerized delayed gratification training.

## P17-02

### How to assess the spectrum of loneliness in the elderly? Proposal of a biopsychosocial structured assessment telehealth protocol assisted with AI: the I-SOLATION Project

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**Background:** Social isolation presents a significant challenge affecting 7-17% of older adults (1), and it is also associated with mental health issues such as depression, decreased ability in daily activities, health problems, diminished emotional well-being, higher rates of morbidity and mortality, and reduced life expectancy (2). Given the aging population worldwide, it is necessary to study and understand both the phenomenon and its risk factors (3). It is imperative to develop effective, comprehensive and useful assessment protocols to reach these goals. Artificial Intelligence (AI) and telehealth have shown promising results to integrate data for faster and effective interventions. The aim of this study is to propose an assessment protocol to recognize older adults at risk of social isolation and to evaluate their risk factors and consequences both in conventional treatment and in an innovative approach with AI. **Methods:** A scoping literature review was conducted, extracting eight systematic reviews related to social isolation. Subsequently, the works included in each systematic review were evaluated, listing the assessment areas and the main instruments used for each area. **Results:** The proposed structured biopsychosocial assessment protocol, to be conducted in interview telehealth format, addresses the following areas: sociodemographic information, overall functional impairment (Barthel Index), presence of incapacitating physical or psychological illnesses (GMS-B), functional capacity assessment (Lawton & Brody Index), self-perceived physical and psychological well-being, medical history and associated treatments, loneliness (UCLA-10; de Jong-Gierveld), anxiety (Goldberg) and depression (CES-D), personality (BFI-10) information regarding losses, bereavement and other stressful events, social participation and social network, and self-perceived social support (DUSOCS) (4). Additionally, an AI-system has been developed to integrate the interview data with Person-Centered Therapy. **Conclusion:** There are currently a variety of good indicators and protocols to assess the full spectrum of loneliness, and these are consistently used in many studies, facilitating

comparability. It is expected that the biopsychosocial structured assessment protocol will guide the selection of effective and useful assessment areas and instruments to detect, understand, and promote effective biopsychosocial telehealth interventions to reduce unwanted loneliness assisted with AI (5).

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## P17-03

### The I-SOLATION Study Protocol: an artificial intelligence integrated prospective observational cohort study of loneliness in older adults

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**Background:** The I-Solation Project faces the challenge of tackling and identifying early unwanted loneliness (UL) among older people through the research of new technologies as telehealth and artificial intelligence and the integration between stakeholders belonging to sectors affected by this problem, trying to offer personalized solutions to a growing elderly Spanish population [1]. The aim of this project will be to design a predictive and risk estimation model, based on data from different community resources,

to assess the risk of suffering unwanted loneliness in the elderly [2], anticipate its detection and providing digital solutions to promote social interaction that contribute to prevent and resolve UL and its harmful consequences [3]. **Methods:** A prospective observational cohort study design with the aim to recruit 250 patients older than 65 years of age at risk for UL. Longitudinal data will be collected, including sociodemographic, functional, psychological, social, and clinical information, by using a biopsychosocial structured interview, including different psychological and social assessments and patient-reported outcome measures. Pre-planned analyses will use the Cox proportional hazards method to assess factors related with survival, logistic and lineal regression models to investigate associations with associated risk elements, and analysis of variance models to explore changes in these risk factors over time [4,5]. Artificial intelligence algorithms will be integrated together with Person-Centered Therapy and Care. **Ethics and transfere-**  
**rence:** This study was approved by the ethics committees for Research at the San Jorge University of Zaragoza Spain. Participants will be fully informed of the purpose and procedures of the study and written informed consent will be obtained. The study results will be transferred to institutions attending elderly people and shared with policy makers.

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## P18-01

### Study to foster the introduction of patient and public involvement into medical education

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**Background:** Patient and Public Involvement (PPI) incorporates patients’ experiences and thoughts for improving medical care and promotes their engagement as citizens in the healthcare system. In Japan, PPI has been promoting in medical research. However, there are few examples in medical education. This study aims to show a curriculum and medical students’ learning in which cancer patients engage in medical education to make proposals to foster the introduction of PPI into medical education. **Methods:** Our laboratory and a cancer patient advocacy group are collaborating for the curriculum as one of the programs implementing as compulsory community-based medicine practical training for 5th and 6th-year medical students. The curriculum is structured as follows: (1) pre-viewing of on-demand videos in which cancer patients talk about their group’s activities and experiences as patients; (2) group work and general discussion facilitated by our laboratory’s educators on the role of patient advocacy group based on PPI and what students thought about after listening to patients’ stories; and (3) a role play facilitated by a member of the cancer patient advocacy group on communication between physicians and cancer patients. The learnings were analyzed through essays submitted by students who participated in the curriculum in 2023-2024 using grounded theory. **Results:** Students recognized the importance of “empathy to the psychological aspects of patients” and the need to acquire “communication skills that show understanding of the psychological aspects of patients”. On the other hand, many students felt conflicts about the balance between consideration for patients’ psychological needs and “professionalism in providing accurate knowledge as a physician”. In addition, students were recognized for the first time about “the significance of patient advocacy group as an actor of healthcare system” and learned “the importance of patients’ social involvement”. **Discussion:** Students’ learning ranged to the micro, mezzo, and macro levels, respectively. We will consider skills to make consensus, both inside and outside the examination room, with emphasis on the independence of actors as one of the key concepts to link and organize the student’s learning for improving our curriculum. **Conclusion:** We propose to retrofit the professional concepts linking and organizing medical students’ learnings to foster the introduction of PPI to medical education.

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## P19-01

### Comparison of incidence and risk factors of PSD in patients with acute ischemic stroke treated with tenecteplase and alteplase

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**Aims:** To compare and analyze the incidence and risk factors of post-stroke depression (PSD) in patients with acute ischemic stroke treated with Tenecteplase and Alteplase. **Methods:** One hundred and ninety-four patients with acute ischemic stroke diagnosed in Fuyang People's Hospital from January 2023 to January 2024 were included in the study, and were divided into group A (tenecteplase group) and group B (alteplase group) according to the therapeutic drugs. The incidence of PSD was compared between the two groups at 14 days and 3 months after onset. Univariate analysis and logistic regression were used to analyze the influencing factors of PSD in patients with acute ischemic stroke after intravenous thrombolysis. **Results:** There was a significant difference in PSD incidence between group A and group B at 14th day ( $\chi^2=3.988$ ,  $P < 0.05$ ), but there was no significant difference in PSD incidence between the two groups at the 3rd month ( $\chi^2=1.432$ ,  $P > 0.05$ ). Logistic regression analysis showed that NIHSS score and intravenous thrombolytic therapy time were the influencing factors of PSD at 14 days after onset. NIHSS score and social support are the influencing factors of PSD at the onset of 3 months. **Conclusion:** The incidence of PSD in patients with acute ischemic stroke is high, and compared with alteplase, the incidence of PSD in patients with intravenous thrombolysis with tenecteplase is low.

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## P19-02

### Psychoneuroendocrinology in mania: a case report of primary versus secondary first-episode mania in impending thyroid storm

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**Background:** Thyroid abnormalities, including hyperthyroidism and hypothyroidism, have been reported in mania, but these occurrences are rare and not well-documented. Most studies reporting thyrotoxicosis in bipolar mania have been attributed to either lithium use or withdrawal, with few describing lithium-naïve patients. Several case reports describe thyrotoxicosis-induced mania, but there is a lack of representation of more severe thyrotoxicosis in these observations. Both bipolar mania and severe hyperthyroidism involve similar hyperadrenergic symptoms, posing significant diagnostic challenges when a patient presents with both. **Case presentation:** We present a case of a 33-year-old Chinese lady admitted for first-episode mania with newly-diagnosed hyperthyroidism and impending thyroid storm as assessed by the Burch-Wartofsky Point Scale (BWPS). She had no formal past psychiatric diagnosis but had a medical history of

asthma. She was found to be febrile on admission with significant symptoms of thyrotoxicosis and mania. A preliminary diagnosis of bipolar disorder in mixed episode was made, as she had a previous history of a possible depressive episode with an unsuccessful suicide attempt. However, we strongly consider the possibility of secondary mania from severe thyrotoxicosis, given the acute onset of florid manic symptoms. The patient was started on carbimazole and olanzapine, with improvement in both hyperthyroid and manic symptoms within a week. She was subsequently discharged against medical advice at the end of two weeks. **Conclusion:** This case emphasizes the need to be mindful of the possibility of thyrotoxicosis-induced mania in lithium-naïve patients, on top of reported thyrotoxicosis associated with lithium use and withdrawal. It represents a case of more severe thyrotoxicosis, where present literature regarding mania is limited. The case highlights diagnostic challenges in differentiating primary and secondary mania, and the importance of screening thyroid health in first-episode mania. Clinicians should watch out for features supporting organic mania, and be mindful of the increased risk of bipolar disorder in hyperthyroid females with concomitant asthma, as suggested by literature. When both manic symptoms and hyperthyroidism are present, we suggest initiating treatment for hyperthyroidism along with an atypical antipsychotic. Lithium and haloperidol should be avoided, as they can worsen thyrotoxicosis.

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## P19-03

### Peripheral levels of oxidative stress and clinical correlates in overweight/obese patients with Parkinson's disease

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**Aims:** Oxidative stress (OS) is often associated with the incidence of Parkinson's disease (PD), obesity and cognitive impairments. However, the mechanisms and the relationships among them have not been fully studied. Therefore, we aimed to explore the relationship between oxidative stress, obesity and cognitive function in PD patients. **Methods:** This study recruits 186 idiopathic PD outpatients. We collected clinical symptoms (including depressive symptoms, cognitive function and motor symptoms) by the Hamilton Depression Rating Scale-17 (HAM-D-17), the Montreal Cognitive Assessment (MoCA) and the Movement Disorder Society Unified Parkinson's Disease Rating Scale Part-III (UPDRS-III). We also collected oxidative stress profiles, including plasma malondialdehyde (MDA), superoxide dismutase (SOD), glutathione (GSH); and lipid metabolism profiles including Serum levels of high-density lipoprotein cholesterol (HDL), low-density lipoprotein cholesterol (LDL), triglycerides (TG), cholesterol (CHOL). **Results:** The result indicated that the level of lipid peroxidative product MDA ( $F = 7.127$ ,  $P = 0.001$ ) were significantly higher in obesity group. However, correlation analysis showed that BMI was negatively correlated with CHOL ( $r = -0.237$ ,  $P = 0.001$ ) and HDL ( $r = -0.417$ ,  $P < 0.001$ ), respectively. GSH levels ( $r = 0.154$ ,  $P = 0.035$ ) and MDA levels ( $r = 0.250$ ,  $P = 0.001$ ) were positively associated with BMI. In the overweight group, GSH was positively correlated with the naming score ( $r = 0.274$ ,  $P = 0.024$ ); TG was

negatively associated with naming score ( $r=-0.305$ ,  $P=0.013$ ). In the obesity group, we found that CHOL was negatively correlated with orientation score ( $r=-0.474$ ,  $P=0.022$ ). **Conclusion:** These results suggested that oxidative stress process may play an important role in the overweight/obesity PD patients. Further longitudinal design investigations in PD patients are needed to explore the effect of antioxidants on the abnormal lipid metabolism, cognitive dysfunction in obese PD patients.

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## P20-01

### Effect of group biofeedback therapy on perinatal depression in mainland China

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**Aims:** To evaluate the actual clinical intervention effect, onset principle and precautions of group biofeedback therapy on perinatal depression in the real world. **Methods:** This was a controlled study based on real world. Pregnant and lying-in women who visited the psychology department of Changzhou Maternal and Child Healthcare Hospital from October 2019 to May 2022 and met the diagnostic criteria of DSM-5 for perinatal depression were enrolled. 101 patients who voluntarily accepted group biofeedback treatment were divided into the research group, and 49 patients who refused treatment in the control group. General condition assessment, Hospital Anxiety and Depression Scale (HAD) self-assessment, Edinburgh Postpartum Depression Scale (EPDS) self-assessment, Hamilton Anxiety and Depression Scale (HAMD)

assessment, and LF/HF testing were performed respectively. The research group received 10 group biofeedback treatments, which were required to be completed within 3 weeks. **Results:** At baseline, the HAMD value ( $t=3.234$ ,  $P=0.002$ ) and HAD & EPDS value ( $t=2.157$ ,  $P=0.033$ ) of the research group were significantly higher than those of the control group. The HAMD value of the research group ( $t=35.58$ ,  $P=0.000$ ) decreased significantly after treatment, while the LF/HF value ( $t=-9.837$ ,  $P=0.000$ ) increased significantly. In the research group, 77 patients responded to the treatment (HAMD score reduction rate was 50%-74%), 5 patients achieved improvement (HAMD score reduction rate  $\geq 75\%$ ), finally 46 (45.5%) patients achieved clinical remission with HAMD < 7 points. Compared with before the test ( $17.08 \pm 2.65$ ), the HAMD value of the control group after the test ( $15.86 \pm 3.06$ ) was statistically decreased ( $t=2.12$ ,  $P=0.037$ ), but with no clinical significance. Among the 5 factors of HAMD in the research group, cognitive impairment, anxiety, retardation and sleep disturbance were the ones with a larger decrease in score. The treatment rate in this study was 64.7%. **Conclusions:** Group biofeedback therapy, as a safe, non-side effect, and standardizable treatment method, could improve cognitive impairment, anxiety, depressive mood, and sleep symptoms of perinatal depression, and was more easily accepted by pregnant and lying-in women. Thus, group biofeedback therapy could be recommended as First-line treatment for mild to moderate perinatal depression patients.

## P20-02

### An intervention study of multi-objects tracking training in children with attention deficit hyperactivity disorder

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**Aims:** To investigate the intervention effects of multi-objective tracking training on behavioral symptoms, attentional and executive functioning in children with ADHD. **Methods:** The 122 children who met the diagnostic criteria for ADHD in the DSM-5 were randomly divided into a medication group and a multi-objective tracking training group for 8 weeks. MOT Training is a training software for children designed by our group based on the classical psychological paradigm of Multi-Objective Tracking (MOT). Before and after the treatment, the behavioral symptoms of the children in the two groups were assessed by the SNAP-IV scale and the PSQ scale; the attentional functions of the children in the two groups were assessed by the ANT-c and the MOT; and the working memory, cognitive flexibility and inhibitory control of the children in the two groups were assessed by the N-BACK, the WCST, and the SCWT, respectively. Repeated measures ANOVA was used for comparison. **Results:** There was no statistically significant difference between the children with ADHD in the medication and MOT training groups in terms of age, gender and IQ ( $P > 0.05$ ). After 8 weeks of intervention, in terms of symptomatic behavior, the results showed that both groups of children showed significant improvement in behavioral symptoms after medication and MOT training interventions compared to pre-intervention ( $p > 0.05$ ).

In terms of attentional function, there were a statistically significant difference between the two groups in terms of orienting attention, executive attention and correct rate of attention network and multi-target tracking performance after intervention compared to baseline ( $P < 0.05$ ), and the difference between the two groups was not statistically significant ( $P > 0.05$ ). In terms of executive functioning, the two groups showed a significant decrease in 1-back response time, the number of sustained errors on the WCST, and the response time of inconsistent color words on the SCWT compared to the pre-intervention period ( $P < 0.05$ ). **Conclusion:** Both groups limited the growth in ADHD symptomatic behavior, children with medication showed better symptomatic behavior. Both interventions improved the children's attentional and executive functions. Compared with medication, MOT training improved executive function more significantly, and MOT training is effective for children with ADHD.

### P20-03

#### Manualization of neurofeedback training in psychosomatic-psychotherapeutic treatment concepts

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**Background:** The use of neurofeedback (NF) is associated with a growing interest in research, but also in clinical care. With the help of NF, learning processes can be facilitated, patient motivation increased and behavior modified. Overall, current research has already shown in detail that patients with psychosomatic disorders benefit from feedback-based therapies. However, little research has been conducted into the specific implementation in inpatient settings and the associated requirements for the training procedure. In addition, precise information on the application of NF in inpatient settings is unknown. This research gap is also reflected in the actual use of feedback therapies in everyday clinical practice. **Methods:** The implementation of a biofeedback (BF) program in an inpatient psychosomatic-psychotherapeutic context was investigated as part of our own preliminary work. Changing BF practitioners and highly stressed patients place special demands on the implementation of a BF training in inpatient clinical settings, which differ from those in outpatient treatment concepts. The study shows that BF as an additional treatment in a psychosomatic-psychotherapeutic ward is a treatment option that is highly accepted by both patients and BF practitioners and requires special measures. Not only should the personnel resources be planned and available in advance of implementation, but the workflow for BF practitioners should also be as simple and the quality of BF treatment as high as possible. We therefore consider a manualized and standardized implementation of the BF treatment as necessary in order to ensure a high quality treatment and to simplify workflows. **Results and conclusion:** On this

basis, we developed a standard manual for the implementation of NF training in patients with psychosomatic disorders, which focuses on the training of attention and relaxation using SMR and alpha frequency training as well as theta and high beta inhibition as central and generally useful parameters. The feasibility of a manualized NF therapy in both inpatient and outpatient settings will now be investigated, and the manual we have generated will be validated and evaluated.

### P21-01

#### A single session of the integrated yoga program as a stress management education for pharmacy students: quantitative and qualitative analysis of the session experience

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**Aims:** The Ottawa Charter for Health Promotion supports personal and social development through health education. Since we are often requested single sessions of stress management education, I developed a one-session program based on integrated yoga therapy (Nosaka, 2005). The effectiveness of this program was examined using a randomized controlled trial for teaching staffs (Nosaka, Okamura et al., 2013). It is also important to disseminate stress management to healthcare professionals, who are often placed in serious stressful situations. The purpose of this study was to evaluate this program for pharmacy students not only quantitatively but also qualitatively. **Methods:** Pharmacy students with no yoga experience ( $n=46$ ) participated in the single-session program based on integrated yoga therapy. Before and after the intervention, the subjective units of distress (SUD), stress response scale (SRS-18), and respiratory rate (breaths/minute) were assessed. Free-text statements administered after the intervention were qualitatively analyzed by the KH coder. **Results and discussion:** After the one-session program intervention, 43 of 46 participants wanted to use the program in their daily lives. In those 43 participants, there were no significant differences between males ( $n=14$ ) and females ( $n=29$ ) on every scale. This program significantly reduced cognitive mental and physical stress on the SUD, depression and anxiety, discomfort and anger, and inertia scores on the SRS-18, and respiratory rate (every,  $p < 0.001$ ). These results were similar to previous studies with faculty (Nosaka and Okamura, 2015; et al.). Text mining indicated that the program was a place to learn about the characteristics of stress, the importance of utilizing signs as stress reactions for oneself and patients, various understandings such as that difficulties have the potential to enrich themselves. It was also an opportunity to experience various coping strategies (breathing methods, exercises, mindfulness) and to become more

self-aware. **Conclusion:** This program is effective in reducing stress reactions. This experience provided an opportunity to recognize stress reactions as signs of fatigue and to learn various coping strategies related to body, mind and spirit. Almost all participants were willing to use the experiential program on their own initiative.

## P21-02

### Awareness of psychosomatic medicine in Korea: results from an online survey of doctors and the general public

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**Aims:** Despite its medical and socioeconomic importance, awareness of psychosomatic medicine (PM) is still insufficient both in doctors and the general public. **Methods:** The Korean Psychosomatic Society conducted an online survey targeting 101 doctors and 100 general public. The demographic data, the level of awareness of PM, terms considered appropriate for PM before and after education, and educational topics of need were collected. Descriptive statistics, chi-square test and independent variable analysis were done as statistical methods. **Results:** Compared to the General public group, the Doctors group reported a significantly higher awareness for PM. Before education, the Doctors group chose "digestion", "functional", "irritable bowel syndrome", "pain", "psychogenic", and "somatic symptom disorder" as terms suitable for PM significantly more than the general public. The General public group chose "brain", "cause", "influence", "mind", "psychology", "panic disorder", "problem", "response", and "treatment" significantly more than the Doctors group. Terms that were significantly more frequently selected by the Doctors group after education than before are "association", "concept", "connection", and "influence". Terms that were significantly more frequently selected by the General public group after education than before are "association", "connection", "influence", and "somatic symptom disorder". The educational topics most frequently selected by doctors were "Stress and chronic pain", "Mental health issues in cancer patients", "Stress and gastrointestinal disorders", while for the general public, they were "how to self-manage stress", "Stress and chronic pain", and "Medical treatments for stress". **Conclusion:** The results of the study showed that although the level of awareness of PM among the general public is low, it can be increased through education, and the demand for education is high. Doctors generally had a higher level of awareness of PM than the general public, and their educational needs were more about practical assessment and management of psychosomatic disorders.

## P21-03

### Evaluation of a train-the-coach program in the context of a complex intervention for diabetes type 2 and coronary heart disease patients (P-SUP study)

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**Background:** Health coaching can address a variety of health-related issues to improve health parameters and quality of life and is used specifically to manage chronic diseases, such as type 2 diabetes mellitus (T2DM) or coronary heart disease (CHD)<sup>1</sup>. To ensure high-quality coaching, training in preparation for the coaching activity is important. However, few training programs have been evaluated so far. In this study, coaches should provide individual telehealth coaching to patients with T2DM and/or CHD within a peer support program to increase physical activity and healthy nutrition, to increase overall health status. The telehealth coaching intervention is a component of a personalized self-management support program (P-SUP) in Germany. The training for coaches for telehealth coaching was assessed with qualitative and quantitative methods. **Methods:** The training of the coaches (n=4) consisted of 37 hours with eleven units on health action process approach (HAPA), motivational interviewing (MI), nutrition and physical activity, the self-determination theory (SDT) and self-efficacy as well as practice coaching. The training was evaluated based on the Kirkpatrick model, quantitatively with an evaluation survey and a knowledge test on a 7-point Likert scale and qualitatively semi-structured interviews, with emphasis on the qualitative evaluation. **Results:** In the evaluation survey the overall training was rated as highly informative (M=6.75) instructive (M=6.5), practical (M=6.25) and satisfactory (M=6.25). The knowledge test was completed with 76% to 93% correct answers. The qualitative interviews revealed the usefulness of the MI and HAPA units. The practice coaching with actor patients as well as among each other were highlighted as important as well as in the evaluation survey (M ≥ 6.25). Collectively, in-person training was favored by the participants compared to online training. **Conclusion:** Overall, the evaluation showed that the training was well accepted and perceived as useful in preparation for the coaching activity.

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## P21-04

### Evaluating the application of AI technology in motivational interviewing and behavior change assessment

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**Background:** Growing interest in AI technology has encouraged its adoption in various fields, including health care. In recent years, it has begun to be applied in the field of medical education. This study examines the development of effective AI-based assessment methods in the areas of interviewing, particularly motivational interviewing (MI) and behavior change. **Methods:** Interview conversations were textualized and analyzed using the GPT-4 for summative and formative evaluations. Summative assessments aimed to provide scored ratings for specific items in the conversation, while formative assessments focused on providing feedback on the items and pointing out areas for improvement or problems. comparisons were made between AI-based assessments and human raters to verify the reliability and validity of AI in this context. **Results:** AI-based ratings were found to be generally reliable and valid. However, some items in the summative assessment were inconsistent with raters, indicating AI variability in reliability. Formative assessments were rated as highly valid, suggesting that AI may be a more effective tool to assist human evaluations. **Conclusion:** AI technology showed potential in the evaluation of motivational interviewing and behavior change conversations. These assessments provide detailed insights that assist human raters and improve the rating process. In the summative evaluation of interviews, the consistency with AI evaluation should also be carefully considered, since the variability of human evaluation is also an issue.

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## P21-05

### Training to improve the quality of the psychotherapeutic relationship

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**Background:** Numerous studies have shown that the quality of the relationship in psychotherapy has a major influence on its success. This raises the question of whether it is possible to improve this relationship quality through targeted training beyond standard psychotherapeutic techniques. **Methods:** The key components of a high-quality relationship with the doctor or psychotherapist that is beneficial to the patient must be identified. These can then be specifically integrated into a training course, especially for inexperienced psychiatrists and psychotherapists. Martin Buber's concept of personal encounter is groundbreaking in this respect. **Results:** It is possible to offer training in patient-oriented interviewing based on Martin Buber I-Thou encounter which helps young psychiatrists and psychotherapists to build strong therapeutic relationships with patients in addition to their professional expertise and methodological knowledge. These take full account of the professional requirement of abstinence and yet allows patients a personal relationship with a reliable partner in therapy that is beneficial for them. Such targeted training, which goes well beyond the application of client-centered therapy methods, can both support the healthy development of patients and promote the progress of trainee psychiatrists and psychotherapists. **Conclusion:** In addition to the usual methodological skills, it makes sense to include targeted training in relationship building and relationship quality in the training of child and adolescent psychiatrists and psychotherapists, thereby improving their therapeutic skills. The work of Martin Buber can serve as valuable inspiration and points to the value of a personal encounter in the professional medical-psychotherapeutic context. The doctor or therapist must be able to play a dual role as both a professional and an encountering person.



## P22-01

### Optimizing economic outcomes and resource allocation: evaluating a telenursing program for non-adherent type 2 diabetics with concurrent depression

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**Background:** There is a noticeable correlation between depression and type 2 diabetes mellitus. This emphasizes the necessity of introducing innovative therapeutic approaches tailored to patients with comorbidities. Nevertheless, integrating new healthcare initiatives demands careful evaluation, not only focusing solely on clinical efficacy but also considering the associated financial implications. Hence, our objective was to assess the economic ramifications of implementing a pioneering nurse-led telephone program designed for noncompliant individuals diagnosed with type 2 diabetes and comorbid depression (Tele-DD program). **Method:** This was a secondary analysis of cost-effectiveness and budgetary impact based on data from a randomized clinical trial carried out in the field of primary health care. The target population was type 2 diabetic patients with comorbid depression who were not adherent to pharmacological treatment. The usual care + Tele-DD program was evaluated against usual care. The effectiveness outcome was the reduction in the number of glycated hemoglobin units. The average cost-effectiveness ratio and incremental cost-effectiveness ratio were calculated. Likewise, the budgetary impact was evaluated in the first year of implementation of the program in the reference region of the study. **Results:** In the Tele-DD program, patients experienced a reduction in glycated hemoglobin levels, whereas those in the usual care group exhibited an increase in glycated hemoglobin levels at 6, 12, and 18 months. The average cost per unit reduction in glycated hemoglobin was calculated to be €48.67 in the Tele-DD group. The incremental cost-effectiveness ratios at 6, 12, and 18 months were €38.09, €36.35, and €47.02, respectively. Furthermore, the implementation of the Tele-DD program would lead to a reduction of €147,304.32 in expenditure for the funder within the initial year of execution. **Conclusions:** A nurse-led telephone program for nonadherent type 2 diabetic patients with comorbid depression is an efficient option for the management of healthcare resources. These results highlight the role of nursing in the management of chronic patients and the efficient utilization of healthcare resources.

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## P22-02

### First results of a prospective study on the predictive value of the German version of the Stanford Integrated Psychosocial Assessment for Transplantation (SIPAT) regarding to psychosocial and somatic outcome parameters in living kidney donation recipients

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**Introduction:** The postoperative long-term outcomes of recipients of different organ donations are influenced by the psychosocial risk profile prior to transplantation. Internationally, however, there is considerable heterogeneity in the evaluation. Standardised instruments such as TERS (Transplant Evaluation Rating Scale) and Stanford Integrated Psychosocial Assessment for Transplantation (SIPAT) can contribute to greater homogeneity. **Methods:** In this study, the SIPAT was translated into a German-language version by means of a forward-backward translation and subsequent cultural adaptation by a multi-professional team. The

aim was to prospectively investigate the predictive power of the SIPAT for somatic and psychosocial outcomes in 50 recipients of living kidney donation and to compare it with the TERS. This contribution presents interim results of the prospective study. **Results:** Between February 2020 and May 2022, 63 potential living kidney donation recipients at the University Hospital of Cologne underwent a psychosocial evaluation with a detailed psychosomatic interview including SIPAT and TERS before the planned transplantation. Due to the Covid-19 pandemic, there have been considerable delays with regard to the evaluation and transplants. To date, sufficient data is available for 40 % of patients. Based on these data, there was a significant correlation between the SIPAT total score and the occurrence of at least one negative long-term psychosocial outcome ( $p=0.041$ ) and the successful completion of the transplant ( $p=0.014$ ) at time point T2 (at least 6 months after psychosocial evaluation). Furthermore, there was a correlation between the SIPAT score and the estimated glomerular filtration rate (eGFR) 12 months after transplantation ( $p=0.036$ ). The scores for SIPAT and TERS showed a significant correlation with a Spearman correlation coefficient of 0.693. **Conclusion:** To our knowledge, this study is the first, alongside a Japanese study [1] and the original study by Maldonado and colleagues [2], to investigate the SIPAT instrument in relation to somatic and psychosocial long-term outcomes in a prospective approach in living kidney donation recipients. The correlation between SIPAT score and eGFR indicates the clinical significance of the SIPAT.

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## P22-03

### Development and validation of a new instrument to assess the feeling of rejection with potential use in psychosomatic research

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**Background:** High interpersonal rejection sensibility (IRS) can trigger negative emotions derived from many social events. The feeling of rejection can lead to maladaptive behaviors which have been recognized as detrimental to physical and mental health.

Although there are some instruments used to measure IRS, they are not focused on the subjective emotional experiences caused by the feeling of rejection. **Methods:** In this study, we developed and validated in the general Brazilian population the São Paulo State University (UNESP) Rejection Feeling Scale [URFS], an instrument to measure the feeling of rejection derived from interpersonal relationships that generate stress. The URFS items were elaborated based on a theoretical model and validated on 30 volunteers. **Results and conclusion:** Four factors were extracted in the exploratory analysis (rejection by the romantic partner, by the family in general, by specific family members and by people in the social circle), Cronbach's alpha calculation identified a satisfactory internal consistency (0.9). Confirmatory factor analysis indicated values of GDI=0.5062 and RMSEA=0.1919 (95%CI = 0.1711 - 0.2126). The UNESP Rejection Feeling Scale displayed a satisfactory validity and internal consistency for measuring the feeling of rejection in clinical routine and stress research.

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## P22-04

### 300 years Kant: What can he contribute to psychotherapy today?

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Immanuel Kant was born 300 years ago. He is the most important German philosopher who emphasized the importance of reason and founded the enlightenment. Kant asked four fundamental questions: What can I know? What ought I to do? What may I hope for? What is man? All these questions are of great importance for psychosomatics, psychiatry and psychotherapy. His epistemological question, what can I know, points to the limits of our cognitive possibilities. What should I do draws our attention to the many ethical issues involved in medical and psychotherapeutic work. What can I hope for points to the great realm beyond the possibilities of rational cognition. This also includes our diverse

psychotherapeutic working hypotheses, which should not be confused with proven knowledge. What is the human being is a fundamental question that constantly accompanies our psychotherapeutic work and objectives, but one that is far too rarely asked explicitly, let alone answered. Kant's philosophy thus affects large parts of medical and psychotherapeutic work. Understanding his answers to these questions helps us to better recognize the possibilities and limits of our actions and to better grasp the ethical framework and goals of our work. Recognizing our limits and obligations opens up the space for personal encounters, which is a very important component of therapeutic activity. For this reason, even 300 years after Kant's birth, it is still valuable to study his philosophy and work out its relevance for medical and therapeutic action. This is all the more important as the mixture of truth and fake news in our media-driven world poses an increased threat to reason and the rational behavior derived from it.

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## P22-05

### Intergenerational transmission of depressive symptoms and resilience

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**Aims:** This pilot study was conducted to assess the feasibility of establishing and conducting a population-based cohort study of families in German communities. Secondary objectives were to examine the familial influence over health protective or health-adverse outcomes. **Methods:** Phase 1: A one-stage stratified sampling scheme was used. A total of 2100 residents aged 70-85 years from 5 communities in Germany were invited to participate. Trained interviewers carried out in-person interviews using standardized questionnaires. Phase 2: Interviewees of phase 1 who reported children or grandchildren were asked to invite their descendants to participate. The family members from the 2nd and 3rd generations who consented were sent an individual link to the online survey only, without biological sample collection. **Results:** Interviews were carried out with 253 participants in phase 1, with an average age of 76.6 years. For phase 2, 85 surveys were completed. Initial evaluations show a good level of agreement in terms of lifestyle factors, general health perception and resilience. Further results will be presented in the conference poster. **Conclusion:** The enrollment rates indicated that the establishment of a cohort study of families in German districts is feasible, however, relatively large samples are required.

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## P22-06

### Who is interested in specializing in Psychosomatic Medicine and Psychotherapy? Results from a multicentre study among medical students

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**Background:** From 2019 to 2022, the VSM-BW network investigated the impact of professional pre-qualifications and interest profiles on academic success, stress experiences, and study satisfaction. This sub-analysis focuses on the interest in specialist training in Psychosomatic Medicine and Psychotherapy. **Methods:** A cross-sectional survey of prospective students, TMS (Test for Medical Studies) applicants and medical students in different stages of university education was conducted at five medical faculties in Germany, Baden-Württemberg. The general questionnaire included questions on interest in different specialty training programmes, professional pre-qualifications and validated instruments such as Maslach Burnout Inventory Student Version and Bergmann's [1] short questionnaire to assess different professional interests according to Holland's RIASEC model [2]. **Results:** A total of 4,254 individuals completed the questionnaire. The most popular specialties were 'Internal Medicine' ( $n = 1,577$ , 37%) and 'Surgery' ( $n = 1,559$ , 37%), followed by 'Paediatrics' ( $n = 1,313$ , 31%). The field of 'Psychosomatic Medicine and Psychotherapy' ranked 12th out of 16. The level of interest remained consistent across all surveyed groups. The total interest level was found to be between 6 and 9%. Medical students interested in specialising in psychosomatic medicine and psychotherapy exhibited a "SAI" profile (S = social, A = artistic-linguistic, and I = intellectual-research activities). Students not interested in this field demonstrated an interest profile focused on social, intellectual-research, and entrepreneurial activities (SIE profile). Those interested in psychosomatic medicine and psychotherapy were, on average, more likely to be female and to have achieved a higher-grade point average (GPA) at the undergraduate level. There was a positive association between higher scores for emotional exhaustion and lower scores

for self-rated academic efficacy and interest in psychosomatic medicine and psychotherapy. **Discussion:** The results are of significant value to the conceptualisation of medical education and development of specialist training, in addition to having implications for mentoring and support requirements, as well as for the early integration of professionals into their working environment. Recruitment strategies may also be informed by these findings.

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|                                   |                                | Yuan, Yonggui       | S06-01-D, S16-03-A,<br>S16-03-C, ST14-03                                    |                              |  |
|                                   |                                | Yun, Hyunju         | P04-05  |                              |  |
| <b>X</b>                          |                                | <b>Z</b>            |   |                              |  |
| Xu, Honghao                       | P16-01, P16-04                 | Zalpur, Anna        | ST04-09, ST08-02  | Ziser, Katrin                | ST04-08  |
| Xu, Kaiyu                         | ST07-02                        | Zapf, Antonia       | ST01-10, ST15-03  | Zou, Shaohong                | P06-06   |
| Xu, Wei                           | S16-03-A, S16-03-D             | Zara, Sandra        | L-07  |                              |  |
| Xu, Zhi                           | S06-01-A, S06-01-D             | Zaurin, Laura       | P06-13  |                              |  |
| Xue, Qing                         | P01-03                         | Zebhauser, Paul T.  | ST01-06   |                              |  |
| <b>Y</b>                          |                                | Zeeb, Ev-Marie      | P07-03, P07-04  |                              |  |
| Yaakobi, Erez                     | ST06-04                        | Zhang, Han          | ST06-03, P05-06, P05-07   |                              |  |
| Yagihashi, Mao                    | P08-04                         |                     |   |                              |  |
| Yamada, Ui                        | S16-05-B, ST03-09              |                     |   |                              |  |