

8TH EUROPEAN SOCIETY FOR RESEARCH ON INTERNET INTERVENTIONS CONFERENCE

VILNIUS, LITHUANIA | 2025



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ABSTRACT BOOK

OCTOBER 3 - 5
2025

ORAL PRESENTATIONS // // // // //



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EUROPEAN SOCIETY FOR RESEARCH ON INTERNET INTERVENTIONS 8TH CONFERENCE

Oct 3 – Oct 5, 2025 | Vilnius, Lithuania

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Oct 3 – Oct 5, 2025 | Vilnius, Lithuania

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SATURDAY OCT. 4TH | FIRST SESSION 11:00-12:00

Track 1: Symposium: Prevention and intervention of mental disorders in children and adolescents through e-health

Presentation 1: Therapist-guided and self-guided online behavioural activation versus treatment as usual for adolescents with mild to moderate depression: a single-blinded, randomised controlled trial

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Introduction: Adolescent depression is a major cause of disability and a global health priority, yet it often goes undetected and undertreated. This project addresses this gap by evaluating the efficacy and cost-effectiveness of remote psychological treatments, with and without therapist support, for major depression. Additionally, there is a lack of randomized trials on behavioral activation (BA) for adolescent depression, and none have specifically examined remote BA.

Methods: This was a single-blinded, parallel, randomised controlled trial with 219 adolescents (13-17 years) with mild to moderate major depression. Participants were assigned (1:1:1) to either 10 weeks of therapist-guided I-BA (n = 73), self-guided I-BA (n = 73), or treatment as usual (TAU, n = 73). The I-BA involved an eight-module course for parents, while TAU was delivered by regular mental health care. The primary outcome was clinician-rated depression (CDRS-R) scores at 3 months, and treatment response was assessed with the Clinical Global Impression scale. Health economic analyses will also be conducted.

Results and Conclusions: Data collection for the primary endpoint was completed in mid-October 2025. The results are currently being analysed, and we aim to finalise and submit the manuscript by the end of March. Findings will be presented at this conference/symposium.

Presentation 2: Co-Creation of an App-Based Compassion-Focused Intervention for Parents of Children with Mental Health Problems

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Introduction: Parents of children referred to Child and Adolescent Mental Health Services (CAMHS) often experience high levels of stress, self-criticism, and emotional exhaustion. Compassion-Focused Therapy (CFT) has shown promise in improving parental well-being, and an evidence-based face-to-face CFT intervention for parents, developed in Australia, serves as an inspiration for this study. To ensure relevance for parents of children awaiting CAMHS assessment, user involvement is central to the intervention's development. This study aims to co-create an accessible, app-based CFT intervention tailored to their needs.

Methods: The co-creation process consists of three key elements: 1) A group interview with 6–8 parents of children who are currently awaiting or have undergone psychiatric assessment, exploring their experiences, stressors, and coping strategies to inform intervention content. 2) Parental feedback on specific app content to enhance relevance. 3) A "think-aloud" process to ensure usability and engagement.

The app is being developed by Danish specialists in CFT and child- and adolescent psychiatry, integrating core CFT principles while being directly shaped by parental insights.

Results: Data collection is ongoing. At the conference, we will present the intervention's core components and how parental perspectives have guided content development, including key themes identified as essential for inclusion.

Conclusions: User involvement is crucial in designing effective digital interventions. By integrating parental experiences, inspiration from an Australian CFT intervention, and Danish clinical expertise, this app aims to provide accessible, targeted support to enhance

parental resilience. Future research will evaluate its feasibility and effectiveness in reducing parental stress and burnout.

Presentation 3: Treatment Response and Dropout in of a mHealth Intervention for youth Mental Illness Prevention

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Growing evidence supports the efficacy of e-health preventive interventions for mental illness, particularly self-guided programs due to their cost-effectiveness, scalability, and flexibility. However, high dropout rates remain a significant challenge. This study examines predictors of treatment response and dropout in two personalized, gamified self-guided e-health interventions.

Data were drawn from the ECoWeB (PREVENT) project, a large randomized controlled trial evaluating m-health interventions designed to prevent mental disorders in adolescents and young adults (aged 16–22) with emotional competence deficits. The study was conducted across Belgium, Germany, Spain, and the UK. In this secondary, data-driven analysis, a total of 548 participants ($M = 18.80$, $SD = 1.95$; 77.97% female) were analyzed regarding predictors of treatment benefits and dropout. Key factors examined included age, gender, baseline psychopathology symptoms, and levels of worry, along with intervention characteristics.

Findings indicate that older participants, those with higher baseline psychopathological symptoms, and individuals with greater worry levels experienced long-term benefits. Conversely, being male, exhibiting depressive symptoms, and reporting lower levels of worry were associated with increased dropout rates.

To improve adherence, interventions should be tailored to at-risk subgroups, such as younger individuals, males, and those with depressive symptoms. Strategies may include personalized content, targeted motivation techniques, deeper gamification elements, adaptive support mechanisms, and blended care models integrating human guidance. These adjustments could enhance engagement, optimize intervention outcomes, and ultimately reduce dropout rates.

Presentation 4: Early signs of depression and anxiety disorders in the young using digital biomarkers

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The prevalence of adolescent mental disorders has been rising for years, worsened by COVID-19, while psychotherapeutic care is massively overburdened. Early symptoms often go unnoticed, increasing the risk of chronic conditions underscoring the need for timely diagnostics, prevention, and intervention. Digital Phenotyping (DP) offers a digital approach to capturing psychopathological traits through time-series data collection, providing an objective, individualized view of psychological change processes. Machine Learning (ML) can analyze these data to support the early detection of mental disorders. As first of its kind, this project combines DP with a participatory approach to identify vulnerable adolescents early, enabling effective intervention.

In a six-month longitudinal study, N=200 adolescents (16–22 years), including n=50 with depression or anxiety, have been recruited. Data collection has spanned four 14-day intervals, assessing cognitive functions (via games in the Brain Explorer App), EMA-based sleep, emotion regulation, stress, well-being, as well as voice recordings and mobile sensing. Personalized feedback has been provided, and clinical interviews have been triggered if values exceeded clinical thresholds. Behavioral parameters have been analyzed using ML to classify symptom severity and predict emerging psychopathology, with EMA data potentially being the most predictive. The study is ongoing; initial results will be presented.

In collaboration with the target group, an ML-supported, low-burden early detection tool is being developed and evaluated using minimally intrusive real-life data for automated prediction. This digital approach ensures broad accessibility, enabling participation regardless of location or infrastructure. In the future, these models could support preventive interventions and personalized treatments.

Presentation 5: Gamification-Based Digital Interventions and Stigma in Child Mental Health

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Digital mental health interventions and gamification-based psychotherapy have gained increasing attention in recent years, offering new opportunities to bridge gaps in mental healthcare (Romanos et al., 2024). However, few interventions specifically target children, and evidence on their effectiveness remains mixed. Moreover, their broader psychosocial effects—particularly on stigma—are not yet well understood (Gkintoni et al., 2024; Wolff et al., 2023).

Stigma remains a major barrier to mental healthcare, manifesting as structural, public, courtesy, and self-stigma, all of which can hinder treatment engagement and exacerbate psychological distress (Rüsch et al., 2020; Schomerus et al., 2023). While digital interventions can offer anonymity and flexible access (Lincke et al., 2022; Marcu et al., 2022), they may also unintentionally reinforce stigma by visibly marking users as mentally ill or structuring parent-child dynamics in ways that highlight the illness. Additionally, most research on childhood stigma has focused on parental burden (Liao et al., 2019), whereas little is known about its direct impact on children, and cross-diagnostic stigma measures remain scarce (Kaushik et al., 2016, 2017; Laird et al., 2020).

Thus, this systematic literature review examines the role of gamification-based digital interventions in stigma dynamics, identifying both opportunities for stigma reduction and risks of technology-based stigma reinforcement. Moreover, we present a participatory approach within the project “GamKi,” aiming to develop stigma measures that include children’s and caregivers’ subjective experiences. Given the scarcity of validated stigma measures, our findings inform future feasibility studies and contribute to the development of inclusive, child-centered digital health solutions.

Track 2: Interventions for stress: usability and optimization

Presentation 1: Adapting WHO's Doing What Matters in Times of Stress for Employees in Dutch Small-to-Medium Enterprises: Feasibility Considerations Ahead of Cluster RCT

Cătălin Gherdan¹, Amber Brizar¹, Anke Witteveen¹, Sanne Feenstra¹, Mark van Vugt¹, Marit Sijbrandij¹

¹ Vrije Universiteit Amsterdam, Amsterdam, The Netherlands

Introduction: The World Health Organization's Doing What Matters in Times of Stress (DWM) is a preventive, low-intensity psychological intervention delivered online. It requires minimal time investment while providing easy-to-learn skills and exercises. This format makes DWM particularly suitable for employees of small-to-medium enterprises (SMEs), who often experience psychological distress due to high workloads and job demands, while SMEs lack the resources to adequately address mental health in the workplace. In this study, we adapted the DWM intervention to the requirements of employees in Dutch SMEs through a systematic approach based on human-centered design and co-creation.

Methods: Three adaptation activities were conducted: 1) Individual interviews with end-users (N=9) identifying barriers and facilitators of online-delivered interventions at the workplace; 2) Cognitive interviews with end-users (N=5) reviewing DWM's content and functionalities; 3) Pilot study with a pre-post design (N=15) assessing DWM's feasibility among Dutch working adults. Additionally, process evaluation interviews are being conducted (N=3).

Results: Based on end-user interviews and pilot study, several functionalities were added and refined to the DWM intervention: the option to opt in/out of reminders; progress-tracking features; a mood tracker to accompany the intervention; and gamification elements. Additionally, DWM's design was improved, and the content was adapted to better align with the needs of this population.

Conclusion: The findings from end-user interviews will be discussed in light of the outcomes of the pilot study. Insights gained from the adaptation activities will be interpreted in relation to the DWM's implementation and further evaluation in an upcoming cRCT in the Netherlands.

Presentation 2: Who Benefits Most? The Role of Baseline Mental Health and Adherence in the Outcomes of a Stress Recovery Internet Intervention for Healthcare Workers

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Introduction: Although Internet-delivered cognitive behavioral therapy (ICBT) has been shown to be effective for various mental health outcomes, the role of individual and program-related factors underlying its efficacy remains unclear. This study aimed to explore how mental health outcomes following a six-week therapist-supported ICBT for stress recovery in healthcare workers are associated with program use and baseline symptom severity.

Methods: The sample comprised 259 healthcare workers (96.5% female) aged 19-73, from a dataset of two RCT trials. Self-report questionnaires were used to assess stress recovery experience (REQ), psychological well-being (WHO-5), perceived stress (PSS-4), and symptoms of depression and anxiety (PHQ-4). Assessments were conducted pre-intervention, post-intervention, and at the three- or six-month follow-up.

Results: Changes in mental health across all measured indicators varied significantly at post-intervention and follow-up depending on baseline symptom severity ($p < .001$), with greater positive changes at follow-up observed among clients with poorer initial mental health (Cohens' d : 0.74-1.21). Across the total sample, program usage was associated with mental health changes over time in stress recovery ($p = .029$), psychological well-being ($p = .002$), and symptoms of depression ($p = .003$). In terms of these outcomes, higher program usage led to more pronounced long-term effects for individuals with more severe symptoms at baseline (Cohens' d : 1.04-1.34), while for those with better prior mental health, higher program usage had a preventive long-term effect (Cohens' d : 0.14-0.44).

Conclusions: As better adherence leads to greater outcomes over time, irrespective of the initial severity of symptoms, it is important to explore strategies to enhance client engagement in ICBT to ensure optimal outcomes.

Presentation 3: Developing User Personas Based on Engagement Patterns in a Digital Behavior Change Intervention for Stress and Burnout

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Introduction: Digital health interventions, such as internet-based cognitive behavioural therapy (CBT), offer scalable solutions for reducing stress and burnout. However, engagement and adherence vary between users, affecting intervention effectiveness. This study examines engagement patterns in HelloBetter Stress and Burnout, a prescription-based digital intervention (DiGA) in Germany, to explore their relationship with treatment outcomes. Based on these findings, user personas were developed to characterise different types of engagement.

Methods: A mixed methods approach was used. Quantitative analyses examined real-world user activity data (logins, module completions and self-reported measures of engagement), using descriptive statistics to identify patterns of engagement. Qualitative semi-structured interviews explored users' motivations, barriers and contextual factors influencing engagement. Findings from both methods informed the development of user personas, representing different engagement profiles.

Results: Preliminary findings indicate that users exhibited heterogeneous engagement patterns. Barriers to engagement included a mismatch between course content and participants' needs, particularly in terms of topic relevance and personal connection to the material. Conversely, strong personal commitment and a well-structured course experience facilitated engagement. Findings on the relationship between engagement and treatment outcomes will be presented at the conference.

Conclusions: Identifying different patterns of engagement helps to better understand user needs and inform strategies to improve adherence to digital CBT interventions. The development of user personas provides a structured way to capture variability in engagement, supporting the design of more adaptive and user-centred interventions in healthcare settings.

Presentation 4: Internet-Based Cognitive-Behavioral and Mindfulness-Based Stress Management for Adult ADHD: a Randomized Controlled Trial

Martin Oscarsson¹, Frida Monasterio¹, Karin Wall¹, Alexander Rozental^{2,3}, Ylva Ginsberg³, Per Carlbring¹, Gerhard Andersson^{4,3}, Fredrik Jönsson¹

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⁴ Linköping University, Linköping, Sweden

Introduction: Adults with attention deficit hyperactivity disorder (ADHD) experience elevated stress, increased fatigue, and heightened vulnerability to mental health problems. They also face occupational challenges, including difficulties in the workplace. Despite growing awareness of adult ADHD, many individuals remain undiagnosed or lack access to evidence-based psychological treatment. Internet-based interventions offer a scalable solution to improve accessibility, but their effectiveness in addressing work-related mental health issues in adults with ADHD requires further investigation.

Methods: This randomized controlled trial enrolled 240 working adults with ADHD in one of three groups: an internet-based cognitive-behavioral intervention, an internet-based mindfulness intervention, or a waitlist control. The intervention groups participated in structured twelve-week interventions with clinical support on demand. The primary outcome measure was quality of life, with secondary outcomes assessing perceived stress, risk of exhaustion, depression, anxiety, and ADHD symptoms. Both interventions were compared against each other and the waitlist control. Participants in the intervention groups also provided qualitative feedback on their experiences.

Results: Recruitment is completed, and preliminary results will be presented at the 8th European Society for Research on Internet Interventions (ESRII) 2025 conference.

Conclusions: Previous research has shown potential benefits of the CBT intervention for adults with ADHD. This study expands on prior findings by comparing the intervention to both an active mindfulness comparator and a waitlist control. If effective, the CBT intervention could be implemented in clinical practice or offered as a standalone product, potentially contributing to improved mental health and occupational functioning for adults with ADHD.

Track 3: The role of AI in psychological interventions

Presentation 1: From Code to Care: AI's Place in Psychological Counseling

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Introduction: The use of artificial intelligence (AI) has become more prevalent in recent years, and the field of psychology and counseling is no exception. ChatGPT, one of the most popular and well-known tools of generative AI, has shown potential for use in psychological interventions. Previous research shows that it can act in accordance with counseling guidelines, which could make it suitable for use in the field of online counseling.

Methods: We tested ChatGPT-4's ability to provide counseling advice to young people aged 14–17 who asked questions about their mental health in the largest Slovenian online counseling service for adolescents – #To sem jaz (#This is me). Using thematic analysis, we compared ChatGPT's answers to those of human online counselors.

Results: We concluded that the content of the responses provided by the AI tool was mostly similar to that of human counselors, particularly in expressing empathy and providing psychoeducation. However, it asked fewer additional questions and referred users to mental health experts and institutions more frequently, which could indicate a lack of ability to build a rapport.

Conclusions: The findings highlight the potential of AI to complement traditional (online) counseling services. However, the study underscores the irreplaceable role of human counselors in building rapport, fostering trust, and addressing the nuanced needs of individuals. While AI can serve as a valuable support tool, its limitations in forming deeper connections emphasize the necessity of maintaining human oversight and expertise in psychological counseling.

Presentation 2: Harnessing Generative AI for Mental Health: A Systematic Review of Interventions

Noah Marshall¹, Julia Groot¹, Maria Loades¹, Christopher Jacobs¹, Lucy Biddle², Nello Cristianini¹, Jeffrey Lambert¹

¹ University of Bath, Bath, United Kingdom

² University of Bristol, Bristol, United Kingdom

The proliferation of generative artificial intelligence (AI) marks a paradigm shift in automated mental health treatment. Unlike traditional rule-based mental health chatbots – which are limited to inflexible, predefined therapeutic scripts – generative AI enables original, adaptive, and highly personalized interactions that closely mirror clinician-delivered care. To elucidate the impact of this emerging field, this novel systematic review will identify the (a) acceptability and (b) effectiveness of generative AI-supported mental health interventions.

This review will follow PRISMA guidelines (Page et al., 2020). A comprehensive search across 13 databases, including PubMed, EMBASE, PsycINFO, and Scopus, will cover studies from inception to 1 June 2025. Eligible studies must report data involving the acceptability (e.g., engagement, feedback) or effectiveness of a mental health intervention utilising generative AI. Empirical quantitative, qualitative, and mixed-methods studies will be included, excluding reviews and case reports. Two reviewers will screen, extract data, and assess bias using MMAT (Hong et al., 2011), with a third resolving discrepancies.

Preliminary searches identify over 19 eligible studies, with 15 published since January 2024. 16 interventions involve live-text therapeutic agents targeting depression, anxiety, or well-being. Most studies are small-scale feasibility or pilot trials (N<50), conducted in the US, and report acceptability and effectiveness outcomes comparable to clinician-delivered treatments. Formal results are anticipated by 20 June 2025.

While variations in study power and AI capabilities may limit data synthesis, this review will provide insights into generative AI's role in the future of scalable mental health care, with potential implications for research, clinical implementation, and policy decisions.

Presentation 3: Clinical efficacy of a Machine Learning based Clinical Decision Support System for therapists treating patients with Internet Cognitive Behavioral Therapy – A triple blind randomized clinical trial

Viktor Kaldo^{1, 2}, Pontus Bjurner¹, Fehmi Ben Abdesslem³, Erik Forsell¹, Magnus Boman¹

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Introduction: Internet-based Cognitive Behavioral Therapy (ICBT) combined with a Clinical Decision Support System (CDSS) based on Machine Learning (ML) predicting treatment outcome can signal if treatment adaptations are needed. A ML-model, learning from about 6000 patients with depression and anxiety, has been shown to make fully automatic predictions of treatment outcome. The aim of the current trial is to evaluate its clinical efficacy.

Methods: The CDSS summarize its prediction in four colors, each with recommendations for the therapist:

- Green: likely to succeed, consider spending less time on patient
- Yellow: too uncertain to give guidance
- Light Red: likely to fail, consider adjustments
- Dark Red: very likely to fail, adjustments must be implemented

A therapist manual gives detailed suggestions on how to act in relation to each color.

A triple-blind randomized trial with 70 novice ICBT-therapists and patients (n=401) evaluate if patients to therapists randomized to use the CDSS decrease symptoms and increase adherence more than when the CDSS is not used.

Primary outcome is symptom reduction on each diagnose-specific measure. Primary analysis is made for the sub-group of patients indicated as Red at least once during treatment (also for control patient, even though color is not shown for their therapists) since these are expected to benefit most.

Results: All patients have been recruited and preliminary results indicate a small but significant benefit for CDSS. Full results will be presented.

Conclusions: The potential of precision medicine is described as substantial. However, few trials have gone beyond model-building and actually tested this assumption.

Presentation 4: The clinical potential of using XAI methods in a machine learning based decision support tool for internet-delivered cognitive behavioural therapy (ICBT) – a randomized experiment

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² Institute of Information Systems, Leuphana University, Lüneburg, Germany

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Introduction: Machine learning (ML) based decision support tools (DST) for internet-delivered cognitive behavioral therapy (ICBT) are a promising strategy for predicting treatment outcomes to guide personalization of treatment.

However, several studies have shown that even though ML-based predictions are more accurate than the average clinician, clinicians are still hesitant to use them because of their black box nature. Explainable Artificial Intelligence (XAI) methods are aimed at addressing this issue.

Implementing XAI methods in a DST for ICBT has so far not been tested in a clinical setting. Our aim was thus to explore how the addition of XAI methods would affect therapists' experience of a DST.

Methods: In a balanced randomized experimental study, on an online platform, 61 therapists with previous experience of ICBT were presented with several cases receiving ICBT for depression. Each case displayed a background description, the patients' weekly symptom measures and a DST with a prediction of the probability of treatment success, with and without XAI.

Following each case, therapists answered questionnaires about how they perceived the shown DST version on different dimensions of user experience. They also made overall ratings on established measures for acceptability, usability, and trust.

Results: Data analysis is ongoing, and results will be presented.

Conclusions: The contribution of this project is the investigation of the potential benefits of using XAI to make ML-based predictions more trustworthy.

Track 4: Interventions for Children and Adolescents

Presentation 1: Safe-Photo-Share App: Importance of Individual and Family Factors for the Effectiveness of a Personalized Feedback Intervention to Reduce Problematic Online Photo Self-Disclosure Among Adolescents

Kristina Žardeckaitė-Matulaitienė¹, Viktorija Čepukienė¹, Ugnė Paluckaitė¹

¹ Vytautas Magnus University, Kaunas, Lithuania

Introduction. There is a lack of evidence-based interventions targeting adolescents' problematic photo self-disclosure on social networking sites (SNS). Given the success of the Prototype Willingness Model (PWM) in reducing adolescent risk behaviors, a mobile app, Safe-Photo-Share (SPS), was developed. This study examines individual, and family factors related to the short-term effectiveness of the SPS.

Methods. A randomized experimental study design was used, with pre- and post-intervention evaluations. Study participants had to be aged 15-16 years and had to be sharing at least one problematic photo online in the past week. All elements of PWM as well as number and frequency of sharing problematic photos were measured at baseline and one month later. Two individual (narcissism, self-control) and two family (perceived interparental conflicts, perceived parental mediation) factors were measured. 154 adolescents in the experimental group started using SPS. At post-intervention, dropout rates were 64.3% in the experimental group and 70.6% in the control group, leaving 54 participants in the experimental and 88 in the control group for analysis.

Results. While positive changes in some measured variables occurred in the experimental group, only attitudes towards photo self-disclosure showed a significantly greater positive change compared to the control group. Self-control was the only significant predictor of attitude change in the experimental group.

Conclusion. SPS significantly improves adolescents' attitudes towards problematic photo self-disclosure, with higher self-control contributing to this change.

This research has received funding from the Research Council of Lithuania (LMTLT), agreement No S-MIP-23-16.

Presentation 2: Characterization of Frequent Chatters and Linguistic Variables in a Messenger-based Psychological Chat Counseling Service for Children and Young Adults

Christine Rummel-Kluge¹, Elisabeth Kohls¹, Aneliana da Silva Prado¹, Juliane Hug¹, Richard Wundrack², Melanie Eckert²

¹ Leipzig University, Germany

² Krisenchat gGmbH

Introduction: Online helplines, particularly messenger-based counseling services, are highly accepted and effective, especially among young people. However, limited evidence exists on user characteristics and the written communication within these services. Two studies aimed to characterize frequent users of krisenchat (a 24/7 messenger-based psychological crisis counseling service) and explore language usage patterns related to psychiatric symptoms.

Methods: The cross-sectional studies analyzed data between May 2020 and July 2021. Frequent chatters, defined as those who received an above-average number of messages ($M + 2 * SD$) from counselors within a week and had at least seven days of contact, were selected from $N = 6,657$ users. Additionally, 661,131 messages from $N = 6,962$ users were analyzed using Linguistic Inquiry and Word Count.

Results: 1.5% of users were identified as frequent chatters, typically around 17 years old, female, and using the service in the late afternoon (around 5:00 pm). These users sent significantly more and longer messages during counseling sessions, reporting more severe concerns. Of these, 81.8% presented psychiatric symptoms, including suicidality (43.4%) and non-suicidal self-injury (41.4%). Frequent chatters were also more likely to use krisenchat alongside other professional services. Psychiatric symptoms were positively associated to increased use of first-person singular pronouns (OR 1.05), negations (OR 1.11), and negative emotion words (OR 1.15). Suicidality, self-harm, and depression showed the strongest correlations with linguistic variables.

Conclusions: Frequent users are more likely to report severe mental health conditions. Integrating psycholinguistic insights into counseling practice can improve counselors' understand of users' psychological processes, enabling tailored interventions.

Presentation 3: Messenger-Based Psychological Chat Counseling Service as a Support Pathway for Children and Youth Flagged as at Risk of Child Welfare Endangerment

Aneliana da Silva Prado^{1, 2}, Elisabeth Kohls¹, Juliane Hug¹, Richard Wundrack³, Melanie Eckert³, Christine Rummel-Kluge¹

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² Federal Institute of Education, Science and Technology of Paraná, Brazil

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Introduction: Child and young people who experience maltreatment are rarely able to seek out help, and online chat-based counselling services have emerged as a viable low-threshold alternative. This study aimed to characterize at-risk of child welfare endangerment chatters of a 24/7 free of charge messenger-based psychological counseling service (“krisenchat”), comparing them to other users.

Methods: Anonymized data from N = 10,688 users of krisenchat was extracted from January to December 2023. Demographic information, utilization behavior, suicidal behavior, user satisfaction, recommendation rate, and emotional distress were assessed via metadata and feedback survey.

Results: Overall, 10.7% of chat users were flagged as at-risk of child welfare endangerment by the counseling team. They were significantly more likely to be female (84.3%) and younger (M = 14.42), to report sexual violence (15.6%) and suicidal behavior (10.9%), to be referred to local support services (36.6%) (e.g., health care system), and present higher emotional distress before the chat compared to the other chatters. From participants who answered the feedback survey (n = 3,243, 30.3%), 91.4% of the at-risk of child welfare endangerment chatters indicated the service helped them “well/very well”, presenting significant lower emotional distress after the consultation (M = 4.65) than before it (M = 6.80). There were no significant differences in using other professional help services, in recommendation rate, or in satisfaction with the service between the two groups.

Conclusions: At-risk of child welfare endangerment chatters use messenger-based psychological counselling services despite the professional help services they already use, pointing it as helpful.

Presentation 4: Emerging issues for the content development of a serious game for adolescent mental health: Qualitative results from focus groups with users and their stakeholders

Gwendolyn Mayer¹, Nelli Tschobur¹, Franziska Großwendt¹, Johanna Heger¹, Jobst-Hendrik Schultz¹

¹ Heidelberg University Hospital, Heidelberg, Germany

Background: Serious games have a high potential in mental health prevention. The European project SMILE is developing a mobile game that is intended to educate and support adolescents aged 10-24. As part of a co-creation concept, the target group and their stakeholders were involved in the development of the game in order to understand needs, conditions, and meaningful game elements. However, their perspectives might differ substantially.

Methods: Six focus groups were conducted with 22 adolescents and 16 stakeholders (parents, teachers, medical professionals) and transcripts were evaluated using qualitative content analysis.

Results: Talking about worries, adolescents focused on their school environment, feelings of performance pressure, and social conflicts which was a notion that was shared by the stakeholders. Differences in the perspectives were found in media consumption, self-discovery, and seeking recognition. Leisure time and friendships were the most prominent resources seen by adolescents. Parents emphasized the relevance of the family. Younger kids talked about the importance of goals. Barriers to help-seeking were seen by clinicians in low education, while adolescents expressed to have made bad experiences, not to feel informed about offerings and to be confronted with trivialization of their problems. While parents focused on the importance of a game that should be a “safe space” for adolescents, they appreciated goal-setting, gamification and feelings of achievements.

Conclusions: Adolescents and their stakeholders differ in the perception of adolescents’ needs and meaningful elements in a serious mental health game. The different perceptions should be regarded to increase the acceptance of the game.

SATURDAY OCT. 4TH | SECOND SESSION 13:30-14:30

Track 5: Symposium: Through a New Lens: Enhancing Mental Health with Augmented Reality and Virtual Immersion

Presentation 1: Co-creation of digital mental health interventions with experts-by-experience: ZeroOCD, an augmented reality exposure therapy for fear of contamination

Marketa Ciharova ¹, Jón Ingi Hlynsson ², Andrej Skoko ³, Jan Bergström ², Thomas Berger ³, Per Carlbring ², Ilja Cornelisz ¹, Chris van Klaveren ¹, Tobias Krieger ³, Tom Van Daele ⁴, Tara Donker ⁵

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Introduction: Fear of contamination is one of the most reported symptoms among individuals with obsessive-compulsive disorder (OCD). Digital interventions may address treatment gap caused by geographical constraints, long waiting lists, or reluctance to seek help. Yet, involvement of people with lived experience is necessary for effective implementation and sensible use of resources in health care innovations. We developed ZeroOCD, an augmented reality exposure therapy smartphone application for fear of contamination, while involving experts-by-experience in the whole development, from the first draft to user testing of the final version of the application.

Methods: Following the co-creation framework, we conducted focus groups with eight experts-by-experience and four OCD therapists to address their needs and preferences. Upon the development of the app, we conducted user testing with the same sample to address user-friendliness. We consequently conducted a feasibility study involving 20 participants who followed the intervention with therapeutic support on request.

Results: Based on the insights of the participants, we iteratively co-created nine modules of the app, and the content of the augmented reality exposure. User-centered methodology enabled us to identify topics the participants were particularly interested in, such as specific exposure focus, accessible therapist involvement, or flexible

gamification-based reward system, address design challenges, and improve user satisfaction.

Conclusions: Employing co-creation framework involving experts-by-experience may identify unexpected challenges in the intervention design and shed light on content necessary to improve user satisfaction. Thus, it is highly beneficial in the development of mental health innovation and may lead to adherence improvement.

Presentation 2: Virtual and Augmented Reality Cognitive Behaviour Therapy for Specific Phobia and OCD

Tara Donker¹, Marketa Ciharova², Jón Ingi Hlynsson³, Andrej Skoko⁴, Jan Bergstrom³, Thomas Berger⁴, Per Carlbring³, Ilja Cornelisz², Jamie Fehribach⁵, Jean-Louis van Gelder⁶, Chris van Klaveren², Tobias Krieger⁴, Annemieke van Straten², Marieke Toffolo²

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Introduction: Globally, access to evidence-based psychological treatments is limited, but virtual and augmented reality (XR) offer scalable solutions. This presentation overviews the evidence base for XR cognitive behavioral therapy (CBT) in treating Specific Phobia and Obsessive-Compulsive Disorder (OCD). Specifically, I will present three VR/AR studies on specific phobia (ZeroPhobia) and introduce an ongoing AR study for OCD targeting contamination fears (ZeroOCD).

Methods: The broader evidence base supporting XR interventions will be reviewed, followed by a discussion of three single-blind randomized clinical trials evaluating the ZeroPhobia program. These trials compared a self-guided XR CBT app with a wait-list control among Dutch participants (aged 18–65) with acrophobia, aviophobia, or arachnophobia. The intervention comprised six animated modules and gamified XR environments delivered over a three- to six-week period.

Results: Current evidence supports VR/AR treatments, including self-guided XR-CBT, as effective for specific phobias—producing significant, lasting symptom reductions and serving as an alternative to traditional therapy. For OCD, AR treatments for contamination fears are in early stages but show promise. ZeroPhobia trials demonstrated significant

symptom reductions with large effect sizes ($d = 0.98$ – 1.29), maintained at both 3- and 12-month follow-ups.

Conclusions: Preliminary findings suggest that low-cost, self-guided XR CBT can effectively reduce phobic symptoms and improve accessibility to evidence-based care. Although AR-based interventions for OCD are still emerging, early studies indicate they may offer an effective, accessible alternative to intensive traditional therapies, warranting further investigation.

Presentation 3: What Happens When Augmented Reality Meets CBT for OCD? A Live Demonstration of ZeroOCD

Jón Ingi Hlynsson¹, **Marketa Ciharova**², **Andrej Skoko**³, **Jan Bergström**¹, **Thomas Berger**³, **Per Carlbring**¹, **Ilja Cornelisz**², **Chris van Klaveren**², **Tobias Krieger**³, **Tom Van Daele**⁴, **Tara Donker**⁵

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Introduction: Obsessive-compulsive disorder (OCD) affects 1.1%–1.8% of the global population and is characterized by persistent obsessions and/or compulsions that interfere with daily functioning. While effective, evidence-based treatments exist, many patients do not receive them due to barriers such as limited availability of specialized therapists, stigma, long waiting lists, and high costs. Although recent investigations with augmented reality (AR) stimuli in OCD treatment show promise, no effectiveness studies have yet been conducted to our knowledge. This presentation will demonstrate what such treatment could look like, emphasizing on showcasing the user experience and functionality of ZeroOCD, a novel AR-CBT app-based intervention.

Methods: ZeroOCD combines augmented reality (AR) exposure therapy and CBT principles to ameliorate OCD symptoms, with a focus on contamination-related symptoms (e.g., fear of dirt, germs, bodily fluids). For instance, the app can transform the user's smartphone into a magnifying glass that reveals virtual germs and viruses. It offers a module-based treatment program featuring evidence-based tools, including psychoeducation, immersive AR stimuli (both realistic and ambiguous to address disgust and uncertainty intolerance), in vitro and in vivo exposure and response prevention, and relapse prevention.

Results: The presentation will showcase the ZeroOCD app's functionality and user environment, demonstrating its modules, and how modules were designed to reduce OCD symptoms in general, and specifically contamination-related OCD symptoms.

Conclusions: While the presentation does not include results per se, it does provide a unique opportunity for attendees to better understand the future of AR-CBT interventions generally, and the future of accessible OCD interventions more specifically.

Presentation 4: Designing and Evaluating ZeroOCD: A Study Protocol and Interactive Discussion on the Implementation of XR Interventions

Andrej Skoko¹, **Markéta Čihařová**², **Jón Ingi Hlynsson**³, **Jan Bergström**³, **Thomas Berger**¹, **Per Carlbring**³, **Ilja Cornelisz**², **Chris van Klaveren**², **Tobias Krieger**¹, **Tom Van Daele**⁴, **Tara Donker**²

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Introduction: Despite the growing availability of digital mental health interventions, real-world implementation remains challenging. Engagement rates for evidence-based XR (virtual and augmented reality) apps are low. ZeroOCD is an augmented reality cognitive behavioral therapy (AR-CBT) intervention designed to provide scalable, low-cost treatment for contamination-related OCD symptoms. This presentation introduces the ZeroOCD randomized controlled trial (RCT) and includes an interactive discussion on facilitators and barriers to XR-based mental health implementation.

Methods: This multinational two-arm RCT evaluates ZeroOCD's efficacy and cost-effectiveness. 180 participants will be randomized to ZeroOCD (minimal therapist support) or CBT via videoconferencing (active control). Assessments occur at baseline, post-treatment (10 weeks), and follow-up (6 months), with weekly symptom monitoring. The primary outcome is OCD symptom severity; secondary outcomes include fear of contamination, depressive symptoms, anxiety, distress, quality of life, and treatment satisfaction.

Results: Preliminary findings on the implementation landscape of digital interventions will be presented, including data on evidence-based app availability versus real-world uptake. Discussion topics include engagement strategies, clinician involvement, and structural barriers. Insights from the interactive session will inform the ongoing process evaluation of ZeroOCD.

Conclusions: This talk is conceptualized as the last part of a symposium on XR interventions and ZeroOCD. It aims to emphasize that understanding XR intervention implementation barriers is crucial for bridging the gap between research and practice. This session will spark discussions on the under-researched disconnect between RCT outcomes and real-world implementation.

Track 6: Engagement and Adherence

Presentation 1: Exploring reasons and predictors for dropout in an internet-delivered cognitive behavioral therapy for insomnia

Laura Simon¹, Lisa Steinmetz², Eileen Bendig¹, Ann-Marie Kuchler¹, Dieter Riemann², David Daniel Ebert^{3,4}, Kai Spiegelhalder², Harald Baumeister¹

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Introduction: Internet-delivered cognitive behavioral therapy for insomnia (iCBT-I) is an effective treatment. However, dropout is a common challenge in digital therapeutics. This study examines dropout in iCBT-I by analyzing reported reasons for dropout and investigating whether baseline variables and intervention usage data can predict non-completion.

Methods: This is an exploratory secondary analysis of a clinical trial investigating a stepped care model for insomnia featuring an eight-module iCBT-I. Reasons for dropout of the iCBT-I were assessed in follow-up surveys and a dropout survey sent to all patients who did not complete at least seven modules of the iCBT-I within 12 weeks. Additionally, bivariate models were specified to explore whether baseline variables and intervention usage data can predict non-completion.

Results: Among the 233 patients in this sub-study, 103 (44.2%) were categorized as dropouts. The most frequently reported reasons for dropout were distractions from daily life, the perception of the content not being useful, and difficulties resuming after a break. None of the examined baseline variables significantly predicted dropout, whereas the time needed to complete the first module (OR=1.16; 95%CI=1.08–1.27) and the number of sleep diary entries in the first week (OR=0.73; 95%CI=0.65–0.80) significantly predicted dropout.

Discussion: This study highlights dropout as a significant challenge in iCBT-I, affecting over 40% of patients. Self-reported reasons indicate the importance of compatibility with distractions from daily life and perceived effectiveness. The prediction models suggest that dropout risk profiles can be developed based on first-week treatment data. Future research should focus on validating such models.

Presentation 2: What do therapists do when instructed by an algorithm to “do more”? Clinical adaptations used in a successful Adaptive Treatment Strategy in ICBT for Insomnia

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Background: In Adaptive Treatment Strategies, each patient's outcome is predicted early in treatment, and treatment is adapted for those at risk of failure based on a telephone interview and planning with the patient. It is unclear what treatment adaptations are most used or requested by patients and how these adaptations change or increase the workload for clinicians. This study aimed to explore the adaptations used for at-risk patients in a previous RCT on an Adaptive Treatment Strategy.

Method: Data from the subset of patients who were classified as risk of failure and then randomized to adapted treatment in the RCT were used. Clinicians filled out a questionnaire at the end of treatment detailing how treatment was adapted and if and in what way the patient was open to and receptive to adaptations. Off-protocol events and actions by clinicians (such as telephone calls) were also documented continuously during the treatments.

Results: Data on treatment adaptations were available for 100% of the 51 patients assigned to adapted treatment. In 75% of cases therapists rated that contact for the interview was established and the patient seemed happy about the opportunity for adapting the treatment. Notable frequent adaptations included narrowing focus to only main component (sleep restriction; 71%), scheduled weekly phone calls (55%) and proactive text messages prompting the patient to keep working (27%).

Discussion and Conclusions: Adaptive treatment was usually easy to initiate and welcomed by patients. The focus seems to have been lessening the administrative burden of treatment for the patients by reducing the sheer number of exercises and texts to read, reminding the patient to keep working and reaching out via phone to let the patient tell the

clinician how things were going rather than log in and explain it in writing. This is in line with previous findings what the number one patient complaint in regular care-ICBT is that there is too much to read and write. Future directions for ICBT and adaptive treatments will be discussed

Presentation 3: Able and Willing – The Role of Distress and Capacity to Invest in Predicting Preferences for Digital Mental Health Self-Help Tools or Face-to-Face Interventions

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Introduction: Research typically shows a higher preference for professionally-led face-to-face mental health interventions over digital ones. It remains unclear under which circumstances digital self-help tools are preferred. This study examined how individuals' present capacity to invest themselves in an intervention relates to their preference for self-help tools versus professional services.

Methods: A digital mental health screening tool providing comprehensive automated feedback was developed. The sample comprised 684 participants aged 18 or older who opted to complete the screening (via a Facebook advertisement) to receive mental health feedback. General psychological distress was measured using K6. Capacity to Invest was measured by items developed for this study. Participants also indicated their degree of preference for a professional versus self-help tools.

Results: A hierarchical linear regression found that K6, Capacity to Invest, and Currently Being in Psychotherapy significantly predicted preference for a professional versus self-help tools. K6 (Beta=0.25) and Capacity to Invest (Beta=0.23) were the strongest predictors, with similar effect size. The model explained 20% of the variance in preference, with Capacity to Invest uniquely contributing 5%. Distressed participants with high Capacity to Invest tended to prefer a professional (60.5%), whereas distressed participants with low Capacity to Invest mostly favored self-help tools (66.1%).

Conclusions: This study emphasizes that the preference for digital self-help tools is driven by a reduced capacity and willingness to invest time and effort in an intervention. Attempts to reduce the mental health treatment gap through digital interventions should focus on optimizing the effort exacted to improve engagement and desirability.

Presentation 4: Exploring Stakeholders Perspectives in the Co-Creation of a Digital Mental Health Game: Findings from a Triangulated Focus Study

Magdalena Leśniewska¹, Jan Maciejewski¹, Magdalena Pietrzak¹, Ewelina Smoktunowicz¹

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Introduction: The SMILE (Supporting Mental Health in Young People: Integrated Methodology for Clinical Decisions and Evidence-Based Interventions) project is a European initiative uniting 14 research and technology partners to enhance youth mental well-being. A key objective is the development of a CBT-based digital serious game using an agile co-creation approach. To maximize adherence by ensuring alignment with user and stakeholder needs, focus groups were conducted to gather qualitative insights. This study presents key findings on diverse stakeholder perspectives on game conceptualization, particularly based on data from the Polish research team.

Methods and Results: A triangulated participatory approach was adopted, integrating perspectives from three key groups: potential users (children, adolescents, and young adults aged 10–24), parents/guardians, and professionals from education and healthcare. Eight semi-structured focus groups (N = 46) were conducted between October and December 2023. Thematic analysis identified both converging and diverging perspectives on gaming preferences, expectations, adoption factors, as well as concerns, resources, coping mechanisms, and barriers to seeking help. The three-way perspective revealed differences in how young people’s psychological situations are perceived. Regarding the game, while young users prioritized design, engagement, and narrative depth, parents and professionals emphasized efficacy, privacy, and integration with support systems. The findings highlight the need to balance entertainment value with psychological credibility and accessibility.

Conclusions: This study provides critical insights into stakeholder needs, informing iterative intervention development. Results emphasize user-centered design and accessibility. The next phase involves participatory workshops to refine prototypes, ensuring a compelling, evidence-based tool fostering resilience and mental well-being.

Track 7: AI Integration for Symptom Detection

Presentation 1: Looking beyond sum-score questionnaires in mental health diagnosis – a call to action

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Questionnaires play a central role in the diagnosis of mental disorders and are used extensively in both research and clinical practice. They generally use simple decision rules by summing the rather arbitrary integer scores assigned to different answers and basing the diagnosis on whether this sum exceeds a threshold. This method was historically justified by the need for paper assessments with easily calculated scores.

With the wide-spread availability of computers, the use of simple decision rules is no longer required. Moreover, the relative abundance of mental health data and advanced data analytics provide a unique opportunity to move towards more advanced decision rules and thus improve the accuracy of questionnaire based diagnostic tools.

This can be achieved through the methods collectively known as ‘machine learning’ which learn trends in the data. By learning directly from the data, these models have the potential to establish links between questionnaire responses and the diagnostic outcomes of interest that go beyond the simple sum-rule relationships, thus resulting in better diagnostic sensitivity and specificity. Moreover, these models can unearth yet unknown relationships in the data and thus advance our understanding of mental disorders.

This presentation is a call to action for increased use of machine learning in diagnostic tools. We will explain how machine learning can be used for this purpose and illustrate the advantages that derive from machine learning algorithms.

We will present alternative approaches applied to various high-quality empirical data sets that provide more accurate assessments of symptomatology than the traditional sum-score models.

Presentation 2: Symptom detection from everyday language: A new approach to personalizing digital interventions with large language models

Ludwig Küster¹, Peter Eric Heinze¹, Tommaso Ballarini¹, Vincent Brehmer¹

¹ HelloBetter – Data Science & Research, Germany

Introduction: Large Language Models (LLMs) offer unprecedented possibilities for analyzing and processing natural language. LLMs such as BERT can infer symptom severity and treatment-relevant markers from spoken/written language in the field of mental health. This could eliminate time-consuming questionnaires. LLM-generated markers could better tailor digital interventions to patients' needs.

Research Question: In two experiments, we examine our models' ability to predict process- and symptom-oriented questionnaire scores from patients' language.

Method: The prediction of questionnaire scores based on free-text responses is investigated in the first experiment using a routine care dataset from HelloBetter, including free-text responses and PHQ scores from N = 7,300 patients. A Sentence Transformer converts texts into vectors, used by machine learning models (ridge regression, XGBoost) to predict PHQ scores. In the second experiment, we use study data from N = 1,000 participants to train a "Semantic Similarity System" with tested ML algorithms. This system estimates scores for nine process- and three symptom-oriented questionnaires based on patients' statements.

Results: Exploratory analyses in N = 30 HelloBetter patients show high predictive power of free-text responses for PHQ scores using an LLM (MSR = 1.17). The full modeling results from Experiments 1 and 2 will be presented on-site.

Conclusion: Capturing clinically relevant constructs through everyday free-text responses offers potentially higher ecological validity and better scalability than standardized questionnaires. In digital interventions, these constructs can be continuously and indirectly assessed based on patients' inputs. This LLM-supported monitoring enhances the personalization of digital interventions but also raises new ethical questions.

Presentation 3: The Individual Makes the Difference: Improved Depression Detection by Personality-Aware Artificial Intelligence in Audiovisual Data

Björn Schuller^{1,2}, Jiadong Wang¹, Johanna Löchner³, Changzeng Fu⁴

¹ Technical University of Munich, Munich, Germany

² Imperial College London, London, United Kingdom

³ Friedrich-Alexander-Universität Erlangen–Nürnberg, Germany

⁴ Northeastern University, Shenyang, China

Introduction: The automatic detection of depression by Artificial Intelligence (AI) has long been a critical area of research, with existing approaches predominantly focusing on young adults. However, these methods often neglect the individual differences in symptom manifestation, failing to account for personalised factors such as personality traits and health conditions, which significantly influence the expression of depression.

Methods: A novel multimodal dataset has been developed to integrate audio and video, with individual difference information, including personality traits, demographics, and health status. This dataset aims to enhance the detection of depression by considering the unique characteristics and circumstances of individuals. A baseline model has been designed to fuse audio-visual features with personalised attributes to predict depression severity, demonstrating the potential of this integrated approach.

Results: The experimental results show that combining multimodal data with individual differences can improve the accuracy of automatic depression detection. The analyses highlight how different factors, such as chronic illnesses and academic stress, can influence depression in various age groups. This suggests that personalised approaches can provide more nuanced insights into depression detection and management.

Conclusion: The integration of multimodal data with individual differences holds the potential to advance personalised depression detection. By emphasising the role of individual variability, future research can pave the way for more inclusive AI models that are clinically adaptable across diverse demographics. This approach is essential for bridging gaps in mental health research and developing tools that are more sensitive to the unique needs of different populations.

Presentation 4: Heterogeneity in Effects of Automated Results Feedback After Web-Based Depression Screening: A Secondary Machine-Learning Based Analysis of the DISCOVER Trial

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² University Medical Center Hamburg-Eppendorf, Hamburg, Germany

Introduction: Results of the DISCOVER trial (Kohlmann et al., 2024) suggested no effect of automated results feedback compared with no feedback after web-based depression screening with respect to depressive symptom reduction six months after screening. Interpersonal variation in symptom representation, healthcare needs, and treatment preferences may nonetheless have led to differential response to feedback mode on an individual level. The aim of this study was to examine heterogeneity of treatment effects (HTE), i.e., differential response to two feedback modes (tailored or non-tailored) vs no feedback (control) following web-based depression screening.

Methods: We utilized causal random forests, a machine-learning method that applies recursive partitioning to estimate conditional average treatment effects (CATEs). In this secondary data analysis of the DISCOVER trial, the primary outcome was depression severity (Patient Health Questionnaire-9) change six months after web-based screening. Data was split prior to analysis to evaluate CATEs in held-out test data.

Results: Data from N=946 participants of the DISCOVER trial without missing information were analyzed. We did not detect HTE regarding feedback mode (control vs. non-tailored, $P=.41$; control vs. tailored, $P=.93$; control vs. non-tailored/tailored, $P=.72$). Examining covariate profiles, we observed a potentially detrimental role of lower treatment control beliefs when providing (non-) tailored feedback compared with control.

Conclusions: We applied causal random forests to describe higher level interaction of a broad range of predictors to detect HTE. We did not find evidence for harm or benefit of providing (non-) tailored feedback after web-based depression screening regarding depression severity change six months later.

Track 8: Children and Adolescents' Mental Health

Presentation 1: Where do LGBTQ+ young people search for mental health support online and what do they think of what they find? Findings from a qualitative study

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¹ University of Bath, Bath, United Kingdom

² University of Bristol, Bristol, United Kingdom

³ City St George's, University of London, London, United Kingdom

Introduction: Lesbian, Gay, Bisexual, Transgender/Trans, Queer and Questioning (LGBTQ+) adolescents are at greater risk of mental health problems and yet, less likely to engage with traditional face-to-face support. Self-help, digital mental health interventions (DMHIs) are a promising option for this group but routinely encounter challenges with real-world implementation, such as ensuring sufficient reach and uptake. This undermines the effectiveness of these interventions.

It is therefore imperative to understand how to improve the reach of DMHIs for LGBTQ+ young people by identifying where this group are already looking for support online and how we can develop engaging signposting materials that will improve their uptake of DMHIs.

Methods: Between April and September 2025, qualitative interviews will be conducted with 10-15 LGBTQ+ young people (ages 13-19) to explore online help-seeking behaviours and their perceptions of available support and accompanying advertising materials. The Think Aloud approach and vignettes will be used during the interviews to stimulate meaningful discussion about what is important to LGBTQ+ youth. Transcripts will be analysed using reflexive thematic analysis.

Results and Implications: Key themes from the interviews will be shared, alongside recommendations on how these insights can be used to develop tailored intervention dissemination strategies for LGBTQ+ young people. These more informed strategies could improve the reach and uptake of the many DMHIs that are being shown to be useful for LGBTQ+ young people. This study will also provide a methodology for exploring some of the factors that are key to the successful dissemination of DMHIs among specific populations.

Presentation 2: Decision Making in Turbulent Times: Managers' Views on Implementing Evidence-Based Psychosocial and Digital Interventions for Young Children in Finnish Wellbeing Services Counties

Sanna Herkama¹, Minja Westerlund¹, Marjo Kurki², Andre Sourander¹

¹ University of Turku, Turku, Finland

² Itla Children's Foundation, Finland

Introduction: Untreated childhood behavioral problems pose significant risks for healthy development. Many families lack timely treatment, increasing the need for specialized services. Despite existing evidence-based psychosocial interventions, their implementation in healthcare and social welfare remains understudied, especially regarding children. Digital interventions offer promising solutions for timely and accessible treatment but their integration into existing systems is not well understood. This study explores how top and middle managers in Finnish wellbeing services counties describe the adoption, implementation, and sustainment of evidence-based psychosocial and digital interventions targeted at children under school-age and their families. The focus is on decision-making processes, identification of core psychosocial problems, and the planning, monitoring, and evaluation related to the implementation of these interventions.

Methods: This study involves conducting around 30 individual interviews with top and middle managers responsible for the adoption and implementation of psychosocial and digital interventions for children under school-age and their families in several Finnish wellbeing services counties. Participants are selected through snowball sampling, with interviews conducted face-to-face when possible, or online otherwise. The interviews are being conducted between January and April 2025, recorded, transcribed verbatim, and content analyzed.

Results: The Finnish healthcare and social welfare system has undergone its largest reform since World War II. Since January 2023, responsibility for organizing healthcare and social welfare shifted to 21 wellbeing services counties. The reform is ongoing, with systems still being developed and harmonized. It remains unclear how much priority and resources are given to early detection and treatment of childhood social-emotional problems with evidence-based practices.

Conclusions: This study investigates unknown complexities amidst these changes, focusing on decision-making. The findings could inform future policies and practices to enhance the implementation of evidence-based psychosocial and digital interventions for childhood behavioral problems.

Presentation 3: The TeenFit Project: A Study Protocol for Developing a Physical Activity App Finder for Young People

María Rodríguez-Ayllon^{1, 2}, Alicia Ruiz-Moreno³, Cristina Gonzalez-Monroy^{3, 1}, Yolanda Álvarez-Pérez⁴, Abel Gómez-Díaz^{3, 1}, Edelys Crespo-Oliva^{3, 1}, Cristina García-Huércano^{1, 3}, Henar Campos-Paíno^{1, 2}, Carmen Garrido-González³, Patricia Moreno-Peral^{1, 3}, Sonia Conejo-Cerón^{1, 3}, María I. Ballesta-Rodríguez², Emma Motrico⁵, Juan A. Bellón^{1, 3}, Rafael E. Reigal⁶

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Introduction. Youth is a critical period marked by physiological and psychological changes that influence lifelong health. Establishing healthy habits, such as regular physical activity, is crucial during this stage. However, approximately 80% of young people fail to meet the World Health Organization recommendations. This contributes to rising lifestyle-related health issues and growing demands on primary care services. Technology offers a powerful tool to promote health, especially among youth who heavily use mobile devices. However, the vast array of physical activity apps available often lacks scientific validation, usability, or data security, making it difficult for users and healthcare professionals to select suitable options. The TeenFit project aims to (1) systematically review and evaluate physical activity apps for young people between 10 and 24 years old, (2) co-create a web tool to help identify apps aligned with user preferences and needs, and (3) assess barriers and facilitators for implementing TeenFit within the healthcare and educational systems.

Methods. A systematic review of physical activity apps will be conducted, and 30 participants, including youth, caregivers, and healthcare professionals, will form citizen participation groups to co-create the TeenFit website. Qualitative thematic analyses will explore barriers and facilitators for implementation.

Expected Results and Conclusions. TeenFit is expected to deliver a validated catalog of physical activity apps, a user-centered web tool, and actionable insights to support its

implementation. TeenFit aspires to empower young people and their caregivers with accessible, science-backed tools to improve their health and well-being.

Presentation 4: Adolescent adherence to the web-based Youth Compass intervention: What can we learn from looking at different users?

Tetta Hämäläinen¹, Kirsikka Kaipainen², Katariina Keinonen¹, Päivi Lappalainen¹, Anne Puolakanaho¹, Raimo Lappalainen¹, Noona Kiuru¹

¹ University of Jyväskylä, Jyväskylä, Finland

² Tampere University, Tampere, Finland

Introduction: This presentation discusses the findings and implications of a study that examined the roles of adherence and usage activity in adolescents' (n = 161, age M = 15.26) gains in psychological well-being during a five-week preventive web-based acceptance and commitment therapy intervention. The presentation also includes a short description of the Youth Compass project.

Method: The extent to which adherence and usage activity predicted intervention gains was examined using regression analysis. Emerging subgroups based on adherence, usage activity, and intervention gains were investigated through cluster analysis.

Results: The extent to which users followed the intended program usage was found to predict intervention gains. Three subgroups of adolescents were identified. Comparisons of the subgroups showed that two groups with otherwise similar-looking adherence and usage activity rates but different intervention gains differed significantly in their total time spent in the program.

Conclusions: Greater intervention gains in adolescent psychological well-being are more likely to occur when participants use the program as intended, engage, and put enough time into completing the program exercises. The results supported the feasibility of acceptance and commitment therapy-based interventions in promoting adolescent well-being, although more attention should be paid to motivating adolescents to commit to and invest enough time in them.

Ethical declaration: These results have been partly presented at another conference; however, the present submission differs by focusing on the value of investigating subgroups and adolescent engagement.

SATURDAY OCT. 4TH | THIRD SESSION 15:00-16:00

Track 9: Symposium: Adoption, Implementation, and Clinical Impact of Therapist-Guided Digital Treatment in Routine Mental Health Care

Presentation 1: ICBT Therapists' Perceptions of ICBT and Its Relation to Fidelity: A Survey of Norwegian Therapists in Secondary Care

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The Technology Acceptance Model (TAM) suggests that users' perceptions of a technology influence their adoption and use of said technology. While internet-based cognitive behavioural therapy (ICBT) involves technology, little is known about how therapists perceive ICBT, what shapes these perceptions, and how they relate to treatment fidelity.

This multi-site survey collected data from 47 therapists (70% of all ICBT therapists in Norway) across 15 clinics in specialist healthcare. The survey included background, theoretical orientation, treatment fidelity, and adapted TAM-scales.

The sample had a mean age of 41.2 years (SD = 10.4), with 2.2 years of ICBT experience (SD = 1.7) and 8.8 years of general therapy experience (SD = 5.6). Most were women (68.1%) and clinical psychologists (70.2%). Therapists reported positive perceptions of ICBT, with high scores on most TAM scales. However, image scores indicated a perceived decline in social status associated with ICBT use. Greater fidelity was observed among those with a CBT orientation and less ICBT experience.

Overall, the study shows that those who have used ICBT perceive it positively. According to TAM, this should promote its use. However, the perceived loss of professional status may hinder implementation and raises questions about ICBT's legitimacy among clinicians. Fidelity also appears influenced by factors beyond TAM, warranting further research into how theoretical preference, ICBT experience, and perceived status affect fidelity and successful implementation.

Presentation 2: Preliminary findings from an ongoing open single-arm trial of a Therapist-Assisted Internet-Delivered Intervention for Adults with ADHD in routine clinical care

Aleksander Heltne¹, Robin Kenter¹, Robin Gulseth¹, Tine Nordgreen¹

¹ Haukeland University Hospital, Bergen, Norway

Introduction: Attention-Deficit/Hyperactivity Disorder (ADHD) in adults is associated with significant impairments in daily functioning and quality of life. Though non-pharmacological interventions are promising, their availability is limited and highly variable. Internet-delivered interventions offer a scalable framework for providing psychological treatment. This study examines symptom change, treatment adherence and predictors of treatment response in adults with ADHD undergoing a therapist-assisted internet-delivered intervention within routine clinical care.

Methods: The current study is an ongoing open single-arm trial conducted in a routine care setting. Participants (165 enrolled so far, with an expected total N>200 by the conference date) undergo a structured therapist-guided internet-delivered intervention consisting of seven treatment modules delivered over ten weeks. Participant ADHD symptoms (ASRS) and quality of life (AAQoL) are assessed at baseline (T0), after the third (T1) and seventh (T2) treatment modules, and at a six-month follow-up (T3) according to a per-protocol approach. Random intercept, fixed slope Linear mixed models will be used to analyze outcome trajectories, with dummy variables representing pre-mid, pre-post, and pre-follow change. Separate predictor analyses will be carried out to explore the impact of comorbidity (depression, anxiety and personality functioning) on treatment outcomes.

Results: Findings will provide insight into symptom improvements over time, dropout patterns, the overall efficacy of the intervention, and the potential impact of comorbidity on treatment response.

Conclusions: This study will contribute to the growing evidence base for internet-delivered ADHD treatment by assessing its effectiveness in a real-world setting. Findings may also inform clinical practice by highlighting key factors influencing treatment success.

Presentation 3: The perceived fit of guided iCBT in the context of specialised mental health care services: A qualitative study of health care professionals' perspectives

Beate Standal¹, Robin Maria Francisca Kenter¹, Monika Knudsen Gullslett², Tine Nordgreen¹, Inger Lise Teig³

¹ Research Centre for Digital Mental Health Services, Norway

² Norwegian Centre for E-Health Research, Tromsø, Norway

³ University of Bergen, Bergen, Norway

Introduction: Depression and anxiety are global health challenges with therapy demand exceeding resources. Therapist-guided internet-delivered Cognitive Behavioural Therapy (guided iCBT) is effective and resource-efficient, yet its uptake in specialised mental healthcare is low. Understanding healthcare professionals' perspectives is important for successful implementation.

Objective: This study explores how healthcare professionals in Norwegian outpatient mental health clinics perceive the fit of guided iCBT within their practice and how these perceptions impact implementation.

Methods: A qualitative study using semi-structured interviews and field observations was conducted with 31 healthcare professionals from three outpatient clinics offering guided iCBT. Purposive and snowball sampling were used for recruitment. Transcripts were analysed using deductive thematic analysis, guided by Lau et al.'s framework, examining the fit between the intervention and its context across four levels: intervention, professionals, organisation and external context.

Results: Perceived fit of guided iCBT varied across contextual levels. Adoption was hindered by technological and usability issues, and misunderstandings about the intervention. Younger, CBT-trained therapists were more positive, but many questioned its effectiveness compared to face-to-face therapy. Despite leader support, unclear implementation strategies, workload, and administrative challenges complicated integration. Patient complexity in specialised care raised concerns, suggesting guided iCBT might be better suited for primary care. Despite digitalisation trends, a prevailing preference for face-to-face therapy remained a key barrier, requiring efforts to shift this paradigm.

Conclusion: The perceived fit of guided iCBT within mental healthcare is shaped by systemic, professional, and technological factors. Addressing these barriers through targeted implementation strategies may improve adoption.

Presentation 4: Examining Therapists' Patient-Related Time Allocation in Guided Digital Mental Health Interventions: Time to Scale Up. A scoping review and clinical case study

Iris Brunner¹, Robin Gulseth¹, Robin M. F. Kenter¹

¹ ForHelse Research Centre for Digital Mental Health Services, Division of Psychiatry, Haukeland University Hospital, Bergen, Norway

Introduction: Guided digital mental health interventions (DMHIs) are often more beneficial to patients than self-administered programs but they increase therapist involvement and treatment costs. Despite this, guided DMHIs can save significant therapist time compared to traditional face-to-face treatments. To support the implementation and the upscaling of guided DMHIs, accurate estimates of therapist time use and an understanding of time categories in providing DMHI are important.

This study aims to expand knowledge on therapists' patient-related time use in guided DMHIs. The objectives are: (1) to explore approaches to measuring therapist time in guided DMHIs, and (2) based on these findings, to develop a checklist of relevant time use categories, providing information for implementation and upscaling.

Methods: The study has two parts: (1) a scoping review conducted according to the PRISMA extension for scoping reviews, searching for publications on therapist time use in guided DMHIs, and (2) the development of a checklist for common time use categories, informed by the scoping review and interviews with therapists. Additionally, an empirical case study will be conducted in five Norwegian clinics, using a registration tool to capture patient-related time use from therapists. This data will be complemented by therapist interaction data from the platform.

Results: The results will include a checklist of time-use categories for guided DMHIs and findings from the time use data collected across five clinics.

Track 10: Methodology

Presentation 1: Natural Language Processing Models for Predicting Treatment Outcomes in Internet-Based Cognitive Behavioural Therapy

Nils Hentati Isacsson ¹, Lucía Gómez-Zaragozá ², Fehmi Ben Abdesslem ³, Magnus Boman ¹, Viktor Kaldo ^{1,4}

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⁴ Linnaeus University, Sweden

Objective: Predicting treatment outcome has the potential to enhance Internet-based Cognitive Behavioral Therapy (ICBT). One aspect of guided ICBT is patient-therapist interaction through written messages. Using Natural language processing (NLP) these could be leveraged to predict outcome; however current evidence is limited. This study investigates the predictive accuracy of NLP models for treatment outcomes and evaluates whether NLP provides additional predictive value beyond symptom variables.

Methods: Patient-therapist messages from 6613 patients undergoing 12 weeks of treatment were used to train three types of NLP models: Term Frequency-Inverse Document Frequency (TF-IDF), Bidirectional Encoder Representations from transformers (BERT), and BERT for Longer Text (BELT). These were trained both with and without symptom variables from the initial treatment period (up to week 5) to predict post-treatment symptom level. A dummy model was also used, and a linear regression model acted as a symptoms only benchmark. Multiple imputation addressed missing data, and nested cross-validation was used for hyperparameter tuning and scoring.

Results: Only BERT outperformed the dummy model, achieving a Root Mean Squared Error (RMSE) of 0.17 compared to RMSE of 0.18. Adding symptom variables to the BERT model significantly increased its accuracy, but not the RMSE metric. The best linear regression benchmark based on symptoms only had a BACC of 70% (F1-score of 0.66) which outperformed the BERT model with 60% (0.55) and the combined BERT plus symptoms model achieved 68% (0.62).

Conclusion: These initial findings indicate a small predictive value from patient-therapist written message interaction but added no value beyond using only symptoms to predict post-treatment symptoms. Further research is needed to refine NLP-methods and more accurately assess the predictive potential of text-based interactions during ICBT.

Presentation 2: User Journey Method: A Case Study for Improving Digital Intervention Use Measurement

Lauri Lukka ¹, Maria Vesterinen ², Vilma-Reetta Bergman ¹, Paulus Torkki ², Satu Palva ², J. Matias Palva ¹

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² University of Helsinki, Finland

Introduction: Digital mental health interventions often struggle with low user engagement. Existing measurement methods may not effectively pinpoint which intervention elements contribute to dropout, limiting opportunities for iterative development. We propose the user journey method as a more comprehensive approach to measuring intervention use: it evaluates every intervention element to identify specific use barriers.

Methods: We applied the user journey method in a clinical trial assessing the efficacy of Meliora, a novel game-based intervention for adult Major Depressive Disorder. The intervention was modeled into four technological (Recruitment, Website, Questionnaires, Intervention Software) and two interpersonal elements (Assessment, Support). We then tracked user progression through these elements using data from social media, website analytics, sign-ups, interviews, questionnaires, and intervention usage.

Results:

Recruitment: We reached 145,000 Finns, with social media, word-of-mouth, and online sources being the most effective recruitment channels. Website: The study website had 16,243 visitors, leading to 1,007 sign-ups. Support: 313 participants contacted researchers via email for support. Assessment: 895 participants were assessed, with 735 accepted into the study. Intervention Software: 457 participants used the intervention at least once, with high variability in usage patterns. Questionnaires: 116 participants completed the post-intervention questionnaire.

Conclusion: The user journey method provided a detailed evaluation of intervention engagement, enabling the identification of specific use barriers. This approach facilitates data-driven, iterative intervention development and implementation, ultimately improving intervention retention and impact.

Presentation 3: Pre-treatment symptom reduction, regression towards the mean and spontaneous recovery

Vilgot Huhn¹, Nils Hentati-Isacson¹, Hanna Sahlin¹, Martin Kraeppelin¹, Marie Bendix¹, Viktor Kaldo¹, Erik Forsell¹

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Introduction: Pre-intervention symptom reduction for psychological symptoms is a common phenomenon observed both within routine care and within clinical trials. The phenomenon can have important interpretive implications for clinical research and evaluation, especially in contexts where there is no control group. However, the potential causes behind it remain under-researched. A prima facie plausible hypothesis is that patients' chronic symptoms naturally fluctuate over time, and that patients tend to seek treatment when their symptoms are worse than usual. When patients later start treatment, they have regressed towards their baseline symptom level. Other explanations include statistical artefacts due to selection thresholds, various forms of measurement reactivity, symptom exaggeration to elicit help-seeking, and positive therapeutic effects of the assessment process. Crucially, hypotheses related to symptom-fluctuation imply a time-dependent effect that other explanations do not.

Method: Utilizing the variability in waiting times at the Internet psychiatry clinic in Stockholm, we analyse the change in self-rated symptoms between screening (at self-referral) and start of treatment from 8339 patients, for five different treatments.

Results: We find substantial variability in pre-intervention symptom change depending on diagnosis. Furthermore, we find a time-dependent effect for primary symptoms and for comorbid depressive symptoms. The time-dependent effects are weak, but somewhat stronger for comorbid depressive symptoms.

Conclusions: An R-based simulation of fluctuating symptoms is used to further contextualize the findings. Implications for reporting standards in trials and clinical evaluations are discussed, as failure to consider this can inflate estimates.

Presentation 4: How well does the online version of the Patient Health Questionnaire-9 detect depressive disorders? A longitudinal secondary analysis of the DISCOVER study

Sebastian Kohlmann¹, Moritz Thake¹, Franziska Sikorski², Bernd Löwe²

¹ Department of General Internal Medicine and Psychosomatics, University Medical Center Heidelberg, Germany

² University Medical Center Hamburg-Eppendorf, Germany

Introduction: The Patient Health Questionnaire-9 (PHQ-9) and its shorter versions, the PHQ-8 and the PHQ-2, are frequently used online to screen for depression. However, the performance of these tools in detecting major depressive disorder is unknown. Objective was the assessment of the criterion validity of PHQ-9, PHQ-8 and PHQ-2 to detect major depressive disorder.

Methods: Sensitivity, specificity, positive and negative predictive values, and the area under the curve (AUC) were calculated using the Structured Clinical Interview for DSM-5 Disorders (SCID-5-CV) as the criterion in a cross-sectional design using data from the internet-based DISCOVER study.

Results: In total, n = 790 participants (574 (72.7%) female, age: 37.4 (SD=13.9)) were screened with the PHQ-9 (mean=11.1; SD=5.4) and interviewed using the SCID (41.2 % fulfilling the criterion of major depressive disorder). Combined sensitivity and specificity of the PHQ-9 were highest for a cut-off of 11 points (sensitivity: 0.77; specificity: 0.68; AUC: 0.80; NPV: 0.81; PPV: 0.63). For the PHQ-8 the sensitivity and specificity were highest for a cut-off of 11 points (sensitivity: 0.74; specificity: 0.71; AUC: 0.79; NPV: 0.79; PPV: 0.64), for the PHQ-2 for a cut-off of 3 points (sensitivity: 0.68; specificity: 0.74; AUC: 0.76; NPV: 0.77; PPV: 0.65). No significant differences were found based on age or gender.

Conclusions: The online PHQ-9, PHQ-8, and PHQ-2 show moderate to good diagnostic qualities to detect major depressive disorder and appear to be suitable for online depression screening. Still, a considerable number of false positives and negatives does not warrant to equate screening result and diagnosis.

Track 11: AI Integration for Youth and Students

Presentation 1: AI Expanding Low-Threshold Mental Health Support for Youth: A Chatbot Complementing Anonymous Online Chat Services Nadine

Saara Huhanantti¹

¹ Project 5/5, Ilkka Paananen Foundation, Finland

Introduction: Sekasin-chat is Finland's largest anonymous online chat service, providing young people support for various life crises. Due to high demand, only 26% of contacts successfully reach a human counselor. To address this gap, Project 5/5 has developed an AI-powered chatbot to complement human support rather than replace it. By combining generative AI, structured response paths, and expert-verified information, the chatbot extends the availability of mental health assistance, particularly during queue times and outside of chat hours. This abstract is linked to Tuuli Pitkänen's presentation.

Methods: The development process involved defining ethical and safety principles, training and testing AI responses in collaboration with mental health professionals. We've been collecting conversation data and user feedback, with preliminary research insights expected by October.

Results: Since its launch in January, the chatbot has been well received by young users. Over 5,000 conversations have taken place, with 92% of individual message feedback being positive and 79% of session-level feedback being positive or neutral. Initial findings suggest that AI can reduce anxiety, provide practical coping strategies, and offer immediate support when human counselors are unavailable.

Conclusions: Integrating AI into youth mental health services creates a new level of low-threshold support, complementing existing human-led services. The reception among young users indicates that AI-powered solutions can bridge gaps in availability while maintaining ethical and safety standards. As digital mental health services continue to evolve, responsible AI implementation will play a key role in ensuring accessibility and scalability.

Presentation 2: Journal Analysis for Monitoring Students' Emotional Well-Being with NLP: A Comparative Study of Typed and Transcribed Entries with Personalized Feedback

Nicole Schmitt¹, Michelle Schlicher¹, Lennart Seizer², Johanna Löchner²

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² Department of Psychology, Friedrich-Alexander University Erlangen–Nürnberg, Germany

Over a third of German students report high emotional exhaustion. Journaling is a cost-effective way to enhance well-being, and advancements in NLP enable automated journal analysis for mental health monitoring and support. Such analyses can be reflected as personalized feedback, fostering self-reflection and engagement. Journaling apps offer different input modalities (typing vs. speaking), but their impact on NLP-based mood detection and user preferences remains underexplored. This study examines how input modalities influence mood prediction and which feedback options students prefer.

In a two-week observational study, N=142 students (M=23.5 years; 118 women, 23 men) were randomly assigned to type or speak daily journal entries and complete an EMA questionnaire on well-being to self-annotate them. The collected data was reflected as personalized feedback and used to train linear regression, random forest, and BERT-based models to predict emotional states.

None of the models achieved significant predictive performance, and input modality had no effect. One possible explanation is that participants indicated that the questionnaires did not capture the emotional depth of their entries. Additionally, conducting EMA assessments throughout the day rather than at specific journaling moments may have been a limitation. However, interest in personalized feedback was strong, with modality preferences varying by journaling habits and mental health needs, highlighting the need for customization.

This study highlights challenges in AI-driven mood detection but reveals high demand for feedback tools. Future research should refine annotation methods, integrate more sensitive NLP approaches, and develop customizable journaling experiences to enhance engagement and mental health interventions.

Presentation 3: Design together: The artificial intelligence for the promotion of mental health in children and adolescents' network (AIMICAN)

Stefan Lüttke¹, Florian Onur Kuhlmeier², Anna-Lena Zietlow³, Alexander Mädche²

¹ University of Greifswald, Germany

² Karlsruhe Institute of Technology, Germany

³ Technical University of Dresden, Germany

Introduction: LLM-based chatbots have great potential for diagnosing and treating mental disorders in youth. However, the development of German-language chatbots for youth is still in its infancy. A key requirement for developing these systems are high quality clinical datasets. For this purpose, interdisciplinary collaboration among different institutions is crucial. The 'Artificial intelligence for the promotion of mental health in children and adolescents' network (AIMICAN) aims to establish a comprehensive platform to further the research and development of German-language chatbots for diagnostic and therapeutic purposes, specifically tailored for youth.

Methods: Four components are envisioned: provision of clinical datasets for LLM training (“data”), training and provision of LLM based on these data sets (“models”), provision of open access applications (“software”) and scientific exchange through conferences and workshops (“exchange”). Clinical institutions such as outpatient clinics participate in data collection. An interdisciplinary steering board coordinates the network’s research activities.

Results: The network is currently being established. The steering board includes researchers in the fields of child and adolescent psychotherapy and psychiatry, informatics, and machine learning. Data collection is thought to be automated wherever possible. Local deployment approaches based on the use of open-source LLMs are pursued. We aim to evaluate the feasibility of data collection in 2025 using a semi-structured interview, the Child Depression Rating Scale-Revised (CDRS).

Conclusions: The establishment of a network such as AIMICAN is necessary to advance the research and development of safe German language diagnostic and therapeutic chatbots for young people. The concept of AIMICAN is introduced and critically discussed.

Presentation 4: Feasibility of an AI-Augmented Psychological Counseling Program for University Students in Romania

Bogdan Tudor Tulbure¹, Andrei Rusu¹, Loredana Marcela Trancă¹, Mihai Predescu¹, Simona Dabu¹, Bianca Spătaru¹, Darian Faur¹, Adrian Florin Spătaru¹, Daniel Precupaș¹, Larisa Dina²

¹ West University of Timișoara, Romania

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Introduction: Digital mental health interventions show promise in addressing psychological distress among university students, yet challenges remain regarding engagement and effectiveness. This study aims to evaluate the feasibility of an AI-augmented psychological counseling program based on the Unified Protocol (UP) for enhancing students' well-being. We will also investigate the program's potential positive impact on subclinical anxiety and depressive symptoms, and the user's experience with the AI components.

Methods: In this open trial design, 60 students with subclinical anxiety/depression symptoms will participate in 5 weekly small-group UP-based counseling sessions augmented with between-session Chat-Bot support. Assessments will occur pre-intervention, during intervention, and post-intervention. Primary measures include GAD-7, PHQ-9, Social Phobia Inventory (SPIN), and Satisfaction with Life Scale (SLS). Secondary measures include AI system usage frequency, System Usability Scale, User Experience Questionnaire. Data will be analyzed using paired t-tests, effect size calculations (Cohen's d), correlations between AI usage and outcomes.

Results: Expected outcomes include improved feasibility indicators, reduced anxiety and depressive symptoms, enhanced psychological well-being. We will also qualitatively investigate facilitators and barriers to the hybrid counseling model implementation.

Conclusions: This study will provide valuable insights into the feasibility and preliminary effectiveness of integrating AI support with traditional psychological counseling, potentially establishing a scalable model for addressing student mental health needs while optimizing professional resources.

Track 12: Prevention and Fostering Resilience

Presentation 1: How Meeting Your Future Self Can Stimulate Future Orientation: Working Mechanisms of a Smartphone App and VR Intervention

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Introduction: Shortsighted behaviors, such as delinquency, unhealthy lifestyle and substance use, often lead to negative consequences in various areas of life. In contrast, future-oriented behaviors typically cultivate positive outcomes, including goal achievement, a sense of competence and financial savings. To enhance future orientation, we developed FutureU: an intervention that aims to promote future orientation by strengthening people's identification with who they will be in the future. Via a smartphone application (app) or immersive Virtual Reality (VR), FutureU enables people to interact with their future self –a digital representation of themselves 10 years from now– which may stimulate an orientation towards the future.

Methods: To examine this working mechanism of FutureU, we conducted a Randomized Controlled Trial (RCT) among first-year university students (N = 321) with three arms: 1) FutureU app, 2) FutureU VR, and 3) a goal-setting control condition.

Results: Preliminary results showed that changes in vividness of and relatedness with the future self were related to concurrent changes in future orientation, which in turn increased future orientation in these conditions compared to the control condition. Moreover, mediation analyses showed that in both FutureU conditions students increased on vividness, which, in turn, increased future orientation in these conditions compared to the control condition.

Conclusions: During the presentation, we will show an impression of the FutureU app and VR, elaborate on the intervention's theoretical foundation, and discuss how our preliminary results fit into the theorized working mechanism of FutureU.

Presentation 2: Digital Interventions to promote Resilience and Mental Health: an Umbrella Review

Sophie Nestler¹, Mariebelle Kaus¹, Hermann Szymczak¹, Christian Meyer-Keirath², Florian Junne², Christian Apfelbacher¹, Claudia Buntrock¹

¹ OvGU, Institute of Social Medicine and Health Systems Research, Germany

² OvGU, Department of Psychosomatic Medicine and Psychotherapy, Germany

Context: Strengthening mental health is crucial, particularly in times of crisis. Digital interventions (DIs) are increasingly used to promote mental health. While their efficacy has been demonstrated in systematic reviews (SRs) and meta-analyses (MAs), a comprehensive synthesis is lacking. This umbrella review provides an overview of the effects of DIs on resilience, well-being, and quality of life (QoL) in non-clinical populations.

Methods: A systematic literature search in PubMed, PsycINFO, and the Cochrane Library was conducted to identify relevant SRs and MAs. Eligible reviews focused on non-clinical adult populations (P) and examined the effects of app- or web-based interventions grounded in psychological techniques (I) compared to any control group (C), on outcomes related to resilience, well-being, or QoL (O). A narrative synthesis was conducted.

Results: Three SRs and six MAs, encompassing 99 primary studies, were included. DIs demonstrated moderate to large effects on resilience post-intervention (SMD = 0.54, CI: 0.28-0.79) and at follow-up (SMD = 1.09, CI: 0.38-1.79). Well-being outcomes exhibited small to moderate positive effects (SMD = 0.14-0.41), while QoL effects were more heterogeneous (SMD = 0.18-0.92). Risk of bias assessments are ongoing and will be presented at the conference.

Conclusion: Preliminary evidence suggests DIs may effectively enhance resilience, well-being, and QoL in non-clinical populations. The most robust improvements were observed for resilience, whereas effects on well-being and QoL were more variable depending on the operationalisation of the construct. To achieve more robust evidence, future research should address methodological heterogeneity, clarify underlying mechanisms, and assess the long-term impact of DIs.

Presentation 3: Preventing Depression in Subclinical Adults: Monthly Effects of a Digital Intervention in a 12-Month Randomized Trial

Mariebelle Kaus¹, Mathias Harrer², Steffen Moritz³, Thomas Berger⁴, Johanna Schröder⁵, Björn Meyer⁶, Jan Philipp Klein⁷, Claudia Buntrock¹

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Introduction. Unguided digital interventions for depression prevention show promise, but their effectiveness across time remains poorly understood. While immediate post-intervention effects are commonly reported, few studies examine month-by-month symptom trajectories—crucial information for determining optimal intervention timing and maintenance strategies to maximize long-term prevention outcomes.

Methods. We analyzed data from the EVIDENT trial consisting of adults with self-reported mild symptoms (PHQ 5-9; $n=379$). The intervention group received a 12-week unguided digital psychological intervention alongside care as usual. We analyzed monthly symptom severity using mixed model repeated measures, at 11 time points with the last follow-up at 12 months.

Results. The analysis revealed significant intervention effects from weeks 12 through 24. Specifically, moderate effect sizes were observed at month 3 (post-intervention; $d = -0.36$ [-0.57, -0.14]), month 4 ($d = -0.40$ [-0.64, -0.15]), month 5 ($d = -0.37$ [-0.62, -0.13]), and month 6 ($d = -0.37$ [-0.58, -0.15]). No significant between-group effects were found during months 7 through 12 (final follow-up).

Conclusions. The results reveal a consistent temporal pattern, with significant intervention effects during months 3-6 that did not persist through the latter follow-up period. These findings suggest the utility of digital prevention for subclinical adults while indicating that booster sessions around month 6 may be necessary to maintain preventive

effects. Future research should examine whether such targeted temporal approaches could extend the duration of preventive effects.

Presentation 4: Participatory Development and Preliminary Feasibility of a Dyadic-Based, AI-Driven Just-In-Time Adaptive Intervention App for Preventing Anxiety and Depression

Claudia Buntrock¹, Theresa Sextl-Plötz², Juliane Schmidt-Hantke², Anna-Carlotta Zarski²

¹ Otto-von-Guericke University Magdeburg, Germany

² Marburg University, Germany

Introduction: Prevention is crucial for early behavioral change and reducing the risk of anxiety and depressive disorders. Standardized interventions often lack relevance, limiting engagement and effectiveness. This project evaluates the feasibility of the CaYou app (Care for You), an AI-driven, dyad-based Just-In-Time Adaptive Intervention (JITAI) for preventing these disorders.

Methods: A pilot RCT with a waitlist control group (N=60) will assess the app's feasibility and whether a larger RCT is viable. Eligible adults with no clinically relevant anxiety or depression, fluent in German, and with internet-enabled smartphones will be enrolled. The intervention group will use the app for four weeks, while the waitlist group will gain access after the intervention period. Both groups will have unrestricted access to routine care. Post-intervention evaluations will include recruitment feasibility, sample characteristics, data collection procedures, app acceptability, and participant clinical responses. Participants will complete an introductory module and optional features like GPS tracking and "Buddy" support. During a 7-day learning phase, five daily push notifications will identify optimal engagement times. The app offers psychoeducational modules, Ecological Momentary Assessments (PHQ-4), and tailored JITAIs targeting individual goals, anxiety, and depression symptoms, with exercises based on cognitive-behavioral therapy (CBT).

Results: Preliminary results will be presented at the conference.

Conclusions: The CaYou app offers personalized, real-time interventions for preventing anxiety and depression, expanding prevention research by providing timely, individualized responses. By combining CBT techniques with interpersonal accountability, it may enhance mental health strategies.

SATURDAY OCT. 4TH | FOURTH SESSION 16:30-17:30

Track 13: Symposium: Resilience Through Service Models in the Nordic Countries

Presentation 1: Resilience Through Service models in Norway

Tine Nordgreen¹, Pontus Bjurner², Tarja Korpilahti-Leino³, Terja Ristkari³, Marianne Aalberg⁴, Vidar Halsteinli⁵, Eva Serlachius⁶, Cecilia Svanborg⁷

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⁷ Psykiatri Sydväst, Stockholm Health Care Services (SLSO), Region Stockholm, Sweden

Introduction: In this symposium we will present data related to the existing service models for internet-delivered treatments across the five Nordic countries and to discuss factors which increases or decreases the resilience or robustness of the current service models.

Methods and results: We have collected and will present data on service models in Sweden, Denmark, Finland, Island and Norway regarding the following key questions:

1: How are internet-delivered treatments provided to the public through research and in routine care for adults and children/adolescents?

2) How are effects measured and how are these results fed back to the therapists?

3: How are internet-delivered treatments organized in relation to a) funding; b) training; c) supervision; d) referral pathways.

4: What are the main barriers and facilitators for upscaling/increase the use of internet-delivered treatments in the Nordic countries?

Conclusion: Based on the above WE WILL IN THIS symposium discuss how the healthcare services in the Nordic countries can motivate and support each other in order to increase the resilience of service models for internet-delivered treatments, potentially through a Nordic network.

Presentation 2: Resilience Through Service models in Denmark

Ulla Damgaard-Sørensen¹, Rie Eg Sell¹

¹ Internetspsykiatrien, Center for Digital Psykiatri, Region Syddanmark, Denmark

How are internet-delivered treatments provided to the public through research and in routine care for adults and children/adolescents?

We will present the Danish experience of developing and delivering Internet-based interventions in mental health care in Denmark. The mapping exercise includes the description of research settings as well as the delivery of clinical services spanning both national services as well as smaller geographic, non-profit or private (including health insurance companies) initiatives. This will demonstrate some of the significant challenges the field is facing.

How are effects measured and how are these results fed back to the therapists?

Data is presented from the national mental health care delivery of anxiety and depression (Internetspsykiatrien) for adults. Ways of developing methods for Feedback-Informed Practice (FIP) are presented as are reflections on broad dissemination of our learnings.

How are internet-delivered treatments organized in relation to a) funding; b) training; c) supervision; d) referral pathways.

An outline of the formal structures of the Danish context will be presented. These highlight the endeavour to build a national digital pathway to routine mental health care centred on unified funding, intake and referral pathways. The presentation will outline the identified needs for training and supervision.

What are the main barriers and facilitators for upscaling/increase the use of internet-delivered treatments in the Nordic countries?

With over ten years of service development, implementation and delivery, Internetspsykiatrien has gathered considerable knowledge that will be helpful in facilitating the continued acceptance and expansion of digital service delivery, including key factors that contribute to successful service delivery.

Presentation 3: Service models for internet-delivered treatments in Sweden

Pontus Bjurner¹, Cecilia Svanborg¹, Amanda Simonsson², Sarah Vigerland³, Gerhard Andersson⁴, Viktor Kaldo^{1,5}

¹ Karolinska Institutet and Stockholm County Council, Sweden

² Uppsala University, Sweden

³ Karolinska Institutet, Sweden

⁴ Linköping University, Sweden

⁵ Linnaeus University, Sweden

Introduction: SibeR was launched in 2015, at the same time as a national platform for digital support and treatments became available for all 21 regions in Sweden. The aim is to provide a basis for systematic evaluation, development of and research on internet-delivered healthcare treatments.

Methods: Treatments include a wide range of defined interventions for mental illness as well as behavioral medical conditions in psychiatry, primary care and somatic care for patients of all ages. The indications are expanding in line with implementation in regular care. The quality measures apply to diagnostic assessment, availability, completion rate and treatment effect. Registry goals are to increase: 1) Access to effective psychological treatments in a reasonable time, 2) Equal quality of care, and 3) Treatment compliance.

Results: There are now about 30 000 treatments registered in SibeR. The registry has developed standards for outcomes measures, definitions of response, online interactive reports, checklists for program and care processes, and structured informatics to help the regions to gather data for digital psychological treatments. SibeR's transparency around treatments, processes and effects contributes to the development of better programs and care processes. We have learned about factors for sustainable implementation.

Conclusions: It is feasible to build a national system for process and outcome monitoring of internet-based psychological treatments in clinical practice. SibeR is increasingly used to support the implementation of ICBT, quality assurance and research, and to enhance ICBT in clinical practice.

Presentation 4: Resilience Through Service models in Finland

Tarja Korpilahti-Leino¹, Terja Ristkari¹

¹ Research Centre for Child Psychiatry, University of Turku, Finland

Introduction: The research data related to the resilience of the existing service models for internet-delivered treatments in Finland is presented. The Strongest Families Finland (SFF) working model was developed in the Research Centre for Child Psychiatry in the University of Turku. It aims to study the efficacy of internet-delivered interventions and provides evidence based knowledge about long term outcomes and implementation. The model combines population based screening and targeted digital interventions. The screening of different mental health problems takes place in Finnish public health clinics and referrals are based on screening. Evidence based, highly structured digital interventions for children, adolescents and families are provided to the public through research and delivered centralized from our unit. This confirms the fidelity and enables appropriate training and supervision. The interventions aim to prevent later adversities of early mental health problems at the most critical transitional stages of development during the life span.

Methods and results: The results of randomized controlled trials of our digital interventions “Notice the Good” for parents of 4-year old children with conduct problems, “Master Your Worries” for anxious children aged 8-12 and their parents and “Stronger Together” for women with depressive and anxiety symptoms during pregnancy will be presented. The main barriers and facilitators for increasing the use of internet-delivered treatments in Finland, for example difficulties in systematic screening and implementation will be discussed.

Conclusion: The results indicate that digitally assisted interventions are effective and provide a low threshold, easy access solution for stepped care and can increase the resilience of the service system in Finland.

Track 14: Cultural and Individual Adaptations

Presentation 1: Illness Beliefs Predict Uptake of Depression Treatment Six Months After Web-Based Depression Screening: A Secondary Analysis of the Prospective DISCOVER RCT

Matthias Klee¹, Franziska Sikorski², Bernd Löwe², Sebastian Kohlmann^{1,2}

¹ University Medical Centre Heidelberg, Germany

² University Medical Center Hamburg-Eppendorf, Germany

Introduction: Previous findings suggest subjective illness beliefs (IB) as important determinants of health behavior. So far, research targeting IB relied primarily on clinical

populations with ascertained diagnoses. It is however unclear how IB impact treatment uptake in undiagnosed individuals. The aim of this study was to investigate the role of IB for the uptake of depression treatment in an online population of individuals with moderate depression but without a contemporary diagnosis.

Methods: In this secondary analysis of the randomized controlled DISCOVER trial (Kohlmann et al., 2024), IB were examined as prospective predictors of depression treatment uptake. DISCOVER investigated the effect of automated results feedback following web-based depression screening on depression severity six months later. IB were assessed at the time of screening with an adapted version of the Brief Illness Perception Questionnaire. Depression treatment was operationalized as self-reported initialization of psychotherapy or antidepressant medication during follow-up.

Results: Data from N=871 participants of the DISCOVER trial without missing information were analyzed. IB about consequences (OR [95% CI]=1.12 [1.00-1.26]), treatment control (OR [95% CI]=1.19 [1.11-1.29]) and identity (OR [95% CI]=1.61 [1.13-2.31]) were associated with greater depression treatment uptake at follow-up. Inclusion of IB increased explained variance (McFadden's pseudo-R²=0.115 [with IB]; 0.063 [covariates only]).

Conclusions: Presented findings reinforce the importance of IB for the uptake of depression care. Special emphasis lies on IB about consequences, treatment control and identity. Reported IB could reflect relevant barriers in access to care and reflect intervention targets to increase health service utilization in currently undiagnosed populations.

Presentation 2: The Efficacy of a Culturally Adapted Tailored iCBT for Arabic-speaking Refugee Youth and Young Adults with Mild to Moderate Common Mental Health Problems: A Randomized Controlled Trial

Youstina Demetry¹, Anahita Geranmayeh², M. Ali Amiri³, Tomas Lindegaard³, Elisabet Wasteson⁴, Gerhard Andersson³, Shervin Shahnavaz²

¹ Institution for Clinical Neuroscience, Karolinska Institute, Sweden

² Karolinska Institute, Sweden

³ Linköping University, Sweden

⁴ Mid Sweden University, Sweden

Introduction: Refugees are at heightened risk of common mental health problems. Despite that, a trend of underutilisation of mental healthcare services has been reported in previous literature. Barriers to access of mental healthcare services include language and

cultural barriers. The current study aimed to examine the efficacy of a culturally adapted tailored internet-based cognitive behavioral therapy (iCBT) for Arabic-speaking refugee youth and young adults with mild to moderate common mental health problems.

Methods: In a randomized clinical trial, participants aged 15 to 29 were allocated to either a culturally adapted iCBT or a waitlist control group. The intervention consisted of 12 modules addressing anxiety, depression, stress, rumination, insomnia, emotion regulation, traumatic memories, grief and loss, romantic relationships, and resilience. An introductory and a termination module were also included.

Primary outcomes were assessed using the Hopkins Symptoms Checklist Questionnaire (HSCL-25). Measurements were collected at baseline, 4-weeks, post-treatment and a 6-months follow-up. Secondary outcomes include ISI, PHQ-9, PCL-5, PG-13, WHO-5, BRS, and PSYCHLOPS. A latent growth curve model will be used to for data analysis.

Results: A total of 125 participants were randomized. Data collection for the post-treatment measurement will be completed on the 3rd of march 2025. Data collection for the 6-months follow-up will be completed by the 31st august 2025.

Presentation 3: Recruitment strategies of a pilot study of culturally adapted ICBT for Farsi/Dari speaking migrants

Anahita Geranmayeh¹, Ali Amiri², Youstina Demetry¹, Tomas Lindegaard², Elisabet Wasteson³, Gerhard Andersson², Shervin Shahnava¹

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³ Mid Sweden University, Sweden

Background: Mental health problems are widespread, affecting millions globally, with anxiety and depression being the most common. Migrants and refugees often experience more severe mental health problems compared to host populations due to pre-, peri-, and post-migration stress factors. They also face significant barriers to accessing mental health care. We investigated the feasibility, acceptability, and effectiveness of a tailored Internet-delivered CBT (ICBT) for common mental health problems among Farsi/Dari-speaking migrants (Raha).

Method: 35 Farsi/Dari-speaking migrants (15–29 years old) from two different cohorts included and received Raha intervention over 10-weeks period. The second cohort (n=11) underwent a test module prior to inclusion. Feasibility was evaluated through participant engagement by calculating recruitment and retention rates. The efficacy of the intervention

was assessed using pre- and post-treatment measurement and a 6-months follow up. The primary outcomes, depression and anxiety symptoms, were measured using the Hopkins Symptom Checklist-25 (HSCL-25) before and after the treatment.

Results: Recruitment rate of the study was 39.6% and retention rate was 47.2%. HSCL-25 decreased significantly following the intervention, Cohen's $d = 1.34$, [.68, 1.97]. The effect of the intervention was maintained at the 6 months follow-up.

Conclusion: Overall, there were some feasibility challenges which motivated the development of improved recruitment strategies. The intervention was well-accepted. Reduced level of depression and anxiety symptoms following the intervention indicate that Raha may be an effective intervention for Farsi/Dari speaking migrants' mental health problems.

Track 15: Online Support and VR Application

Presentation 1: Developing an AI-Guided Chatbot for an Internet-Based ACT Program: A Multiprofessional Co-Design Approach Using a Modified Design Sprint

Panajiota Rasanen¹, Joonas Merikko^{2,3}

¹ University of Jyväskylä, Finland

² University of Helsinki, Finland

³ Annie Advisor Ltd, Finland

Acceptance and Commitment Therapy (ACT) internet interventions have demonstrated efficacy in supporting student mental well-being, yet user engagement can remain suboptimal. Recent advances in large language models (LLMs) offer novel opportunities to enhance motivation, personalize psychoeducation, and facilitate timely, low-threshold guidance. Building on The Student Compass, an established web-based mental well-being program shown to reduce perceived stress and depression symptoms while improving students' overall well-being, we developed a prototype AI-based chatbot intervention to potentially boost engagement and provide minimal user guidance where needed. In a modified design sprint, a multiprofessional team—two psychologists, two AI developers, and eight master's students in psychology—collaboratively identified four priority areas for AI integration: (1) personalized onboarding, (2) participant activation, (3) AI-facilitated ACT exercises, and (4) progress communication. Early-stage prototypes were then tested with representative users, who offered immediate feedback through interviews

and questionnaires. Preliminary findings underscore the potential of LLM-driven chatbots to deliver on-demand, context-sensitive support, suggesting that AI could serve as a viable supplement or alternative to purely self-guided internet interventions.

Although these results are promising, further investigation into efficacy, user privacy, and ethical considerations is critical. In our presentation, we will discuss our preliminary experiences from the developed prototype, including practical challenges and future research directions, to advance ethically grounded, AI-enhanced interventions for promoting university students' well-being.

Presentation 2: Using AI chatbots to test and train clinical communication skills: A meta-analysis, a feasibility study, and qualitative interviewing

Anna R. Hudson¹, Maartje Schoorl¹, Selin Olten¹, Marieke Tollenaar¹, Joanne Mouthaan¹

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Introduction: Generative AI chatbots which are capable of holding a natural-sounding conversation have been suggested to be a viable method of training clinical communication skills, such as clinical interviewing and suicide risk assessment skills. Furthermore, as intensive, small-scale workshops are the usual method of teaching such skills, chatbots may prove more cost-effective and scalable. In three studies, we will investigate: 1) meta-analytic evidence for the effectiveness of AI chatbots in training communication skills in healthcare education; 2) the feasibility of using an AI chatbot to assess students' skill level in suicide prevention; and 3) students' perception of the desirability of incorporating AI chatbots into clinical skills education.

Methods: Study 1: A systematic review and meta-analysis will investigate the effectiveness of AI chatbots in training communication skills, such as interviewing, psychological assessment, and empathy, in (mental) healthcare students/trainees. Study 2: Psychology students will "talk" to an AI chatbot programmed to respond like an individual presenting with suicidality. Conversation transcripts will be evaluated for student ability to spot signals of suicidality, ask direct and open questions, correctly refer the "patient" to the correct care, and adhere to national official guidelines on suicide prevention. Study 3: A thorough debriefing interview will take place at the end of Study 2, during which we will probe student attitudes.

Results/conclusions: Insights gained from the three studies will be used to improve suicide prevention skills e-learning education in the Netherlands, as well as to inform the use of AI chatbots in other types of (communication) skills education.

Presentation 3: Psychological Support through Video conferencing and Live-Chat: Findings on Effectiveness, Working Alliance and Session Impact from an Online Support Service created during the COVID-19 Pandemic

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Background: The COVID-19 pandemic, and consequent physical distancing measures, led many counsellors and therapists to move their services online. At the University of Porto, the Psic.ON service was created to provide brief psychological support interventions through videoconferencing and live-chat to people in need. Aims: The aims of this study were to assess the effectiveness of the brief online interventions delivered at Psic.ON, and to explore users' ratings of working alliance and session impact, and intervention success.

Methods: Participants' self-reports on anxiety and depressive symptoms were obtained before and after attending the support, along with ratings of working alliance and session impact, and appraisals of intervention success. Changes in symptoms from pre- to post-intervention were tested and assessed regarding clinical significance and reliability, and working alliance and session impact scores were explored.

Results: Most users attained relief from their symptoms, and ratings of working alliance, session impact and intervention success were generally high.

Discussion: The findings of this study attest that the brief online interventions delivered at Psic.ON were helpful for most users, and broaden the evidence on feasibility, acceptability and effectiveness of therapist-delivered videoconferencing and live-chat interventions.

Presentation 4: The Impact of VR Immersion on Cyber sickness and Sense of Presence: Implications for Digital Health

Gert Jan de Boer¹, Vladimir Ivanov¹, Elena Sofia Silva¹, Jadwiga Bożek¹, Eva Ansems¹, Leon Anema¹, Oscar Delgado Rueda¹, Alexandra Hering¹, Phillip Brown¹, Eriko Fukuda¹, Mercedes Almela¹

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Background: This study investigates how an immersive Virtual Reality (VR) environment experienced through a Head-Mounted Display influences cybersickness and Sense of Presence (SoP). SoP refers to the subjective experience of feeling physically and psychologically immersed in a virtual environment. It is a crucial factor in digital psychology because it enhances engagement, learning, and potentially, the therapeutic effectiveness of VR-based interventions. Studies suggest that higher levels of immersion increases SoP. However, experiencing a degree of cybersickness reduces it.

Method: To investigate the relationship between the levels of immersion, cybersickness & SoP, a between-subjects design was used. Participants were randomly allocated into one of three immersive conditions: (1) Full immersion (hand gestures & sound, n = 25), (2) Partial immersion (joystick & sound, n = 25), and (3) Low immersion (joystick & sound deprivation, n = 25). Self-report questionnaires were administered to assess cybersickness (Simulator Sickness Questionnaire) and SoP (iGroup Presence Questionnaire).

Planned analyses: The impact of immersion on cybersickness and SoP is analyzed using one-way ANOVAs, followed by post-hoc comparisons to identify specific group differences. Mediation analysis is conducted to determine whether cybersickness mediates the relationship between immersion and SoP, controlling for covariates.

Expected contributions: This study will provide valuable empirical insights into the complex interplay between VR features that influence varying levels of immersion, cybersickness, and SoP. By elucidating the underlying mechanisms, these findings can enhance the understanding of user experience and engagement in VR environments. This research contributes to advancing digital health interventions and personalized therapeutic approaches by utilizing immersive VR for mental health applications.

Track 16: Anxiety, Suicidality and Grief

Presentation 1: Comparing two treatments for generalized anxiety disorder within routine care - Intolerance of Uncertainty vs. A Metacognitive Intervention

Vilgot Huhn¹, Nils Hentati-Isacsson¹, Hanna Sahlin¹, Martin Kraeppelin¹, Marie Bendix¹, Viktor Kaldo¹, Erik Forsell¹

¹ Karolinska Institutet, Sweden

Introduction: Generalized Anxiety Disorder (GAD) is a common and debilitating anxiety disorder with a chronic course and a low rate of spontaneous remission. GAD is distinguished by a high degree of excessive worry about multiple subjects, as well as an experience that this worry is difficult to control. A multitude of cognitive and behavioural models exist to explain excessive worry, which has given rise to many differing CBT protocols. Often these protocols mix techniques from many different theoretical models, making evaluations of the protocols less scientifically informative with regards to the underlying theoretical models.

Method: In this RCT we compare two structurally equivalent ICBT protocols for GAD that are focused around two prominent models for worry, the Intolerance of Uncertainty Model (IUM) and the Metacognitive Model (MCM). The trial is implemented within routine care at the internet psychiatry clinic in Stockholm. 440 patients will be randomized 1:1 to receive either IUM-based-treatment or MCM-based-treatment. Using multi-level modelling both treatments will be compared against each-other in an equivalence test. The within-group effect size will be compared in a bench-marking analysis to previous effectiveness estimates of CBT for GAD within routine care.

Results/Conclusion: Data collection is expected to wrap up during the summer/early autumn and a preliminary data analysis will be shared during the presentation.

Presentation 2: Suicide prevention skills training: E-learning modules for the psychology curriculum

Joanne Mouthaan¹, Anna R. Hudson¹, Jaël van Bentum², Wouter van Ballegooijen³, Derek de Beurs⁴, Ruth Van der Hallen⁵, Francesca Piccioli¹, Emma Hulsebosch¹, Maartje Schoorl¹

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Introduction: Suicide is an enormous problem in the Netherlands, with approximately five suicides and 109 attempts per day in 2023. However, adherence to suicide prevention (SP) guidelines is suboptimal and professionals often feel under-prepared to treat individuals with suicidal ideation. Therefore, SP e-learning modules were created by a Dutch expert group with the goal of better educating future clinicians on recognising, diagnosing, treating, and preventing suicidality. In two studies, we intend to: 1) investigate if the e-learning modules influenced bachelor/master students' self-rated competence in SP skills; and 2) explore student attitudes towards the e-learning modules.

Methods: Study 1: A minimum of 512 psychology bachelor/master students at five Dutch universities will participate in a four-wave stepped-wedge study. Participants complete an online questionnaire (Suicide Prevention Skills Inventory) 5 weeks and 1 week before completing the e-learning modules and 1 month and 3 months after completing, rating their perceived knowledge, skills, confidence levels, attitudes, and interest in SP skills. Study 2: Psychology bachelor/master students across the Netherlands will take part in focus groups to gain a deeper understanding of student attitudes towards the usefulness, accessibility, and educational value of the e-learning modules.

Results: Study 1: A multilevel growth curve model will be fitted, nested within participant, educational level, and university, and controlling for number of e-learning modules completed at each timepoint. Study 2: Thematic analysis will be used to interpret student attitudes.

Conclusions: Results will be used to inform and improve SP education through e-learning of healthcare professionals-in-training in the Netherlands.

Presentation 3: Qualitative analysis of the first experiences of users of SYMPTOMS-JIT: an app for in vivo exposure in anxiety disorders

Iratxe Alonso-Olea¹, Patricia Gual-Montolio¹, Laura Díaz-Sanahuja², Antonio Donato³, Lucas Niño-Ruiz¹, Nazar Pysko-Kopot¹, Javier Herrero-González¹, Sven Casteleyn¹, Carlos Granell¹, Juana María Bretón-López¹

¹ Universitat Jaume I, Spain

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Cognitive Behavioral Therapy (CBT) is the treatment of choice for Anxiety Disorders (ADs), with in vivo exposure (IVE) being the core component. This technique aims to gradually expose the patient to feared situations. Although its effectiveness is well-established, it presents certain limitations and challenges in implementation, since it can be aversive, especially when patients apply it themselves, leading to a higher dropout rate. Traditionally, therapist support has been essential, although it comes with additional costs. In this context, smartphones emerge as a promising alternative to optimize psychological treatments. The aim of this study is to assess and describe the opinion and satisfaction of three patients, diagnosed with an AD, who used the SYMPTOMS-JIT app, a location-based just-in-time system, during IVE. A consensual qualitative research (CQR) study was conducted with information provided by patients. We developed an ad-hoc semi-structured interview. A total of twenty-one categories were identified within six domains: benefits, limitations, functionalities, interference, user's satisfaction and experience, and suggestions. In conclusion, the app enhances treatment adherence by providing support, motivation and autonomy to users. Although its design is intuitive and its functionalities are positively valued, areas for improvement were identified, such as the optimisation of feedback, the reduction of technical problems and the inclusion of more therapeutic resources. Overall, it is considered a useful tool that complements traditional therapy, but does not completely replace it. SYMPTOMS-JIT emerges as a promising tool to make the IVE component more accessible to patients.

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SATURDAY OCT. 5TH | FIRST SESSION 9:30-10:30

Track 17: Symposium: Applying the Unified Protocol in Different Formats: Results of It's Online, Blended, and Web-based Application

Presentation 1: Can the Unified Protocol in Online Group be as Effective as In-Person Group? A Pilot Study among Patients with Emotional Disorders

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¹ University of Coimbra, Center for Research in Neuropsychology and Cognitive Behavioral Intervention, Faculty of Psychology and Educational Sciences, Portugal

Introduction: Several clinical trials supported the effectiveness of the Unified Protocol (UP) in treating emotional disorders in in-person group formats. However, a research gap remains regarding its comparative effectiveness when delivered in a synchronous online group format. This study aimed at presenting the findings of a pilot study evaluating the effectiveness of the UP in reducing symptoms of anxiety and depression in an online group format (UP-G-O) compared to an in-person group setting (UP-G-IP).

Method: Participants consisted of 55 adults with a primary diagnosis of emotional disorders, who were available to participate in any of the therapeutic formats. Participants were randomly assigned to the UP-G-O (n=28) or the UP-G-IP (n=27) and completed self-report questionnaires at baseline, post-intervention and three months follow-up. The research protocol included the Patient Health Questionnaire-9 (PHQ-9) and the Overall Depression Severity and Impairment Scale (ODSIS), the Generalized Anxiety Disorder-7 (GAD-7) and the Overall Anxiety Severity and Impairment Scale (OASIS), and the Multidimensional Emotional Disorder Inventory (MEDI).

Results: Dropout rates were low (21%) and participants in both arms were satisfied with the treatment. Mixed ANOVAs revealed significant effects of time ($p < .05$) on both depressive and anxiety symptoms, as well as on eight (out of nine) transdiagnostic dimensions of the MEDI. No significant time \times group interactions were found, except for anxiety (GAD-7), where the UP-G-O demonstrated a more significant reduction.

Conclusions: These results support the equivalent feasibility and effectiveness of the UP in a group format, whether delivered synchronously online or in-person.

Presentation 2: Blended Care, Better Outcomes? A Pilot Study on the Unified Protocol in the Spanish public mental health system (Laura Martínez García in excel)

Óscar Peris-Baquero¹, Jorge Osma¹, María Ángeles Torres Alfonsea², Jon Belaunzaran Mendizabal³, María Asunción Santos Goñi⁴, José Fernando Vencesla⁵

¹ University of Zaragoza, Spain

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⁵ Reina Sofía Hospital of Córdoba, Spain

Introduction: The Spanish National Health System faces barriers in mental health care. Transdiagnostic interventions, such as the Unified Protocol (UP), a cognitive-behavioral treatment focus on training emotion regulation skills in blended format, may provide a viable solution. This study evaluated the acceptability and preliminary effectiveness of the UP in a blended format (UP+APP), integrating face-to-face sessions with an UP-based app, compared to Treatment as Usual (TAU) for emotional disorders (EDs) in 8 specialized mental health units in Spain.

Methods: A total of 88 adults diagnosed with ED were randomly assigned to UP+APP (n=46) or TAU (n=42) and completed self-report questionnaires at baseline, 3, and 6 months.

Results: UP+APP condition showed significant improvements in neurotic temperament, depressed mood, emotional dysregulation, cognitive reappraisal and mindfulness dimensions ($p = .012-.038$) over time. TAU condition showed significant improvements in depressed mood ($p = .027$). No significant differences were found between conditions in treatment outcomes or the Time*Condition interaction. UP-App usability was rated as good at 3 months (76.97) and excellent at 6 months (82.83), but adherence was low (7.5% completion rate). Treatment satisfaction was similar in both conditions.

Conclusions: Findings suggest that UP+APP is equally effective as TAU for the treatment of EDs in Spanish specialized mental health units. Although the naturalistic character increases the relevance of the research findings for clinical practice, high dropout rates and low adherence to the UP-App limit the obtained results. Future research should involve larger samples and an updated version of the UP-App with enhanced functionalities.

Presentation 3: Comparing Therapeutic Alliance in Blended Unified Protocol vs. Treatment as Usual for Emotional Disorders in Spanish Mental Health Units

Laura Martínez García¹, Óscar Peris-Baquero¹, Javier Pérez González¹, Jorge Osma¹, Vanesa Ferreres-Galán², Jordi de Luna Hermoso², Cristina Robert Flors³, Alba Quílez Orden⁴

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Introduction: Interest in therapeutic working alliance in technology-based mental health interventions has grown, yet evidence on blended interventions (therapist sessions + digital tools) remains scarce. This study analyzes differences in working alliance scores between the Unified Protocol in blended format (UP+APP) and Treatment as Usual (TAU; unstructured cognitive behavioral therapy) for emotional disorders (EDs) and examines whether alliance scores predict anxiety, depression symptoms, and number of face-to-face sessions attended.

Method: A secondary analysis of a pilot randomized controlled trial in 8 Spanish mental health units was conducted. Eighty-eight adults with EDs were randomly assigned to UP+APP (n=46) or TAU (n=42). Primary outcomes included working alliance scores (Working Alliance Inventory-Short; WAI-S) after the first, third, and sixth sessions, as well as anxiety, depression symptoms, and number of face-to-face sessions at 3 and 6 months.

Results: Working alliance scores were consistently high across both groups (64.8–68.7/84 points) with no significant differences between them or changes over time. Working alliance did not predict anxiety or depression symptoms at any time point. However, higher alliance scores significantly predicted greater number of sessions attended at six months, highlighting its role in treatment engagement.

Conclusions: UP in blended format can establish a working alliance comparable to TAU. Moreover, the predictive role of alliance in treatment adherence emphasizes its importance, especially in blended formats where engagement is challenging. Future research should explore strategies to enhance the working alliance in digital-supported treatments to optimize adherence and clinical outcomes.

Presentation 4: Unified Protocol in Online Group vs. Blended Format (Online Group and Mobile App) for Treating Emotional Disorders in University Students: Preliminary Results on Feasibility at 6-Month Follow-Up

Óscar Peris Baquero¹, Laura Martínez García¹, Jordi Socias Soler¹, Alba Abanades¹, Alba Fadrique¹, Iván Prieto¹, Miranda Sánchez¹, Jorge Osma¹

¹ University of Zaragoza, Spain

Introduction: Emotional Disorders (EDs) are highly prevalent among young populations, particularly university students, with only a small percentage (16.4%) receiving treatment. This study compares the clinical utility and acceptability of the Unified Protocol (UP) in two cost-effective formats: online group and blended online group with a mobile app.

Methods: 35 participants (80% women, mean age=21.29 years, SD= 1.87, range 18-27) with primary diagnoses of ED were randomly assigned to either the Blended UP condition (n=18) or the Online Face-to-Face UP condition (n=17). The intervention involved 8 UP modules, delivered as either 8 weekly 2-hour online group sessions or a blended format (4 online group sessions + autonomous work via the UP app for modules 1, 4, 6, and 7). Depression, anxiety, and transdiagnostic variables (neurotic temperament, somatic anxiety, cognitive intrusion, social concerns, trauma re-experiencing, and avoidance) were assessed at baseline, post-treatment, and at 1, 3, and 6 months. Satisfaction was also measured.

Results: Statistically significant changes were observed over time (main effect of time) for all evaluated variables (except in quality of life and positive temperament), with no "Time*Condition" interaction, meaning that the scores evolved similarly in both conditions. Participants reported high satisfaction scores: 8.91/10 in the blended condition and 9.38/10 in the face-to-face condition.

Conclusions: These preliminary results informed that both the blended and online face-to-face formats of the UP are clinically useful and highly valued, and that the UP in these formats could be an efficient alternative to address the high demand for mental health support among university students.

Presentation 5: Web-based psychological intervention for women receiving fertility treatments: preliminary clinical utility of the Unified Protocol

Veronica Martinez-Borba^{1,2}, Miranda Sánchez-Albentosa¹, Javier Pérez-González¹, Jorge Osma^{1,2}, Laura Andreu-Pejó^{3,2}, Elena Crespo-Delgado^{3,2}, Alba Monferrer-Serrano⁴, Consuelo Badenes-Monfort⁴

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⁴ Hospital Universitario General de Castellón, Spain

Introduction: face-to-face psychological interventions for people receiving fertility treatments are desirable but not always available. The use of Internet-based solutions may help to better disseminate psychological programs. Aim: to explore the clinical utility of the Unified Protocol (UP) for transdiagnostic treatment of emotional disorders, delivered through a webpage to prevent the onset/aggravation of emotional symptoms in women undergoing fertility treatments.

Methods: an adaptation of the UP was completely self-administered through a webpage in 10 online sessions. Depression, anxiety, stress, and quality of life were assessed before and after the intervention. This study is ongoing and we are presenting results on the sociodemographic, reproductive and psychological status of women at pre-test. The evolution of psychological variables at post-test will be presented at the congress.

Results: 29 women (age=35.66; SD= 3.23; range 29-44) completed the pre-test. Most women had more than 12 years of education (82.70%), were employed (82.80%), had an income over 25.000€/year (55.10%) and were in a stable relationship (75.80%). Time trying to conceive was >18 months (72.40%), and time receiving fertility treatments was >6 months (55.20%). Some participants have suffered previous miscarriages (41.30%). In psychological terms, 20.60% of women had clinical depressive symptoms (ODSIS scores \geq 10) and 27.40% had clinical anxiety symptoms (OASIS scores \geq 10). Moderate stress (mean=160.60; SD=30.77) and low quality of life (mean=55.66; SD=16.01) were identified.

Conclusions: women undergoing fertility treatments experience high emotional distress. The possibility of offering the UP in online format may facilitate the provision of multidisciplinary care by reproductive health services.

Track 18: Sleep & Insomnia Interventions

Presentation 1: USleep: A Multi-Arm Randomised Controlled Trial Evaluating the Efficacy of App-Based Audio Tools to Improve Sleep Health in Working Adults Experiencing Poor Sleep

Jessica Vazzaz¹, Faith Matcham¹, Kate Cavanagh¹, Marcos Economides²

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² Unmind Ltd, United Kingdom

Study Objectives: A significant proportion of the population experience sleep disturbances and use digital sleep aids. App-based audio tools have become popular, yet research on their efficacy is limited. This study aimed to evaluate the effectiveness of three categories of audio-based sleep tools: sleep sounds (including music, coloured noises, and soundscapes), bedtime stories, and sleep skills (guided meditation, sleep hygiene, positive psychology practices).

Methods: A multi-arm, parallel group randomised controlled trial was conducted. Working adults with self-reported sleep disturbances were recruited online and randomly allocated to one of three experimental conditions (Sleep Sounds, Bedtime Stories, or Sleep Skills) or to a digital control condition. Participants completed self-report questionnaires on sleep disturbances, other sleep-related outcomes, mental health, well-being, and work productivity at baseline (t0) and after the 4-week intervention (t1). The primary analysis followed an intention-to-treat approach using mixed-effects models.

Results: A total of 495 working adults (mean age = 32.7, 55.8% female) were included in the analysis. Significant improvements were observed across all conditions in sleep disturbances and most secondary outcomes over time. However, between-group Hedges' g effect sizes were small and non-significant. This suggests that the three audio-based sleep tools did not outperform the digital control condition in improving sleep disturbances, sleep-related impairment, mental health, and well-being.

Conclusions: This is the largest study to evaluate the efficacy of app-based audio tools for improving sleep in working adults with self-reported sleep disturbances. Study strengths and limitations are considered and implications of the findings for theory research and practice are discussed.

Presentation 2: Effectiveness of the Online-Therapy Program HelloBetter Schlafen for the Treatment of Insomnia in Routine Care: A Real-World Evidence Study

Marie Feiler¹, Tommaso Ballarini¹, Vanessa Franke¹, Elena Heber¹, Gesine Schrade^{2,1}

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² University of Potsdam, Germany

Introduction: Insomnia affects approximately 10.1% of Europeans. Although guidelines recommend cognitive behavioural therapy for insomnia (CBT-I) as effective first line treatment, access remains limited. Digital CBT-I (dCBT-I) offers an effective, accessible alternative to deliver guideline-based care. HelloBetter Schlafen is a CE-marked online therapy programme delivering dCBT-I, that has been implemented in German routine care as a digital health application (DiGA) since December 2022 and was evaluated in a randomized controlled trial (N = 210, DRKS00031306) during the approval process as DiGA.

Methods: In this retrospective longitudinal study, real-world data (RWD) from patients utilizing HelloBetter Schlafen, between June 2023 and November 2024, will be analysed to test the programme effectiveness in routine care. As part of the programme, bi-weekly symptom assessments are carried out. The primary outcome is the change in insomnia symptoms measured by the Insomnia Severity Index (ISI); secondary outcomes include depressive symptoms and generalised anxiety. Outcome data will be analyzed using linear mixed models. Additionally, individual symptom change for the primary endpoint will be analysed using established thresholds for minimal important difference (≥ 6 points) and clinical remission ($ISI \leq 14$). Exploratory descriptive analyses will be conducted on sleep diary metrics, treatment engagement, retention, and participant satisfaction.

Results: Results will be presented at the conference day.

Conclusions: This real-world evidence study can provide evidence for the effectiveness of dCBT-I in routine care, potentially supporting its further implementation to address the current treatment gap.

Presentation 3: Large-scale implementation of guided internet-delivered insomnia treatment in routine psychiatric care: treatment effects and implications for patients with insomnia-depression comorbidity

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Introduction: Insomnia and depression are prevalent, debilitating and costly for society. Comorbidity between the two is very common. Cognitive behavioural therapy (CBT) is first-line treatment for insomnia, but rarely offered or evaluated in routine care. For patients with comorbid insomnia and depression, CBT for insomnia (CBT-i) can be as effective as CBT for depression (CBT-d) in reducing depression, and more effective in reducing insomnia. We present data from The Internet Psychiatry Clinic within Swedish public health. Research questions:

RQ1. How effective is CBT-i in a regular setting in the first 3 years after implementation?

RQ2. Has the possibility to provide CBT-i reduced the prevalence of comorbid insomnia among patients receiving CBT-d, compared to 3 years before the implementation of CBT-i?

Method: RQ1: All patients with insomnia receiving CBT-i during the first 3 years after implementation in Sept. 2017, N=552. Pre- to post and 1-year follow-up.

RQ2: All patients with depression receiving CBT-d in the 3 years before and the 3 years after Sept. 2017, N=1467. Pre-post data.

Results: RQ1: Insomnia symptoms improved statistically significantly after treatment ($p < .001$), with Cohen's d 1.9 pre-post (preliminary results).

RQ2: The proportion of comorbid insomnia in the sample receiving CBT-d remained the same after implementation of CBT-i at the clinic, as before the implementation: 66% comorbid insomnia diagnosis before and 68% after.

Conclusion: Therapist-guided Internet-CBT-i delivered in regular care was highly effective in treating insomnia. The ability to provide CBT-i did not reduce prevalence of comorbid insomnia in patients receiving CBT for depression, even though CBT-i may be more beneficial.

Presentation 4: The Baby Comfort Guide -Mobile-Based Intervention for Parents of Children with Crying/Sleeping/Feeding Problems: A Current Status of the Project and Real-World Evaluation

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Introduction: Parents of children with excessive crying/sleeping/ feeding problems are often under significant stress and face barriers to seeking professional help. The Baby Comfort guide – an innovative app designed for affected parents - aims to provide a low-threshold access to scientifically-based information and alleviate negative outcomes for families. In a randomized controlled trial with a clinical group, the app demonstrated effectiveness in reducing parenting stress and increasing knowledge about crying/sleeping/feeding. After a mixed-methods feedback evaluation, the app has been revised and recently published. Following this, the current status of the project and preliminary results from a real-world evaluation will be presented.

Methods: The revised and published app is now intended to be evaluated in a real-world setting by analyzing anonymized in-app usage data as well as feedback questionnaires.

Results: The reworked app contains the following functionalities: (1) psychoeducational texts and videos, (2) an emergency plan, (3) a diary function for documenting the child's behaviour, (4) selfcare strategies for the parents, and (5) a regional register of professional counseling services. Preliminary findings from the real-world app evaluation will be presented.

Conclusions: The Baby Comfort Guide presents a promising preventive app offer for parents facing the challenges of crying, sleeping, and feeding problems with their children. Additional large-scale studies are needed to assess its real-world impact and long-term benefits.

Track 19: Virtual Reality & Immersive Tech

Presentation 1: Relaxation Using Virtual Nature: A Comparative Study on the Effects of Intervention Components on Psychological and Physiological Outcomes

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Introduction: In virtual reality (VR), different relaxation techniques can be used to calm down and positively alter our subjective experience. However, comparative research on intervention components and efficiency is limited. Additionally, the duration needed to achieve such positive effects has not yet been firmly established.

Methods: This study compared three relaxation techniques via immersive 360° videos: stand-alone nature exposure, nature exposure with mindfulness, and nature exposure with slow breathing. The effects on self-reported relaxation, core mindfulness, changes in positive- and negative affect, immersiveness and user experience were assessed via validated questionnaires. In addition, the physiological measurement of heart rate was collected.

Results: All three nature interventions resulted in a decrease with a large effect size in both positive and negative affect, with $\eta^2 = 0.23$ and $r = -0.81$, respectively within the 69 included participants. No other changes in self-reported measures (relaxation, immersiveness and user experience) were found, with the exception of a higher score on the spatial presence subscale in the virtual nature scene with mindfulness meditation than in the slow breathing condition. The heart rate significantly declined after five minutes of relaxation in all conditions and subsequently remained significantly lower than that at baseline. Considering the user interaction some participants reported headache or nausea after the intervention and overall they made some suggestions to improve the exposure.

Conclusions: In conclusion, this study indicates that 360° relaxation interventions have the potential to influence self-reported affect and reduce heart rate, regardless of whether additional mindfulness or breathing instructions are included.

Presentation 2: Long-Term Efficacy of VR-Based Exposure Therapy for Students With Public Speaking Anxiety: Results from a Randomized Controlled Trial

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Virtual reality-based one-session exposure treatments for public speaking anxiety has shown promising effects in previous studies. We added 4 weeks of internet-delivered transition treatment to facilitate exposure exercises in real-world settings. This is particularly important to improve the long-term effects of VR exposure treatments for public speaking anxiety because previous studies showed that effects tend to decrease in the long term for VR treatment compared to face-to-face one, although post-treatment effects were comparable. This study aimed to assess the long-term effects on public speaking anxiety scores in a CBT-based VR exposure with added online transition intervention.

Methods. In total 31 participants (age M = 22.03, 68% women) were randomized to receive one-session VR-based treatment or the same treatment divided into three equal sessions. Primary outcome measures were public speaking anxiety levels measures with public speaking anxiety scale (PSAS). Secondary outcome measures included Liebowitz Social Anxiety Scale (LSAS) and Brief Fear of Negative Evaluations Scale (BFNE).

Participants were followed up at 3-months with a one-year follow-up scheduled in May-July.

Results. Out of 31 who were randomized so far, 25 had already reached the 3-month follow up term. The 3-month follow-up period will be reached by all participants before the beginning of August and we will present the results from the full sample during the conference.

Conclusions. The need to report long-term effects of VR-based exposure has been highlighted by metaanalysis comparing traditional and VR-based exposures. The effects of added transitional 4-week internet-delivered course on exposure exercises could potentially increase long-term effects.

Presentation 3: Beyond Improvement of Symptoms: A Qualitative Study on Broader Effects after VR-based Exposure Therapy for Youth with Public Speaking Anxiety

Olga Zamalijeva¹, Ieva Grigalytė¹, Karolina Petraškaitė¹, Goda Gegieckaitė¹, Samanta Šimukovič¹, Jonas Eimontas¹

¹ Institute of Psychology, Vilnius University, Lithuania

Introduction. Virtual reality exposure therapy (VRET) is a proven approach for alleviating symptoms of social anxiety, including the specific fear of public speaking. However, its impact on various life domains and particular aspects of social anxiety beyond symptom reduction remains uncertain. This study seeks to explore participants' reported experiences and the changes in different life areas related to social anxiety following cognitive behavioural therapy-based VRET with an added 4-week online intervention.

Methods. Five students aged 23-28 (4 female, one male) completed the VR-based intervention and participated in semi-structured interviews. The interviews were recorded, and after being transcribed, they were analysed using thematic analysis by Braun & Clarke (2017). The interviews with participants who complete the program are ongoing, and a more saturated thematic analysis will be presented at the conference.

Results. Six main themes emerged after initial data analysis: 1) fear and catastrophic scenarios; 2) emotions, rumination, and self-perception; 3) action orientation; 4) interpersonal relationships; 5) changes across life domains; and 6) lessons learned from the intervention. These themes were comprised of 2 to 5 sub-themes each.

Conclusions. This study demonstrates that the effects of a VRET for public speaking anxiety complemented with a 4-week internet intervention span beyond the alleviation of public speaking anxiety symptoms. The findings highlight the potential of VRET to foster personal growth, enhance social interactions, and improve overall well-being.

Track 20: Methodology, Measurement and Adverse Events

Presentation 1: How to measure self-reported stress on a smartphone: A scoping review of assessment methodology

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² Queen's University Belfast, United Kingdom

Introduction: Smartphone-based assessment methods, such as ecological momentary assessment, are increasingly used to measure self-reported stress in both research and clinical practice. These methods show great potential, but require tailored measurement strategies with brief scales and well-selected items to ensure data quality. The proliferation of studies and methods, especially in the field of stress, makes it challenging for researchers and practitioners to maintain an overview and make scientifically informed choices. This study therefore conducts a scoping review of smartphone-based self-assessment of stress.

Methods: Following the PRISMA guidelines, we collected studies on brief smartphone-based self-assessment of subjective stress, in healthy adults in daily life. Using carefully defined search strings, we searched Web of Science, PubMed, PsycINFO, Embase, IEEE Xplore, and ACM for studies published between January 1, 2016, and June 14, 2024, retrieving 8777 records.

Results: Each record was screened by two independent researchers, using pre-defined inclusion-exclusion criteria and a double-blind method. Following abstract screening, 496 records were retained, and after full-text screening, 176 records remained. Preliminary analyses found most studies using one or two rating scale items to measure stress, often without carefully considering validity or reliability. Some studies, however, focused on developing and evaluating psychometrically sound self-assessment items.

Conclusions: While studies using smartphone-based assessment have proliferated in the past decade, relatively little attention has been attributed to scale (or item) selection. This review aims to provide researchers and practitioners with an overview of the current state of the art in mobile stress assessment, thereby facilitating informed measurement strategy choices.

Presentation 2: Measuring Stress Using WhatsApp Voice Messages – A Feasibility and Usability Study

Janika Thielecke ¹, Maartje Bakhuys Roozeboom ¹, Irene Niks ¹, Elsbeth de Korte ¹,
Sadegh Shahmohammadi ¹

¹ TNO, The Netherlands

Introduction: Stress is an important health signal across health and occupational domains. Questionnaire-based stress assessments are often retrospective and unpopular among participants. Ecological Momentary Assessment (EMA) via smartphones offers more granular, real-time data collection but suffers from adherence issues. This study explores the feasibility and usability of WhatsApp voice- and text-messages as a method for daily stress measurements.

Methods: A convenience sample of 172 workers took part in a 14-day diary study employing automated WhatsApp messages to collect a stress rating, main stressors and energy sources in 4 groups: A) week 1 voice-, week 2 text-messages with emojis; B) week 1 voice-, week 2 text-messages without emojis; C) week 1 text-, week 2 voice-messages with emojis; D) week 1 text-, week 2 voice-messages without emojis. Demographics and usability rating (incl. preference) were assessed online pre- and post-study respectively.

Results: We will present demographics, overall and per group adherence rates, and comparison of adherence depending on preference and emoji use. For the user evaluation, we will provide descriptive statistics regarding usability. To evaluate the quality of the data, all open answers will be coded to represent types of stressors and energy sources. The number of stressors/energy sources identified across methods (voice vs. text) within and between participants will be compared and correlated with stress ratings.

Conclusion: We will discuss to what extent stress diary studies via WhatsApp are feasible, well perceived and create useful data for research. We will discuss implication for real-world, digital stress measurements by leveraging widely-used communication platforms.

Presentation 3: Does feedback after internet-based depression screening cause harm? A secondary analysis of negative effects in the randomised controlled DISCOVER trial

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² University Medical Centre Heidelberg, Germany

Background: Internet-based depression screening is frequently used by affected individuals. Criticism, however, points to potential associated harms.

Objective: To examine whether automated feedback after internet-based depression screening is associated with misdiagnosis, mistreatment, deterioration in depression severity, in emotional response to symptoms, and in suicidal ideation one and six months after screening.

Methods: Secondary analysis of the German-wide, internet-based DISCOVER RCT. Affected but undiagnosed individuals screening positive for depression (Patient Health Questionnaire-9, PHQ-9 \geq 10 points) were randomised to receive nontailored, tailored, or no feedback on their screening result. Outcomes are based on self-reports compared to SCID assessments of major depression (misdiagnosis and mistreatment), on the PHQ-9 (deterioration in depression severity and suicidal ideation) and on the Brief Illness Perception Questionnaire (deterioration in emotional response). Outcome rates were compared based on relative risks (RR).

Results: In the per protocol sample of 948 participants (72% female; mean age 37.3 years), there was no difference in rates of misdiagnosis (from 3.5% to 4.9% across study arms), mistreatment (7.2% to 8.3%), deterioration in depression severity (2% to 6.8%), deterioration in emotional response (0.7% to 2.9%), and deterioration in suicidal ideation at six months (6.8% to 13.1) between study arms (RRs from 0.46 to 1.96, $P_s \geq 0.13$). The rate for deterioration in suicidal ideation at one month was increased in the nontailored feedback arm (RR=1.92; $P=0.01$), but not in the tailored feedback arm (RR=1.26, $P=0.43$), with rates of 12.3%, 8.1%, and 6.4% in the nontailored, tailored, and no feedback arm, respectively. Sensitivity and subgroup analyses supported the findings.

Conclusions: It cannot be ruled out that nontailored feedback may increase the risk of suicidal ideation. Robust prospective research on negative effects, particularly suicidal ideation, is needed.

Presentation 4: Adverse Events in Two Variants of Blended Therapy Compared to Face-to-Face Treatment

Lena Sophia Steubl¹, Mira Denninger¹, Harald Baumeister¹, Manfred Reichert¹, Theresa Sextl-Plötz^{2, 3}, Anna-Carlotta Zarski^{2, 3}, Mathias Harrer^{2, 4}, Ingrid Titzler^{2, 5}, David Daniel Ebert², Juliane Schmidt-Hantke³, Rüdiger Pryss^{6, 7}, Robin Kraft^{1, 6, 7}, Claudia Buntrock⁸

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Introduction: Integrating online self-help sessions into routine care (i.e., blended therapy) may enhance flexibility and scalability of treatment for mental disorders. However, detailed evidence on the frequency and potential predictors of adverse events is lacking.

Methods: This study is a secondary analysis of the three-armed multicenter cluster-randomized controlled non-inferiority trial PSYCHOnlineTHERAPY, in which 75 psychotherapists delivered 16 sessions of either blended therapy with an alternating order of online self-help sessions and routine sessions face-to-face (FIX), blended therapy with a flexible order (FLEX), or routine care (STANDARD). In total, they treated 495 patients (FIX: 129, FLEX: 246, STANDARD: 120). Adverse events were defined as symptom deterioration (patient-reported via the Patient Health Questionnaire Anxiety and Depression Scale), premature termination (therapist-reported), and serious adverse events related to the treatment (e.g., self-injury requiring medical care, suicide attempt; patient-reported). Potential predictors included sociodemographic and early-change variables.

Results: Preliminary analyses revealed that across all conditions, 73 patients (14.7%; FIX: 23 [17.8%], FLEX: 33 [13.4%], STANDARD: 17 [14.2%]) experienced any adverse events during treatment. Specifically, 45 (9.1%; FIX: 12 [9.3%], FLEX: 23 [9.3%], STANDARD: 10 [8.3%]) experienced symptom deterioration, 30 (6.1%; FIX: 12 [9.3%], FLEX: 11 [4.5%], STANDARD: 7 [5.8%]) discontinued treatment prematurely, and 1 (0.2%; STANDARD: 1 [0.8%]) experienced a serious adverse event. Analyses of predictors are still ongoing.

Conclusions: There is preliminary evidence that blended therapy is a safe alternative to routine care. However, further analyses may help to understand potential predictors, ensure safety for different subpopulations, and guide future intervention development.

SATURDAY OCT. 5TH | SECOND SESSION 13:00-14:00

Track 21: Symposium: What Digital Tools Can Teach Us About Grief, from Therapy to Daily Life Self-Monitoring

Presentation 1: Dynamic networks of prolonged grief symptoms in daily life: Ecological momentary assessment study using 16030 measurement occasions

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Introduction: According to network theories, mental disorders, including prolonged grief disorder (PGD), are comprised of networks of dynamically connected symptoms. Examining how PGD symptoms are interrelated over time may show what processes are driving PGD. Ecological Momentary Assessment (EMA), where participants rate symptoms multiple times daily, provides the necessary data to capture these processes. The study presents the first empirical exploration of dynamic networks of PGD symptoms using EMA data.

Methods: Adults whose partner, family member, or friend died, on average 30 months ago (N = 229, 80% women, Mage = 51), rated PGD symptom intensity using 11 items (e.g., “In the past three hours, I felt alone or detached from other people because of his/her death.”) five times per day for two weeks. We used a multilevel vector autoregressive model to produce temporal, contemporaneous, and between-subject networks.

Results: Based on 16030 measurement occasions, emotional numbness had the greatest influence on other PGD symptom at subsequent timepoint. Moreover, we found two processes of highly interconnected PGD symptoms. The first cycle of symptoms included: yearning for the deceased, preoccupation with the loss, and sadness because of the death. This process resembles loss-oriented approach behaviors. The second cycle

included: difficulty reintegrating after the loss, emotional numbness, meaninglessness, and loneliness. This process resembles restoration-oriented avoidance behaviors.

Conclusions: We propose that breaking the cycle of longing for the reconnection with the deceased (approach-behaviors) and breaking the cycle of avoiding life changes and internal experiences (avoidance-behaviors) may help people cope with loss.

Presentation 2: Evaluation of a self-management mobile app for bereaved adolescents: Meaningfulness and effects on mental health, grieving processes and everyday lives

Rebecca Rhodin¹, Rakel Eklund¹, Anneli Silvén Hagström², Atle Dyregrov³, Josefin Sveen^{1,3}

¹ Uppsala University, Sweden

² Stockholm University, Sweden

³ University of Bergen, Norway

Introduction: Accessible psychosocial interventions for bereaved adolescents are scarce. To address this, a self-management mobile app was co-developed with bereaved adolescents. This study evaluated the app's impact on bereaved adolescents' mental health, along with its meaningfulness and self-perceived effects on their grieving process and everyday lives.

Methods: A randomised controlled trial with an intervention group having access to the app for 8 weeks and an active control group was conducted. Pre- and post-assessments included symptoms of grief, prolonged grief, depression and posttraumatic stress (PTS) and were analysed using linear mixed models. Ten adolescents in the intervention group participated in interviews, which were then analysed using the narratives of change method.

Results: A total of 126 bereaved adolescents (aged 12-19) participated in the study. Reductions in grief (Cohen's $d = 0.45$), depressive ($d = 0.45$), and PTS ($d = 0.59$) symptoms were greater in the intervention group compared to the control group. However, there was no statistically significant effect on prolonged grief ($d = 0.29$). Adolescents reported that the app enhanced emotional understanding, normalised grief, and reduced feelings of isolation, strengthening communication and social support. Additionally, it helped regulate emotions, fostering greater control over grief and a more positive self-image and outlook on the future.

Conclusions: The study indicated that the app effectively alleviated symptoms of grief, depression and PTS in bereaved adolescents, having small to medium sized effects. The app was also meaningful for bereaved adolescents by helping them manage grief, improve social support, and instil self-compassion and hope.

Presentation 3: Self-monitoring of grief reactions in daily life after loss: A randomized controlled trial

Lonneke Lenferink¹, Minita Franzen²

¹ University of Twente, The Netherlands

² Erasmus University Rotterdam, The Netherlands

Background: Previous research suggests that monitoring symptoms in daily life through diary assessments (also known as experience sampling) may influence symptom severity. However, studies on such effects in the field of grief are lacking. Our goal was to determine whether self-monitoring of grief reactions through diary assessments leads to clinically significant changes in prolonged grief disorder (PGD), post-traumatic stress disorder (PTSD), and depression symptoms, both at the group and individual levels.

Method: A total of 184 adults (83% women; Mage = 55 years; 80% lost spouse/parent; 38% early PGD) who had lost a loved one 3–6 months earlier were randomly assigned to a self-monitoring group (n = 90) or a waitlist control group (n = 94). Participants reported their grief reactions five times a day for two weeks via a smartphone app. Symptoms of PGD, PTSD, and depression were assessed through interviews at baseline, after self-monitoring, and after the waiting period. We pre-registered our analytic plan. ANCOVAs and Reliable Change Indices were used to examine changes in psychopathology.

Results: At the group level, self-monitoring did not have a significant effect on the severity of PGD, PTSD, or depression symptoms. At the individual level, most participants did not experience clinically relevant changes. However, individuals with more severe PGD symptoms at baseline were more likely to show improvements after self-monitoring.

Conclusion: Overall, self-monitoring does not appear to cause changes in symptom levels, but self-monitoring may benefit those with more severe initial symptoms. Our findings show potential for targeted self-management strategies in bereavement care.

Presentation 4: A feasibility study of guided internet-delivered cognitive behavioural therapy for prolonged grief in Sweden

Frida Berglund¹, Rakel Eklund¹, Maria Bragesjö², Lina Ciardella³, Ellen Hven³, Viktor Kaldo^{2, 4}, Josefin Sveen^{1, 5}

¹ Uppsala University, Sweden

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³ Primary Care and Health, Region Uppsala, Sweden

⁴ Linnaeus University, Sweden

⁵ University of Bergen, Norway

Introduction: The death of a loved one can be a traumatic life event, causing symptoms of prolonged grief, posttraumatic stress, and depression. A growing body of evidence supports the efficacy of cognitive behavioural therapy in reducing symptoms of these disorders following loss. The primary aim of this study was to explore the feasibility and acceptability of internet-delivered cognitive behavioural therapy (ICBT) for prolonged grief in Swedish bereaved adults. A secondary aim was to assess symptom reduction of prolonged grief, posttraumatic stress and depression.

Methods: The study was an uncontrolled trial. Fourteen participants were given access to ICBT for eight weeks. Post-intervention surveys and telephone interviews were conducted to evaluate participants' experiences and satisfaction with the treatment. Treatment engagement, adherence, retention and adverse events were assessed. Symptom severity of prolonged grief, posttraumatic stress and depression was measured at pre-, mid- and post-treatment, with a follow-up at four months.

Results: Most participants reported satisfaction with the treatment, and all would recommend it to others. The treatment alleviated hopelessness and helped participants engage in meaningful activities. Exposure and cognitive restructuring exercises were perceived as both helpful and challenging.

Significant reductions were observed in prolonged grief ($d=1.01$), posttraumatic stress ($d=0.75$) and depression ($d=1.11$) between pre- and post-assessment ($n=10$). At post-treatment, the majority no longer met the cut-off for probable PGD.

Conclusions: ICBT for prolonged grief is a feasible and acceptable treatment, showing preliminary effects in reducing symptoms of prolonged grief, posttraumatic stress and depression.

Track 22: Internet-Based CBT Effects

Presentation 1: Effectiveness of Self-Referral vs GP-Referral Pathways to Guided Internet-Delivered Cognitive Behavioral Therapy (Guided ICBT) for Depression and Anxiety Disorders: An Open Naturalistic Study

Jill Bjarke ¹, Rolf Gjestad ¹, Tine Nordgreen ¹

¹ Haukeland University Hospital, Norway

Introduction: Therapist guided internet-delivered cognitive behavioral therapy (guided ICBT) have shown effectiveness for depression and anxiety disorders in routine care settings. A self-referral system to guided ICBT was tested alongside general practitioner referral (GP-referral) to improve access to care in specialist mental health services in Bergen, Norway. This study compares whether treatment effectiveness differs between self-referral and GP-referral pathways for patients with depression and anxiety disorders.

Method: This open naturalistic study compared treatment outcomes from pre-treatment to post-treatment and from pre- to 6-month follow-up across two referral pathways. The module-based guided ICBT program lasted up to 14-weeks, included weekly asynchronous therapist support. Symptom severity was self-reported before, immediately after, and 6-months post-treatment. Linear mixed modeling estimated effect sizes for symptom change.

Result: In total 460 patients were included, 155 self-referred, 305 GP-referred.

We found significant symptom reduction for both referral pathways from pre-treatment to post-treatment and from pre-treatment to 6-month follow-up. Self-referred patients reported significantly greater treatment outcomes with larger effect sizes (ES: 1.34 - 1.58) compared to GP-referred (ES: 0.97 - 1.22). Across the total sample about 60% were female, mean age 32 years, average duration of disorder 10 years. We found no significant differences in pre-treatment symptom levels between referral pathways.

Conclusion: Self-referral to guided ICBT appears to yield greater treatment outcomes compared to GP-referral. Our findings suggest that self-referral may enhance patient motivation and autonomy, potentially improving engagement with guided ICBT. Facilitating self-referral pathways in specialized routine mental health care could reduce wait times and expedite access to evidence-based psychological treatments.

Presentation 2: Exploring the Influence of Loneliness and Social Isolation in Transdiagnostic ICBT Delivered in Routine Care – Findings from the Online Therapy Unit in Saskatchewan

Anton Käll¹, Ram Sapkota², Gerhard Andersson³, Heather Hadjistavropoulos²

¹ Linköping University, Sweden

² University of Regina, Canada

³ Linköping University, Sweden

Introduction: Past research shows that the social environment in which the patient is situated can have an important role in mental health outcomes. However, when seeking to understand for whom psychological treatments work, social factors are rarely investigated as potential moderators. The aim of the current study was to investigate the prevalence of two important social factors in a routine care setting for ICBT: social isolation and loneliness. Additionally, we were interested in how these changed during the transdiagnostic treatment and if they moderated the trajectories of psychiatric symptoms.

Methods: Data has been collected from patients (n = 625) with elevated levels of depression and generalized anxiety who sought help at the Online Therapy Unit in Saskatchewan, Canada. Data on loneliness and social isolation was collected at pretreatment, mid-treatment (4 weeks after starting treatment), at posttreatment (8 weeks after starting treatment), and after 20 weeks. Measures of depression and generalized anxiety were also collected weekly during the treatment phase. The longitudinal data will be analyzed using mixed effects models.

Results and discussion: Both frequent loneliness and social isolation was prevalent in the sample, with 76 % and 55 % scoring above the cut-off, respectively. Results from the longitudinal analyses will be presented at ESRII 2025.

Presentation 3: Internet-based cognitive behavior therapy for obsessive-compulsive disorder: Implementation and effectiveness of the OCD-NET program in a psychiatric outpatient department in Germany

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¹ University Leipzig, Medical Faculty, Department of Psychiatry and Psychotherapy, Germany

² Karolinska Institutet, Stockholm, Sweden

Introduction: Cognitive behavior therapy (CBT) is the gold-standard treatment for obsessive–compulsive disorder (OCD); however access to CBT remains limited. This study explores the implementation of a guided Internet-Based CBT program (ICBT) for individuals with OCD in a psychiatric outpatient department, specifically examining its acceptability, feasibility, and effectiveness.

Methods: In an open, naturalistic pilot trial, N = 57 patients with OCD received a 10-week ICBT program (OCD-NET), consisting of 10 different modules covering psychoeducation, cognitive restructuring, exposure with response prevention, and overall therapist support and guidance. The primary outcome was feasibility and acceptance of the OCD-NET program; secondary outcomes were OCD symptoms (OCI-R), depressive symptoms, quality of life, self-efficacy, and psychological distress.

Results: Mixed-effect models showed a significant reduction in OCD symptoms (OCI-R), with large within-group effect sizes in both intention-to-treat (ITT) and completer analyses. In ITT analyses, OCI-R scores decreased significantly ($d = 1.13$ (95% CI 0.88 – 1.38)). At post-treatment, $n = 17$ (29.8%) participants showed a treatment response on the OCI-R ($\geq 40\%$ reduction). The treatment also resulted in statistically significant improvements in depressive symptoms and self-efficacy. On average, participants completed 6.30 (SD = 3.21) modules, and $n = 19$ (33.9%) participants completed all 10 modules of the program. Satisfaction with the program was high, with a majority of participants indicating that they would recommend it to others ($n = 56$, 98.2%).

Conclusion: The OCD-NET program is overall highly acceptable and appears to meet patients' needs. ICBT with therapist guidance significantly reduces OCD and depressive symptoms in real world settings and can be integrated into routine psychiatric outpatient treatments.

Presentation 4: Preliminary efficacy of a mobile-based values intervention for improving psychological well-being in university students: a randomized controlled trial

**Pedro Sarrión¹, Lorena Desdentado¹, Ausiàs Cebolla¹, Rosa M. Baños¹,
Alejandro Dominguez-Rodriguez², Ernst Bohlmeijer², Gerben Westerhof²**

¹ University of Valencia, Spain

² University of Twente, The Netherlands

Introduction: Acceptance and Commitment Therapy (ACT) integrates valued living (i.e., clarifying and acting on values), which has been shown to enhance well-being. These kinds of interventions usually include imaginary tasks, but it is still unknown the impact of fostering imagination to enhance values work. This study evaluated a 7-day mobile

intervention using two modalities of daily values-based ACT micro-interventions: one relying only on imagination and another supported by photography.

Methods: 112 university students from Dutch universities were randomly assigned to the imagination, photography, or control groups. Both experimental groups received the micro-interventions. The photography group was also instructed to look at personal pictures. Psychological well-being and valued living were assessed using the Mental Health Continuum-Short Form and Engaged Living Scale. We conducted a two-way repeated measures ANOVA with Bonferroni-adjusted post-hoc comparisons.

Results: A significant interaction effect was found only for valued living ($F=5.13$, $p=.007$, $\eta^2=.091$), with the photography group showing greater improvement from pre- to post-intervention than the control group, with no other significant comparisons observed. A similar but non-significant trend was observed for emotional ($F=.767$, $p=.467$, $\eta^2=.015$) psychological ($F=1.061$, $p=.350$, $\eta^2=.020$) and social well-being ($F=1.681$, $p=.191$, $\eta^2=.032$).

Conclusions: This study highlights the relevance of visually supporting values-based micro-interventions to enhance their efficacy. Future research should include large-scale Randomized Controlled Trials (RCTs) to ensure sufficient statistical power to detect intervention-specific effects and explore potential moderators, such as individual imagery abilities and the quality of practice of micro-interventions.

Track 23: Youth Mental Health

Presentation 1: Strengthening Youth Mental Health through Online Counselling: A Case Study of #Tosemjaz in Slovenia

Petra Tratnjek¹, **Ksenija Lekić**¹, **Domen Kralj**¹, **Nuša Konec Juričič**¹, **Anja Jularić**¹, **Patrik Senica**¹, **Maruša Naglič**¹, **Marjan Cugmas**²

¹ National Institute of Public Health, Slovenia

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Introduction: The "To sem jaz" ("This is Me") program is a comprehensive mental health initiative for adolescents, launched in 2001 by the National Institute of Public Health. Its key component is Slovenia's largest online information and counselling platform #Tosemjaz (www.tosemjaz.net), which offers anonymous, simple, and free access to expert advice for adolescents.

Methods: With nearly 25 years of experience, the service has provided various online interventions, consistently offering simple access to expert advice for adolescents. The service reaches adolescents in psychological, emotional and physical distress. The multidisciplinary network of counsellors includes over 100 volunteer professionals. Editorial office systematically analyses user questions to monitor trends and emerging needs. To further support the adolescents, the synchronous online counselling (chat) was established in 2022, complementing the original asynchronous format.

Results: Since its inception, over 60,000 questions have been answered. #Tosemjaz attracts approximately 200,000 unique visitors annually. Experts answer around 3,500 questions each year, with 75% answered within five days. In the last year, the service has hosted about 200 chat counselling sessions. About 75% of questions come from girls, most questions are related to interpersonal relations, dealing with emotions and physical maturation. Over the recent years, the proportion of severe distress-related questions (about, e.g., suicide, anxiety and depression) has increased (23% in 2024). Specifically, about 100 questions were related to suicide in 2024.

Conclusions: Slovenia's oldest and largest online counselling service for adolescents – #Tosemjaz – remains a vital, confidential resource for young people in need of support.

Presentation 2: Chatbot-based intervention for distressed youth in Lithuania: results of a pilot randomized controlled trial

Austėja Dumarkaitė¹, Livija Žiemienė¹, Adomas Gražinis¹, Ramunė Serapinienė¹, Evaldas Kazlauskas¹, Kenneth Carswell², Anne M. de Graaff², Wietse Anton Tol³, Ulrich Reininghaus⁴

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⁴ Central Institute of Mental Health, Department of Public Mental Health, Germany

Introduction. Emerging adulthood is a developmental stage associated with higher vulnerability for mental disorders. Technology-based interventions can effectively provide mental health resources and support to young people. While chatbot interventions have grown rapidly, research on their effects is still limited. This study examines the feasibility of a transdiagnostic chatbot-based CBT intervention for distressed youth.

Methods. Using a randomized controlled trial (RCT) design, the study included 80 young adults aged 18-25 years with elevated distress levels (K6 score >7). Participants were

assigned to a guided 10-session transdiagnostic CBT chatbot intervention called STARS (Scalable Technology for Adolescents and Youth to Reduce Stress) delivered over 8 weeks (n = 40) or enhanced usual care (n = 40). STARS is a World Health Organization-intervention culturally adapted for youth in Lithuania. The STARS intervention includes stress psychoeducation, CBT-based coping strategies, and five brief support calls from trained "e-helpers". Symptoms of depression (PHQ-9), anxiety (GAD-7) and psychological well-being (WHO-5), among other measures, were assessed at baseline, in 8 weeks, and will be assessed in 20 weeks.

Results. After a cultural adaptation process, this pilot RCT started in November 2024 with expected completion of three-month follow-up in April 2025. Pre-post differences over time in symptoms of depression, anxiety and psychological well-being between the intervention and control groups will be presented.

Conclusions. Transdiagnostic chatbot-based interventions could be a viable option for youth who experience elevated distress levels. More research is needed in this field with fully powered RCTs conducted to evaluate the effects in different settings and cultures.

Presentation 3: Effectiveness of a Guided Internet-Based Self-Help Intervention for Reducing Procrastination in University Students – a Randomized Controlled Trial

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Procrastination is highly prevalent among students and has several negative consequences, affecting academic performance, mental health, and prospects for future professional development. However, there exists a treatment gap, with there being many more students with problems than those receiving help. This study aims to assess the effectiveness of a guided internet-based self-help intervention, GetStarted, in addressing procrastination among college students. In this two-arm randomized controlled trial, 403 students were randomly assigned to GetStarted or waitlist control. The primary outcome was the difference in procrastination behaviours between intervention and control measured on the Irrational Procrastination scale (IPS) at post-test (4 weeks post-baseline). In addition, long-term effects based on the difference in the IPS scores from baseline to 6 months follow-up were assessed in the intervention group. Secondary outcomes were differences in depressive symptoms, anxiety, stress, and mental health-related quality of life. All analyses were based on the intent to treat principle. The Random Forest Lee

bounds approach was applied as a sensitivity and robustness analysis. The sociodemographic characteristics of the participants were examined as treatment moderators. Finally, treatment acceptability was assessed through satisfaction with treatment, program usability, satisfaction with e-coach, and treatment adherence. Our results revealed that GetStarted was significantly effective in reducing procrastination at the post-test (Cohen's $d = 0.40$), and this effect remained stable at 6-month follow-up ($p < 0.001$). The intervention group also experienced reductions in depressive symptoms, anxiety, and stress, along with an increase in quality of life from baseline to post-test and 6-month follow-up, although these changes were not statistically significant apart from perceived stress. No significant moderators influenced treatment effectiveness. Overall, participants reported good acceptability of the treatment. GetStarted offers an effective, flexible, and low-intensity solution for treating procrastination, with the potential to prevent common mental health issues among college students.

Presentation 4: Discussions between Young People and Adult Online Counsellors in an Anonymous Chat-Service for Supporting Well-Being

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Introduction: Young people seek help online. Anonymous online chat counselling services (OCCS) can provide low-threshold support and strengthen well-being of young service users (YSU). We have examined the needs that young people present during chat discussions (max 45 minutes) with an adult online counsellor (AOC) and the role of anonymous OCCS in supporting well-being of YSUs generally and at the time of a crisis.

Methods: The data consisted of text-based synchronous conversations held in a large Finnish OCCS that aims to support the mental well-being of youth (12–29). Our data included over 10,000 chat discussions (12/2022–11/2024) that both the YSU and AOC had given permission for research use.

Results: Our results showed that young people sought help for various needs. Also, sensitive issues such as conversations about suicide emerged every day. Many young people brought up chat as a service where they had the opportunity to discuss issues they did not want to talk about in face-to-face services or to burden their close people with. Immediately after a school shooting incident a lot of young people tried to enter the OCCS.

Conclusions: OCCS are an important channel for young people to get in contact with adults. However, professionalism and careful ethical consideration are needed when providing chat services, as well as being prepared to increased volume of YSUs at the time of unexpected crisis. The current OCCS do valuable work and there is a lot of developmental potential.

Track 24: Internet-Delivered Interventions: Reflections, Reviews, and Future Directions

Presentation 1: Current Landscape of Digital Mental Health Interventions for Child, Adolescent and Young Adulthood Anxiety and Depression: A Systematic Review and Meta-Analysis

Kim Mathiasen¹, Nikita Sørensen¹, Julie Buhl-Wiggers², Hans Hougaard Frederiksen², Merete Konnerup³, Marie Paldam Folker³, Johanne Lomholt Jeppesen¹, Helene Skaarnes^{1,3}

¹ Department of Psychology and Behavioural Sciences, Aarhus University, Denmark

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The prevalence of mental disorders among children and young people (CYP) is increasing. Nonetheless, while evidence-based psychological treatments exist, too few receive timely and adequate help. It is well established that digital mental health interventions (DMHI) can be effective in treating many common mental health disorders in adults, but the evidence is less well established among CYP. Therefore, this systematic review and meta-analysis seeks to synthesize the existing evidence for DMHIs for this target group. The systematic review was conducted according to the PRISMA statement.

The largest databases for peer reviewed scientific journals in the field were searched (PubMed, CINAHL, Cochrane Library, PsycINFO, Scopus, Web of Science, ERIC) for either open pragmatic studies or randomized controlled trials (RCT) of the clinical effect of DMHI for CYP (age 0-24) suffering from either depression or anxiety disorders published in English over the past 20 years. 8.433 studies were found in the initial search.

Relevant studies were selected by two independent reviewers in a two-stage process. Study characteristics, population characteristics, clinical characteristics, characteristics of the digital intervention (e.g. iCBT, VR, etc.), level of parental involvement, type of intervention methodology (e.g., cognitive behavioural therapy), type of clinical support,

outcome measures, and results were extracted. The risk of bias for RCTs was assessed using the Cochrane Risk of Bias tool. For non-randomised studies, the ROBINS-I tool was used.

Results of the narrative synthesis and the meta-analysis will be presented and discussed.

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Presentation 2: Internet interventions 27 years later. What have we learned and what remains the same?

Gerhard Andersson¹

¹ Linköping University, Sweden

The aim of this talk is to present an overview of the field since 1998. Treatment formats, applications and dissemination will be covered. The talk is informed by a recent book “Internet-delivered CBT. Distinctive features” (2025), and the focus will be on how much progress has been made during the time period. First, it is clear that internet CBT (ICBT) programs now exist for numerous conditions and target groups. Less is done for older adults and children but overall the conclusion that therapist-supported ICBT works as well as face-to-face CBT is still valid. Moreover, an increasing number of studies test programs dealing with problems for which there is no previous face-to-face research. However, effects of ICBT has more or less remained the same regardless of technical advancements and treatment development. Future research including modern statistical tools (and perhaps Artificial Intelligence) will potentially change this, but a call is made for experimental research and use of other outcomes than purely self-reported measures.

Presentation 3: The Role of Psychologists in Digital Mental Health: Insights from the Inaugural Digital Psychology Nordics Conference

Kristofer Vernmark¹, Kim Mathiasen², Lauri Lukka³, Erla Björnsdóttir⁴, Kaja Asbjørnsen Betin⁵

¹ Linköping University, Sweden

² University of Southern Denmark, Denmark

³ Aalto University, Finland

⁴ Reykjavik University, Iceland

⁵ Lovisenberg Diakonale Hospital, Norway

The digital transformation of mental healthcare presents both opportunities and challenges for psychologists and other healthcare professionals. While digital interventions have demonstrated efficacy, their integration into routine clinical practice remains complex. Many clinicians face barriers related to digital competencies, ethical considerations, and the adaptation of therapeutic skills to online formats. The Nordic region, known for its strong digital infrastructure and commitment to equitable healthcare, is uniquely positioned to lead the development and implementation of sustainable models for the provision of digital mental health interventions. To address these opportunities and challenges, a Nordic collaboration was established that included The National Association for Digital Psychologists in Sweden and Psykologenes Forening for Digital Helse in Norway, together with representatives from Denmark, Finland, and Iceland. The first step in this initiative was the inaugural Digital Psychology Nordics conference, bringing together 181 clinical psychologists, researchers, and decision makers in the Nordic region to explore the role of psychologists in digital practice. The evaluation survey (n=36) indicated strong engagement with digital psychology, with 72.2% of participants already incorporating digital solutions into their practice. Moreover, 88.9% recognized digital psychology as a crucial element for the future of the profession. This presentation will explore learnings from the conference and the evolving role of psychologists in digital mental healthcare, focusing on professional development needs and potential for cross-national collaboration in the Nordic region.

Presentation 4: Internet- and mobile-based psychological interventions: An updated EFPA narrative review on current state of the art and implications for clinical practice

Tom Van Daele^{1,2}, Jessica Cushnan², Paul Best², Adam Elliott³, Alison McKenna⁴

¹ Thomas More University of Applied Sciences, Belgium

² Queen's University Belfast, United Kingdom

³ Northern Health and Social Care Trust, United Kingdom

⁴ South Eastern Health and Social Care Trust, United Kingdom

Introduction:

In 2018, the European Federation of Psychologists' Associations (EFPA) e-health taskforce published a report on internet- and mobile-based psychological interventions (IMIs), which provided an overview and summarized current evidence regarding the use and efficacy of IMIs for the prevention and treatment of mental health disorders. The aim was to offer psychologists and other mental healthcare professionals a tangible overview of this

domain. Given the many changes in that domain that have occurred ever since, an updated narrative review was warranted.

Methods: In order to obtain a broad overview, the choice was again made for a narrative review, exploring different angles in current literature regarding the use of IMIs.

Results: The resulting review structures all retrieved studies and commences by characterizing IMIs, highlighting their main varieties and purposes, followed by touching upon their current evidence base. Subsequently, the (increasing) impact and potential of AI on IMIs is explored. After this, the focus shifts to the potential for and impact on practice. Firstly, limitations and challenges are detailed, such as potential adverse effects, as well as legal and ethical challenges. Secondly, the current literature regarding IMIs implementation is detailed, with attention for barriers, inequalities and inclusion, after which the current use of IMIs in routine care is zoomed in on.

Conclusions: The retrieved results across all these different sections and domains paint a nuanced picture, summarizing the potential as well as the pitfalls of IMIs. In a general discussion, key findings are summarized, focusing specifically on the potential for current as well as future practitioners and practice.

SATURDAY OCT. 5TH | THIRD SESSION 14:30-15:30

Track 25: Stress, Emotion Regulation and Wearables

Presentation 1: Stress Tracking in Real Life: Combining Wearable Monitoring and Daily Self-Report

Nele A.J. De Witte¹, **Toon Colman**¹, **Glen Debard**¹, **Romy Sels**¹, **Jasper Gielen**², **Nina Catharina Van Oost**², **Jean-Marie Aerts**², **Bert Bonroy**¹

¹ Thomas More University of Applied Sciences, Belgium

² KU Leuven, Belgium

Introduction: Stress-related complaints are common and are associated with negative academic, professional, and health outcomes. This underscores a need for tailored interventions to promote insight into stressors and to reduce their negative impact. Consumer-grade wearables could facilitate continuous daily-life stress monitoring and contribute to stress applications which can be upscaled for healthcare implementation. However, a stress response is complex and can manifest itself in nervous system

activation, but also changes in behaviour and subjective mood. Therefore, this study aims to develop and test a stress monitoring approach and custom algorithms combining wearable data with self-reports.

Methods: Participants are recruited in waves of 50 participants for a 3-month trial with the Fitbit Charge 6 and daily smartphone-based self-assessments. The smartphone app summarizes relevant data with a stress index, as a result of the custom algorithms. Additional monthly questionnaires collect data on perceived stress (PSS-10), well-being, somatic symptoms, and sleep quality.

Results: The first wave of data collection is ongoing (N = 50; Mage = 43.56; Female = 38). At baseline, the PSS-10 indicates an average score of 14.56. Twenty participants already used a wearable and most have occasionally used it to inform on stress (N = 18). By September 2025 two waves of data collection will be completed and detailed daily-life stress dynamics can be presented.

Conclusions: Wearables are increasingly available and can be useful to inform on stress when combined with self-report information. The current contribution uses scientifically validated instruments and principles with the aim of providing individualized stress insights.

Presentation 2: Promoting International University Students Stress management and Well-being through brief ACT-based interventions, further outlining a qualitative study exploring adaptation and integration styles informing a newer ACT-based RCT

Francesca Brandolin¹, Päivi Lappalainen¹, Simone Gorinelli¹, Raimo Lappalainen¹

¹ University of Jyväskylä, Finland

Studies have shown that international students are at increased risk of experiencing poor mental health. My doctoral dissertation analysed a low-threshold acceptance and commitment therapy (ACT) group workshop delivered in two different formats. International students (n=101) participated in five group meetings face to face (n=53) or online using the videoconferencing application zoom (n=48), as the workshop was transferred online after the outbreak of the COVID-19 pandemic. Symptom and process measures indicated positive changes in both groups (e.g., PSS-10, face-to-face; $dw=0.94$, online $dw=0.54$; AFQ-Y, face-to-face, $dw=0.84$, online $dw=0.55$), with a slightly larger effect in the face-to-face group. This study suggests that a brief ACT-based group workshop is well received and effective in enhancing the psychological well-being of international students whether delivered face-to-face or online. The design, results and multicultural

implications of this dissertation will be discussed. Furthermore, the presentation will highlight how the project evolved over time and outline the plan of the new project looking into qualitative data on integration and adaptation styles of international university students and personnel to inform the design of a new brief ACT skills training intervention and randomized controlled trial.

Learning Objectives:

1. Discuss different ACT-based interventions, including their clinical efficacy and unique contribution to the ACT literature.
2. Discuss the multicultural context of international students and personnel living and studying abroad and how an ACT-based intervention and skills training is proven to be beneficial and effective across cultures.
3. Integrate the interventions with a broader qualitative exploration in contextual behavioral science, such as the integration and adaptation strategies of international students and personnel living abroad, and the values related to their choice.

Presentation 3: Exploring a brief Internet-Based Affect Labeling course for Emotion Regulation Difficulties

Hanna Sahlin¹, Andreas Olsson², Viktor Kaldo^{2, 3}

¹ Karolinska Institutet, Department of Clinical Neuroscience, Sweden

² Karolinska Institutet, Sweden

³ Linnaeus University, Sweden

Introduction: Difficulties in emotion regulation have received growing research and clinical attention in recent decades, largely due to their role as a transdiagnostic process contributing to the development and maintenance of various psychiatric disorders.

The ability to identify and label emotions (affect labeling, AL) is a core skill taught in behavioral psychological treatments, such as dialectical behavior therapy, to enhance emotion regulation. However, its specific clinical impact remains unclear.

This project aimed to further the understanding of the immediate and long-term emotion-regulating effects of affect labeling in individuals with (clinical group) and without (non-clinical group) a psychiatric diagnosis.

Methods: In a randomized, wait-list controlled trial, 178 adult participants with self-reported emotion regulation difficulties were randomized to receive a 14-day long internet-

intervention with therapist support aimed at improving AL-skills. Participants were stratified on clinical status and randomized to receive the intervention either directly or after 14 days.

Primary outcome was assessed with the Difficulties in emotion regulation scale. Daily ratings of AL were used for mediation analysis.

Results: Data analysis is ongoing, and results will be presented.

Conclusions: This project may contribute with important information on the effect of AL on emotion regulation difficulties.

Presentation 4: Savoring in the wild: Self-efficacy and depressive symptoms in positive emotion (up)regulation

Desiree Colombo¹, Rosa María Baños^{1,3}, Katharine H. Greenaway²

¹ Polibienestar Institute, Department of Personality, Evaluation and Psychological Treatments, University of Valencia, Spain

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³ CIBER Fisiopatología Obesidad y Nutrición (CIBERObn), Instituto de Salud Carlos III, Spain

Introduction: Individuals with depression often struggle to regulate positive emotions, partly due to a reduced use of savoring strategies. However, the mechanisms underlying this impairment remain poorly understood. Here, we explored the role of emotion regulation self-efficacy in the use of savoring strategies among individuals with varying levels of depression.

Methods: We performed two smartphone-based Ecological Momentary Assessment studies exploring the dynamic interplay between self-efficacy and savoring in daily life. Study 1 (n=155) focused on positive regulation self-efficacy (i.e., an individual's belief in their ability to enhance or maximize positive experiences), while study 2 (n=92) examined coping self-efficacy (i.e., an individual's belief in their ability to manage daily stressors).

Results: In both studies, low self-efficacy predicted a subsequent decline in savoring strategy use, which, in turn, further diminished self-efficacy at the next assessment. This pattern was particularly pronounced among individuals with more severe depressive symptoms.

Conclusions: These findings contribute to understanding positive emotion regulation deficits in depression by identifying self-efficacy as a key explanatory factor, indicating that both core functions of savoring – mood enhancement and mood repair – are similarly

influenced by self-efficacy. This maladaptive vicious cycle may further strengthen depressive symptoms by limiting the ability to generate and sustain positive emotions, as well as buffer against stress-induced emotional distress. Overall, both studies highlight the importance of developing interventions aimed at boosting emotion regulation self-efficacy to break this cycle and foster resilience in depression.

Track 26: Therapist Support and Guidance

Presentation 1: Therapist guidance behavior in tailored ICBT for depression

Victoria Aminoff¹, Matilda Berg¹, Gerhard Andersson¹, Laura Luisa Bielinski², Thomas Berger²

¹ Linköping University, Sweden/Switzerland

² University of Bern, Switzerland

Introduction: While therapist-supported ICBT is effective for depressive symptoms, little is known about how therapists provide guidance. This study explores therapist behaviors in individually tailored internet-based cognitive behavioral therapy (ICBT) for depression, where therapists select patient modules. The study examines the distribution, timing, and relationship of therapist behaviors with symptom reduction and potential negative effects of treatment.

Methods: In the study, 1055 messages from six therapists to 62 participants in individually tailored ICBT for depression were analysed with content analysis. The proportions of identified therapist behaviors were analyzed and compared to earlier research on non-tailored ICBT. The relationships between therapist behaviors and changes in depressive symptoms (Patient Health Questionnaire-9), as well as negative effects (Negative Effects Questionnaire-20) were assessed.

Results: Preliminary analyses on frequencies of therapist behaviors, a comparison to former results for non-tailored ICBT, and the relationship to depressive symptoms and negative effects will be presented at the conference.

Discussion: The findings provide novel information on therapist behaviors during guidance in tailored ICBT. Clinical relevance of the findings along with directions for future research in the realm of guidance behavior in ICBT will be discussed.

Presentation 2: The Role of Therapist Support in Internet-Based Trauma-Focused CBT Intervention for Posttraumatic Stress Disorder: A Qualitative Study

Greta Guogaitė¹, Augustė Nomeikaitė¹, Evaldas Kazlauskas¹, Odeta Geleželytė¹, Jonathan Bisson², Catrin Lewis²

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² Division of Psychological Medicine and Clinical Neurosciences, Cardiff University School of Medicine, United Kingdom

Introduction. Due to limited healthcare resources and various barriers, many individuals with posttraumatic stress disorder (PTSD) do not receive adequate treatment. Internet-based interventions can help reduce these barriers and minimize the resources required from therapists. Nevertheless, the role of the therapist and the level of involvement in internet-based treatments is still debatable. ‘Spring’ is a guided internet-based trauma-focused CBT intervention for moderate PTSD. The current study aims to explore Spring participants’ experiences and potential contributing factors to their mental health changes.

Methods. Semi-structured interviews with 10 female participants (age: $M = 43.1$, $SD = 12.97$) were conducted after 3-4 months since completion of the treatment. According to the diagnostic International Trauma Interview, 7 participants had an ICD-11 PTSD diagnosis, and 3 had PTSD symptoms but did not fully qualify for all diagnostic criteria. A thematic analysis was conducted following the approach of Braun and Clarke (2006).

Results. Participants claimed that the role of the therapist was significant for their mental health changes and drop-out prevention. Analysis revealed the therapist’s importance in overcoming avoidance to continue treatment, support in understanding trauma and its impact, emotion regulation, and guidance through the program. The meaning of the relationship with the therapist, as another human being, in terms of support, active listening, and acceptance emerged. The analysis also revealed other themes about mental health changes and potential mechanisms related to them.

Conclusion. The findings of this study reveal the importance of the therapist’s role in the process of change through internet-based interventions for PTSD.

Presentation 3: Exploring the role of psychologist- and client-related factors in early withdrawal from online psychological counselling

Alfredas Laurinavičius¹, Jonas Eimontas², Neringa Grigutytė², Paulina Paškevičiūtė², Vaida Stankutė^{2,3}

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² Vilnius University, Lithuania

³ Online Counseling Platform *Pasikalbėk*, Lithuania

Online psychological counselling is growing in popularity as an alternative to face-to-face psychological counselling. However, the rate of early withdrawal or termination is considerable. In this study, we aim to investigate the factors explaining early withdrawal from online psychological counselling by assessing psychologists and their clients on one of Lithuania's online platforms for psychological services, which serves more than 1 500 clients a year. Preliminary data show that two-thirds terminated counseling after 3 sessions (36% of clients after the first session, 16% after the second session and 9% after the third session). The question of the determinants of early termination of online counselling, such as the psychologist's qualification and experience, belief in therapy, expectations from therapy, therapeutic alliance, levels and changes in depression, anxiety and stress, is of scientific and practical relevance.

Method: The study uses a repeated measures design. The study is expected to involve 200 clients of the online counselling platform and their therapists. Participants agree to complete the questionnaires regularly for up to 10 sessions. Measures include the Big Five Inventory - 2 (Soto and John, 2017), the Working Alliance Inventory (Hatcher and Gillaspay, 2006), the Milwaukee Psychotherapy Expectations Questionnaire - Brief (Normberg et al., 2011) and the Therapist's Expectations for Clients Scale (Bartholomew et al., 2020), the Depression Anxiety Stress Scale-21 (Lovibond and Lovibond, 1995), and socio-demographic and open-ended questions about reason for termination.

Results and conclusions: Data collection is ongoing. Initial analyses indicate that factors related to both psychologists and their clients are important in continuing or discontinuing therapy. The study was funded by a grant from the Research Council of Lithuania (P-MIP-24-136).

Presentation 4: "I have been hanging on by my fingernails for years –now I have allowed myself to fall" Qualitatively investigating the experience of internet-based psychotherapy for functional somatic disorder

Thomas Tandrup Lamm^{1, 2}, Lisbeth Frostholt^{1, 2}, Heidi Frølund Pedersen^{1, 2}

¹ Functional Disorders, Aarhus University Hospital, Denmark

² Department of Clinical Medicine, Aarhus University, Denmark

Introduction: Cognitive behavioral therapy (CBT) is an effective treatment for functional somatic disorder (FSD), but access to treatment remains limited in many countries. To address this, internet-based CBT (iCBT) has been shown to improve accessibility and scalability without compromising effectiveness. However, most research on iCBT for FSD has relied on quantitative designs, providing limited insight into patients' subjective experiences with this digital approach. This study aimed to explore the experience of receiving iCBT for multi-system FSD.

Methods: This study was conducted within the context of a larger RCT study testing the efficacy of iCBT for multi-system FSD. Semi-structured qualitative interviews were conducted three months post-treatment with 15 patients who had received therapist-assisted iCBT. The interviews were transcribed and analyzed by two researchers using reflexive thematic analysis.

Results: The reflexive thematic analysis identified four themes. The first theme explored patients' descriptions of the changes they observed following treatment. The second theme focused on how patients understood FSD as a condition. The third theme examined the key aspects of treatment that patients had worked with and found helpful. The fourth theme addressed the factors that facilitated or hindered engagement with the treatment.

Conclusion: Findings from this study highlight that patients with multi-system FSD found iCBT acceptable, useful, and relevant, and that the internet format did not seem to compromise the delivery of treatment. Nevertheless, several factors inhibited treatment engagement and thereby hampering the attainment of desired treatment outcomes for many.

Track 27: Developing and Optimizing Digital Interventions For Substance Use

Presentation 1: Involvement of End-Users in the Development of Digital Interventions for the Prevention and Treatment of Problematic Cannabis Use

Jasmin Lostedt¹, **Laura Väättäinen**², **Minna Stolt**², **Tella Lantta**², **Solja Niemelä**³, **Kaisa Mishina**¹

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² Department of Nursing Science, University of Turku, Finland

³ Department of Psychiatry, Faculty of Medicine, University of Turku, Finland

Introduction: The rising prevalence of cannabis use has heightened the demand for effective prevention and treatment strategies. However, considerable barriers to help-seeking persist, including stigma surrounding cannabis use and tendency to underestimate cannabis-related problems. Despite these challenges, many individuals who use cannabis express a desire to reduce or quit independently, highlighting the need for low-threshold intervention options. Digital interventions offer a promising solution by addressing treatment demand, overcoming barriers to care and facilitating self-directed behavior change. End-users insights can provide valuable information for improving digital interventions to better meet their needs. This review evaluates the involvement of end-users in developing digital interventions for problematic cannabis use.

Methods: A mixed-methods systematic review was conducted across six databases, supplemented by a manual search. The analysis utilized a deductive approach guided by the Involvement Matrix and was conducted in accordance with a convergent integrated approach.

Results: Twenty-six studies were included. Eight studies involved end-users in development. Among these, two studies engaged individuals who used cannabis, while six involved professionals in the field. The involvement of end-users varied, with roles ranging from listeners (n=1) to co-thinkers and advisors (n=4) and partners (n=2). One study did not specify the role of end-user involvement. Three studies used specific approaches to involve, including a person-centered approach, a participatory co-design and utilizing young actors.

Conclusions: Our findings suggest that there is need for earlier and more active involvement of end-users in the development phase. This could significantly enhance the relevance, engagement and effectiveness of digital interventions.

Presentation 2: CANreduce 3.0: A Randomized Controlled Trial Comparing Mindfulness-Based and CBT-Based Digital Interventions Against a Waiting List Control Condition for Cannabis Use Reduction

Nikolaos Boumparis¹, Andreas Wenger¹, Michael P. Schaub¹

¹ Swiss Research Institute for Public Health and Addiction at the University of Zurich, Switzerland

Introduction: While CBT-based digital interventions show promise in reducing cannabis use, the integration of mindfulness components remains unexplored. This study compared the effectiveness of mindfulness-based versus CBT-based digital self-help interventions against a wait-list control for reducing cannabis use.

Methods: In a three-arm randomised controlled trial (N=301), frequent cannabis users were randomly assigned to one of three conditions: a mindfulness-based digital intervention (n=109), a CBT-based digital intervention (n=94), or a wait-list control group (n=98). Both active interventions consisted of eight modules delivered over six weeks. The primary outcome was days of cannabis use over the preceding 30 days, measured at baseline, post-intervention, and 3- and 6-month follow-up.

Results: Both interventions significantly reduced cannabis use over time, with the mindfulness group showing the strongest reductions at 6-month follow-up. Compared to controls, the mindfulness-based intervention demonstrated superior reductions in cannabis use ($b = -1.33$, $p < .001$), with a significant group by time interaction ($b = 0.35$, $p < .001$). The CBT intervention showed similar but slightly smaller reductions. Both active interventions maintained their effects across all follow-up periods (6 weeks, 3 months, and 6 months), with the greatest reductions observed at the 6-month follow-up. Initial cannabis use levels did not differ significantly between groups at baseline ($p = .497$). Secondary outcomes improved similarly in both active conditions.

Conclusion: Both interventions showed significant reductions in cannabis use compared with the control group, with the mindfulness group showing the strongest sustained reductions up to the 6-month follow-up. These findings suggest that mindfulness-based components may provide enhanced treatment outcomes compared to traditional CBT-only approaches.

Presentation 3: Digital Innovations Transforming Opioid Use Disorder Treatment: Enhancing Adherence Through Mobile Technology

Jorge Palacios¹

¹ Bright Therapeutics, USA

Adherence to opioid use disorder (OUD) treatment remains a critical challenge. Digital interventions have the potential to bridge adherence gaps and reduce drop-out rates by providing real-time support, monitoring, and clinician engagement. This study evaluates the implementation of Recovery Connect, a mobile application supporting clinicians and patients in substance use disorder treatment. Over a 12-month period, 11,495 patients and 302 mental health professionals (MHPs) across 53 clinics utilized the app's self-monitoring tools, clinician-patient messaging, and evidence-based therapeutic resources.

Patient and clinician acceptance of Recovery Connect was high, with 83.7% of patients expressing intent to use the app. Thematic analysis of patient surveys identified key facilitators of engagement, including improved access to counselors, enhanced self-monitoring for accountability, and the convenience of digital tools in daily recovery. Clinicians valued the app's ability to streamline communication, extend support between clinic visits, and provide real-time insights into patient progress.

Results demonstrated that early and sustained digital engagement was a key predictor of adherence. Self-monitoring entries significantly increased the likelihood of 30-day retention, as well as clinician-patient interactions, with patients receiving at least three messages from their MHPs in the first two weeks having 42% higher odds of remaining in treatment. Compared to historical data, 30-day retention rates improved by 12-13% before and after implementing the app.

Findings underscore the critical role of digital tools and adherence strategies in OUD treatment, demonstrating that real-time tracking, proactive clinician engagement, and meaningful use of these tools can enhance retention.

SATURDAY OCT. 5TH FOURTH SESSION 16-17

Track 28: Women's Mental Health & Life Transitions

Presentation 1: "Cuidar-ME": Development of an E-Health CBT Intervention to Promote Women's Mental Health and Wellbeing During (Peri)Menopause

Ana Fonseca ¹, Fabiana Monteiro ¹, Mariana Branquinho ¹

¹ University of Coimbra, Portugal

Perimenopause is a complex transition marked by dynamic physical and psychological changes, with potential negative impact on women's individual, social and professional dimensions. Given the benefits of e-health tools (e.g., accessibility, privacy) and the efficacy of cognitive-behavioral therapy [CBT] for menopausal symptoms, this project aims to develop an e-health intervention to promote Portuguese women's mental health and wellbeing during (peri)menopause ("Cuidar-ME").

The development of the intervention followed a user-centered approach and included several studies to inform the structure, therapeutic goals, and technological features of the intervention. First, a systematic review was conducted to provide a synthesis on CBT-based interventions for menopausal symptoms. Content and structural aspects (e.g., CBT approach, number of sessions) were identified and provided a first basis for the intervention content. Second, a focus group was conducted to explore the perceptions of mental health professionals (CBT psychologists) about the intervention's content and characteristics. Third, a cross-sectional online survey assessed (peri)menopausal women's preferences and acceptability about the use of the e-health intervention.

Based on the findings, the general structure and contents of the intervention "Cuidar-ME" were created. It adopted a web-based format organized into eight thematic modules: Menopause; Emotions; Thoughts; Self-care; Sleep; Interpersonal relationships; Sexuality & Intimacy; Final balance. The intervention includes interactive exercises (e.g., symptoms monitoring) with personalized feedback and optional modules to tailor content to women's needs.

The development of the intervention Cuidar-ME considering the target population and stakeholders' perceptions will enhance its adequacy to women's needs, improve its implementation and adherence, and increase its effectiveness.

Presentation 2: Factors Associated with Negative Psychological Consequences of the Breast Cancer Screening Process in Mexican Women: A Study for the Development of an Internet-Based Psychoeducational Program

Reyna Jazmín Martínez-Arriaga¹, Yineth Alejandra Muñoz-Anacona¹, Joel Omar González-Cantero¹, Norma Alicia Ruvalcaba-Romero¹, Adrián Antonio Cisneros-Hernández¹, Fabiola Macías-Espinoza¹, Sergio Osvaldo Meza-Chavolla², Leivy Patricia González-Ramírez³, Paulina Erika Herdoiza-Arroyo⁴, Alejandro Dominguez-Rodriguez⁵

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⁵ University of Twente, The Netherlands

Introduction: In Mexico, breast cancer is frequently diagnosed at advanced stages, making early detection a priority for reducing mortality. Some factors such as concerns about cancer prevent women from undergoing screening tests. Online interventions could encourage women to approach sooner for a diagnosis. This study aimed to evaluate factors associated with the concerns of women attending a breast cancer clinic to design and develop Salud Mamaria, an online intervention to support them during the diagnosis.

Method: A cross-sectional study was conducted with 468 women attending a specialized clinic for breast cancer screening in Guadalajara, Mexico. The Psychological Negative Consequences Questionnaire (CCPN) for breast cancer screening, the Hospital Anxiety and Depression Scale (HADS), the Sense of Coherence (SOC-13), and the Psychological Well-Being dimension of Nowack's Stress Scale were administered. Spearman's rho correlations and logistic regressions were calculated.

Results: The mean age was 53 years (± 8.7). Anxiety was observed in 48.8% of women, and depressive symptoms in 31.6%. Negative psychological consequences were positively correlated with anxiety ($\rho = .588^*$) and depression ($\rho = .516^*$) and negatively correlated with sense of coherence (SOC) ($\rho = -.393^{**}$) and coping ($\rho = -.507^{**}$). Anxiety and depression, low coping abilities, and younger age were the biggest predictors of negative psychological consequences of breast cancer screening.

Conclusion: Based on these findings, an internet-based psychoeducational program (Salud Mamaria), was designed, to reduce the psychological impact of screening. This self-administered and free program comprises three tailored interventions to support women undergoing screening tests or receiving a breast cancer diagnosis.

Presentation 3: From screens to body image improvement: A scoping review of women's digital body image interventions' content, engagement, and acceptability

Gabija Jarašiūnaitė-Fedosejeva¹, Erika Gibė¹, Gabija Juzėnaitė¹, Gabija Kilkutė¹,
Amera Mojahed¹, Viktorija Stankevičienė¹, Eglė Urvelytė¹

¹ Vytautas Magnus University, Lithuania

Introduction. Negative body image perception can have various adverse effects on women's health. Digital interventions have been shown to be as effective as face-to-face interventions and offer broader accessibility. This systematic scoping review synthesizes literature on digital interventions for enhancing body image perception in women without medical conditions strongly linked to body image disturbances, examining their types, content, engagement, and acceptability.

Methods. A comprehensive search was made in PubMed, Web of Science, Scopus, PsycINFO, and CINAHL followed the inclusion and exclusion criteria based on PCC framework (Population, Concept, Context). After duplicate removal, 1,374 studies were identified, 129 full texts screened, and data extracted from 55 studies. The study protocol was registered in the Open Science Framework (OSF).

Results. The identified digital interventions are based on various theoretical frameworks, including positive body image theory, cognitive-behavioral therapy, cognitive dissonance theory, mindfulness, and mixed approaches. These interventions use diverse techniques such as psychoeducation, mindfulness training, intuitive and expressive writing, discussions, and exposure to visual content. Intervention duration ranges from momentary sessions to several weeks. Engagement and acceptability vary across studies and are assessed through objective and subjective measures, including frequency and duration of use, completion rates, engagement with content, perceived benefits, user experience, and overall satisfaction. Most studies report improvements in body image perception and satisfaction.

Conclusions. Digital interventions, grounded in diverse theoretical frameworks and employing various techniques, show promise in improving body image perception, though engagement varies, highlighting the need for further research on optimizing effectiveness.

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Track 29: Adaptation, Personalization and Engagement

Presentation 1: Does personalization increase the effectiveness and adherence in internet-based interventions? A systematic review

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Introduction: Personalization is discussed as a means to enhance the effectiveness and adherence of Internet-based interventions (IBI). IBIs offer numerous options to tailor interventions to individual patients on different levels and through various mechanisms. This includes the content, human support, and technical communication. Currently, it is unclear whether personalized IBI components lead to better therapy outcomes and higher adherence.

Objective: This systematic review aimed to synthesize evidence on the personalization of treatment components within IBIs targeting diverse mental health conditions. Specifically, we focused on studies that directly compared personalized IBIs components to standardized ones to investigate the impact of personalization on mental health outcomes and treatment adherence.

Results: As part of the systematic literature search (pre-registration: CRD42024501774), we searched PubMed, PsycInfo, and MEDLINE for studies published between January 2000 and January 2024. We identified twelve studies that compared personalized to non-personalized IBI components, with the majority focusing on the personalization of IBI content (like a personalized selection of online modules). Only one study reported a superiority of personalization over standard treatment in terms of outcomes. In this study, multiple personalization levels were combined, and patients were actively involved in the decision-making process regarding personalization.

Discussion: The results reveal a gap between the theoretical potential of personalization in IBIs and the current evidence supporting its impact on outcomes and adherence. This talk will critically discuss the findings and suggest strategies for optimizing the implementation and investigation of personalization strategies in IBIs.

Presentation 2: Transnational Adaptation of Two Mobile Mental Health apps: a Design Thinking Approach

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Introduction : Successful transnational adaptation and uptake of digital mental health (DMH) tools entails more than mere translation. Involving users in the design process has proven to improve adherence and acceptance. However, clear steps on how to do so in an international context are lacking. One interesting approach to involve users in the international upscaling process of DMH tools is design thinking.

Methods: We performed two tandem pilot studies, adapting two mobile mental health applications for use in another country, following the five iterative steps of the design thinking process: empathize, define, ideate, prototype and test. The Dutch Stress Autism Mate app, aimed at reducing stress in individuals with autism, was adapted to the Danish context through an iterative process of desk research, and 1 group interview and low-fidelity testing with 3 clinicians and 6 interviews and high-fidelity testing with individuals with autism. The Danish SAFE app, aimed at informing and helping individuals who self-harm, their family and clinicians, was adapted to the Dutch context through an iterative process of desk research, 4 repeated focus groups and low- and high fidelity testing with 7 clinicians, and a survey filled in by 1 individual who self-harms and 2 next of kin.

Results: Both apps were translated and adapted according to the lessons learned during the design thinking process. These lessons were summarized in guidelines.

Conclusions: We provide guidelines for and examples of user participation to help researchers and practitioners involve users in their design and development process of DMH tools.

Presentation 3: The Effect of Virtual Reality and a Sensory Priming on Compassion Meditation: An Individual-Focused Approach

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In recent years, compassion-based interventions have gained recognition for their positive impact on mental health and prosocial behaviour. However, all individuals practicing compassion do not equally benefit from the practice. Two skills (mental imagery and somatosensory perception) are essential for practicing compassion. This randomized controlled trial assess the effectiveness of the two enhancement tools combined with compassion practice related to these specific skills: virtual reality (VR), used to improve mental imagery skills, and a heating pad, used as a priming (SP) of somatosensory perception, as compared to an active control group (compassion meditation alone). Adult participants (N=92) were assessed on several compassion-related self-reported variables and physiological measure (heart-rate variability) before and immediately after a laboratory session, as well as two weeks after daily home-practice. Mental imagery and interoceptive skills were also tested as potential moderators. Results show that, compared to the control group, positive affect increased significantly more in the VR condition, while the decrease in negative affect was significantly smaller in the SP condition. Additionally, mental imagery skills was a significant moderator. Specifically, criticism toward others decreased significantly more in the VR group, and adherence to the daily practice increased significantly more in the SP group, as compared to the control group, but only for participants with low mental imagery ability. This study highlights the value of enhancement tools in boosting the benefits of compassion practice, particularly for individuals with low mental imagery abilities

Presentation 4: Well-being Online: A web-based intervention for enhancing well-being and reducing symptoms of depression and anxiety. Preliminary results of its efficacy

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Introduction: Well-being Online is a self-guided, web-based intervention for adults in seven countries experiencing mild symptoms of depression or anxiety. This study aims to present the preliminary results of its effectiveness in improving well-being and reducing dysphoric symptoms in Mexican participants.

Method: A randomized controlled trial was conducted with a sample of N = 61 (intervention = 27, control = 34). The measures were the Warwick-Edinburgh Mental Well-Being Scale, the Center for Epidemiologic Studies Depression Scale, and the Generalized Anxiety Disorder-7 Scale. A linear mixed model (LMM) was used to assess the intervention's within-subject effect over time, while between-group differences were analyzed using a simple linear model.

Results: The LMM revealed a statistically significant increase in well-being ($b = 2.00$, $SE = 0.82$, $t(23) = 2.43$, $p < 0.05$) and a reduction in depression ($b = -4.86$, $SE = 1.45$, $t(26.16) = -3.35$, $p < 0.01$), and anxiety ($b = -1.46$, $SE = 0.39$, $t(26) = -3.80$, $p < 0.001$) in the intervention group. Similarly, the simple linear model revealed significant treatment effects after adjusting for baseline scores. The intervention group showed a significant improvement in well-being ($b = 7.37$, $SE = 0.12$, $t = 5.60$, $p < 0.001$) and a reduction in depression ($b = -16.86$, $SE = 2.80$, $t = -6.01$, $p < 0.001$) and anxiety ($b = -3.98$, $SE = 0.80$, $t = -4.98$, $p < 0.001$).

Conclusion: These preliminary findings highlight the relevance of web-based interventions to provide mental health treatments to the general population.

Track 30: Parenting and Family-Focused Interventions

Presentation 1: Is a mobile game prototype feasible to support parents in improving their parental skills? Results of a single-group pretest-posttest study in burdened parents (HelpingParentsMinds)

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Introduction: Mentalizing capacities can be affected by the constant stress that parents often experience, which negatively impacts the parent-child relationship. The Lighthouse parenting program supports parents in improving their parental mentalizing skills. Digital tools have the potential to extend the reach of such programs. Serious games in particular offer the opportunity to involve parents in a playful and flexible way in everyday life.

Methods: A mobile game prototype was developed based on the Lighthouse parenting program by Byrne et al. (2018) in a co-creation process with interested parents. 8 qualitative interviews and 4 focus groups were conducted. A preliminary version of the mentalization-based mobile game was tested for one week in a single-group pretest-posttest feasibility study by burdened parents (N=26). Parents with a child <15 years and an android-based smartphone were eligible. Primary outcome was acceptance, use and satisfaction with the game prototype. Mentalizing capacity, perceived stress, mental strain, emotion regulation and relationship quality with the child were included as secondary outcomes.

Results: Recruitment was successfully closed with 19 participants completing the study (27% dropout rate). Satisfaction rating was low (CSQ-I: M=18.74, SD=4.47) while usability rating was good (SUS: M=77.76, SD=4.38). Most participants used the prototype 2-4 times (74%) between 20-60 minutes (58%).

Conclusions: The low satisfaction rating has to be seen in relation with the limited content of the preliminary version of this mobile game. A full version with age-specific content will be developed based on the feedback from the co-design process and evaluated regarding clinical effectiveness.

Presentation 2: Parental Moderators of the Effectiveness of an Internet-Based Parent Training Intervention on Child Disruptive Behavior: An Implementation Study in Finland

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Introduction: Parental factors may moderate the effectiveness of parent training interventions for child disruptive behavior, yet evidence remains limited and inconsistent, particularly for internet-based programs. This study examined the moderating roles of 10 parental factors in an internet-based, telephone-assisted parent training intervention using an implementation study design in Finland.

Methods: A total of 2,844 families with children who met the screening criteria at their 4-year-old health checkup were recruited. Potential moderators included maternal and paternal age, maternal and paternal educational attainment, family structure, enrollment year, parenting skills, and parental distress. The outcome was the Child Behavior Checklist 1.5-5 externalizing score, assessed at baseline, 6, 12, and 24 months of follow-up. Participating parents received an 11-session web-based training with weekly coaching calls. Hierarchical linear models were used to examine whether these variables moderated the intervention's effect on child externalizing behavior.

Results: Greater improvements in externalizing problems were observed among children whose mothers had lower educational levels and whose parents reported higher baseline Parenting Scale Over-reactivity scores and Depression, Anxiety, and Stress Scale (DASS-21) total scores. No moderating effects were found for maternal age, paternal age, paternal education, family structure, enrollment year, or Parenting Scale Laxness and Hostility score.

Conclusion: Children from socioeconomically and psychologically disadvantaged families consistently benefited more from the intervention. These findings may aid in tailoring clinical approaches for children with disruptive behavior.

Presentation 3: Dyadic Internet Intervention for Work-Family Conflict: Insights from a Pre-Implementation Study and a Randomized Controlled Trial

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Introduction. Work-family conflict (WFC) is a significant public health issue, yet research on interventions remains scarce. WFC often arises when individuals must balance professional and family roles, making it a dyadic rather than an individual challenge. This study tests the effectiveness of a dyadic internet intervention for dual-earner couples.

Methodology. A four-arm parallel-design randomized controlled trial (RCT) will compare: (1) a dyadic intervention targeting both partners, (2) an individual intervention for the male partner, (3) an individual intervention for the female partner, and (4) a control condition. We aim to recruit 600 dyads. A pre-implementation study, involving interviews with 20 dual-earner couples, identified key barriers and facilitators for dyadic interventions.

Results. Five themes emerged: motivation to start, doing things together, sharing and confessing, pedagogical design, and accessibility. Notably, couples expressed concerns about coordinating participation, particularly if one partner lagged behind or was less engaged. They suggested a balance between joint and individual tasks, which we will incorporate into the intervention design.

Findings also inform recruitment strategies. Engaging willing dyads first, rather than those experiencing the highest WFC, may enhance feasibility, adherence, and preliminary efficacy assessment. Peer recommendations emerged as a key motivator for participation, highlighting the potential of leveraging early positive feedback to attract future participants.

Conclusions. Dyadic internet interventions present unique methodological challenges. This presentation will showcase the content prototype developed from the pre-implementation findings and discuss recruitment and engagement strategies for maximizing intervention effectiveness.

Track 31: Implementation and Scale-Up

Presentation 1: EFPA survey results on digital tool integration in mental healthcare: a future role for the digital navigator

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Introduction: The use of digital tools in mental healthcare is rapidly expanding. However, many psychologists lack training and support to effectively incorporate these technologies into their clinical practice.

Methods: In January 2025, a digital survey was disseminated across Europe to gain deeper insights into current practices and needs related to digital mental health tools.

Results: Although the survey is still ongoing, current results from 619 professionals reveal that 93% used some form of technology in their practice, with online consultations and digital interventions being most commonly used. Despite this widespread adoption, formal training remains a significant gap: 91% reported not having received training on digital mental health tools during their university studies. Consequently, over half of the respondents feel inadequately skilled to effectively integrate digital tools into practice, and only 12% have received additional training. Encouragingly, 76% expressed a strong interest for additional training to enhance their digital competencies. Additionally, 62% of professionals acknowledged the relevance of a dedicated digital navigator role within mental healthcare, recognizing its potential to bridge the gap between technological advancements and clinical implementation. Notably, 33% of respondents expressed interest in taking on this role themselves, highlighting a strong demand for professional development opportunities in this area.

Conclusions: These results highlight the critical role of training and workplace support in facilitating the successful adoption of digital tools in mental healthcare. A future role is

foreseen for a ‘digital navigator’ who could provide structured assistance to bridge the gap between technological advancements and clinical implementation.

Presentation 2: Implementation and Scale Up of a Guided e-Mental Health Intervention In Lebanon: Step-by-Step

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Introduction: Digital mental health interventions offer a promising solution to the global mental health treatment gap yet concerns remain regarding their effectiveness and scalability in real-world settings, particularly in low- and middle-income countries (LMICs). After being locally developed and trialled through 2 RCTs in collaboration with the National Mental Health Programme (NMHP), The World Health Organization’s Step-by-Step (SbS) digital self-help intervention for depression, underwent an implementation research phase in Lebanon, a country facing political, financial, and humanitarian crises, to evaluate its scalability and integration into the existing system.

Methods: A mixed-methods implementation study using the RE-AIM framework evaluated reach, effectiveness, adoption, implementation, and maintenance. Quantitative analyses combined with qualitative feedback from key informants assessed SbS’s public health impact and implementation success.

Results: Despite implementation challenges, SbS maintained strong uptake (n= 2429 users) and effectiveness, with significant reductions in symptoms of depression (PHQ-9: 18.4 to 11.5, $p < 0.001$, $r = 0.69$). Hosting SbS within a local organization under NMHP management facilitated implementation but highlighted the need for stronger coordination mechanisms. Findings identified key adoption enablers, including its use as a solution for

long waitlists, and integration concerns among partners. Enhancing in-app engagement is necessary to reduce drop-out rates (62% post-session1).

Conclusion: SbS could be feasibly integrated into the national mental health referral system, including opportunities for integration into primary healthcare, and frontliner's staff-care trainings. Findings highlight key lessons for scaling digital mental health interventions in LMICs, emphasizing that technical adaptability, stable funding, and formalized partnerships are crucial for long-term sustainability.

Presentation 3: Development of a Flemish quality assessment framework for digital care, assistance and support

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Introduction: This study aimed to develop a quality framework for digital care, assistance, and support in Flanders, Belgium. The growing number of technology in mental healthcare presents opportunities for better care, but this comes with challenges and risks, as there are increasing concerns about the quality of the tools, as well as the conditions required to optimally make use of them.

Methods: Following a narrative review of literature and expert interviews (N=10), a 3-round Delphi panel was conducted, in which 48 experts participated. Based on this input, a first draft of the framework was developed, which was subsequently further explored in 4 focus groups (N = 25) and 3 additional expert interviews.

Results: The resulting quality assessment framework comprises of three connected pillars: technology, organization and professionals. Each pillar started from an existing framework (e.g. ISO/TS 82304-2:2021 - Health and wellness apps, as a starting point for technology) which was subsequently tailored further to the Flemish context. Across all three pillars, 119 criteria were described and the distinction was made between must-have criteria (N = 73) and criteria for further optimisation (N = 46).

Conclusions: The framework can offer a starting point for stakeholders wanting to offer optimal technology-enhanced services: mental healthcare and welfare professionals, organizations and developers. While tailored to the Flemish context, it offers valuable insights for similar initiatives globally. The framework itself is not (yet) easy to handle, but will also be supported by a decision aid to guide those wanting to make further use of it.

Presentation 4: Routine Care iCBT in Denmark

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Introduction: iCBT for anxiety and depression is delivered nationally as part of routine care in Denmark. However, little research has been conducted on these routine care treatments.

Methods: We used data from the clinic covering 1475 patients treated during the period November 2019 through December 2022. The treatments included four programs targeting depression, panic disorder, social phobia and specific phobias. We investigated effectiveness of the treatments, predictors for effectiveness, prediction models for treatment completion, and typical trajectories of change.

Results: The treatment programs showed moderate to large effect sizes. Baseline severity was the only transdiagnostically significant predictor for effectiveness. Preliminary prediction models for completion showed good accuracy (around 80%). Results for trajectories of change are still pending.

Conclusion: Routine care iCBT shows good effectiveness. Other types of predictor variables for effectiveness should be investigated. However, prediction models show promising results for identifying patients at risk for dropout.

