

Introduction to the World Psychiatric Association Digital Mental Health Special Edition: Evidence, Implementation, Guidelines, and Policy

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Introduction

This special edition promotes high-quality, behavioral/mental health care via telepsychiatry and other technologies across the world to help clinicians, teams, organizations, and countries. It shares evidence-based interventions during and after the pandemic to optimize delivery of high-quality digital mental health care for the long term. A key part of this edition is the promotion of health, cultural, technological, and economic literacy and sustainability—in all users of technology—patients, clinicians, and other professionals.

The edition emphasizes patient-centered care, user-centered design, randomized and comparative studies, implementation science approaches, interprofessional teamwork, and care delivery related to video and mobile health technology. A number of submissions are related to diversity, equity, and inclusion, including global health disparities and digital mental health in low- and middle-income countries (LIMCs). The edition is geared to help providers, faculty, trainees, team and service leaders, health care administrators, and other community partners to

improve access, quality, and sustainability of digital mental health care. The Call for Papers encouraged contributors to:

- Apply the most recent evidence (i.e., original research), system (i.e., informatics, implementation), and consensus (i.e., guidelines, best practices) approaches to help clinicians, patients, and leaders identify options and access appropriate care options (e.g., in-person, video, and mobile mental health).
- Focus on patient- and user-centered design approaches to find appropriate, sustainable care options.
- Provide population-level approaches, which consider clinical, cultural, and technological factors (e.g., literacy).
- Inform the development of systems and processes based on implementation science methods that will promote the adoption and integration of digital mental health care within international private, community, and public health settings.
- Evaluate user (i.e., patient, clinician, other), team, and organizational factors that influence clinical workflow,

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training, process improvement, management, and administration to promote long-term sustainability of digital mental health care.

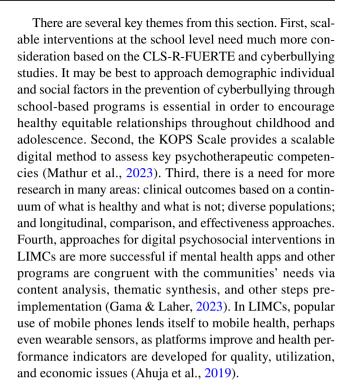
The resulting papers comprise three sections. Section 1 covers research on the application of technology to clinical practice in patients of all ages in settings worldwide. Section 2 focuses on approaches, frameworks, and research in systems of care—programs, organizations, and countries—that will help readers see ideas to apply and improve services. Section 3 has guidelines, professional development, and organizational leadership approaches.

Methods and Results: Sections 1, 2, and 3

Section 1

Section 1 includes clinical evidence-based research for child/adolescent (cyberbullying, decision-making, social media), adult (eating disorder, mobile health (mH)), and older adult (access, social connections, and gaming) populations. Studies come from urban and rural settings in U.S., Spain, UK, South Africa, Sweden, Greece, and the Netherlands. Quantitative, qualitative, and mixed methods studies have more cross-sectional than longitudinal and comparison more than randomized designs.

The studies in this section cover the life cycle and include randomized and comparison interventions and sophisticated reviews of interventions. Regarding children and adolescents, one study shows that the CLS-R-FUERTE school program is comparable in feasibility and acceptability to prior in-person program trial findings—students show greater improvement in parent- and teacher-rated attention deficit hyperactivity disorder, as well as parent-rated oppositional defiant disorders (Haack et al., 2024). One study focuses on cyberbullying, with predictors related to sociodemographic characteristics (age, sex, origin, sexual orientation) and the relationship with peers and family, including childhood violence victimization (Arroyo-Uriarte et al., 2023). One study introduces a scalable mental health interventions (Knowledge of Problem-Solving (KOPS)) (Mathur et al., 2023). For adults, a meta-analysis shows the effectiveness of stand-alone digital suicide preventive interventions for the self-management of suicidality (Samara et al., 2023). A systematic review for bulimia nervosa and binge-eating disorder shows that digital interventions are superior to no intervention and nearly comparable to in-person interventions (Sutori et al., 2023). A study on older adults borrows a tenet from children and adolescent studies, ironically, using digital social gaming to improve the social connections of older adults (Janssen et al., 2023).



Section 2

Section 2 focuses on approaches, frameworks, and research in systems of care—programs, organizations, and countriesand provides lessons learned with digital tools, in general, and telepsychiatry for special settings (e.g., correctional facilities/prisons) from New Zealand, Greece, Nepal, India, Japan, and US American Indian and Alaska Native populations. One paper shows that mobile mental health applications are attractive and well-received by American Indians and Alaska Natives, when based on humility and cultural safety principles (Caloudas et al., 2023). Telemental health care for Asian New Zealanders is noted to be of high quality, provides flexibility, and reduces time and costs (Chen et al., 2023). Telepsychiatry in Japan (Kinoshita et al., 2023) and digital tools for the Nepalese (Acharya et al., 2024) represent scalable options for increasing access to interventions—if they are culturally tailored—and start with an iterative approach to allow patients and clinical teams gain comfort and confidence (Acharya et al., 2024).

Telepsychiatry in forensic settings and the criminal justice system is associated with benefits including access to specialized services, flexibility in rescheduling meetings, security and safety among all parties involved, acceptance and user satisfaction, and efficient and effective time and cost savings (Karachaliou et al., 2023). An innovative private-public partnership model in the digital mental health care domain gave perspective to patients and systems in India, as well as suggestions for assessing, implementing, and evaluating developing countries' challenges (Vohra et al., 2024).



Table 1 Summary of papers in the World Psychiatric Association Digital Mental Health Special Edition: Evidence, implementation, guidelines, and policy

#	Title	Authors and country of primary author
l	Introduction to the World Psychiatric Association Digital Mental Health Special Edition: Evidence, Implementation, Guidelines And Policy	Shalini Ahuja, Christina Armstrong, Davor Mucic, Thomas Schulze, Javed Afzal, and Donald M. Hilty UK
2	Section 1: Clinical services across the life cycle Implementation and Evaluation of a Remote School Clinician Training and ADHD/ODD vs. Intervention Program in Mexico: an 8-School Randomized Controlled Trial of CLS-R-	Lauren M. Haack, Linda J. Pfiffner, Sabrina M. Darrow, Jasmine Lai, Dulce Karely Alcaraz Beltrán, Jassiel Ulises Martinez Beltran, et al., and Eva Angelina Araujo Jiménez
С	4	US Paula Arroyo-Uriarte, Lluis Forcadell-Díez, Daniel G Abietar, Olga Juarez, Francesca Sanchez-Martinez, Maria Jose Lopez, et al., and Glòria Pérez Spain
4	Knowledge Of Problem Solving (KOPS) Scale: Design and Evaluation of a Scalable Competence Measure for a Common Practice Element in Task-shared Youth Mental Health Interventions	Sonal Mathur, Daniel Michelson, Tejaswi Shetty, Vikram Patel, and Andy P. Field UK
5	Self-help: a Systematic Review if the Efficacy of Mental Health Apps for Low- and Middle-Income Communities	Beauty Sibongile Gama and Sumaya Laher South Africa
9	Systematic Review and Meta-Analysis: Effectiveness of Stand-Alone Digital Suicide Preventive Interventions for the Self-Management of Suicidality	Sara Sutori, Gergö Hadlaczky, Emma Eliasson, Danuta Wasserman, and Vladimir Carli Sweden
7	Remote vs Face-to-face Interventions for Bulimia Nervosa and Binge-eating Disorder: a Systematic Review	Myrto T. Samara, Niki Michou, Aikaterini Argyrou, Elissavet Mathioudaki, Dimitra Rafailia, Eirini Tsekitsidi Bakaloudi, et al., and Michail Chourdakis Greece
∞	Improving Social Connections of Older Adults Through Digital Social Gaming - A Pilot Study	Jeroen Janssen, Ilse Van Es, Bas Châtel, Rob Tieben, Marcel Olde Rikkert, and Geeske Peeters Netherlands
	Section 2: Services for special populations and perspective from countries around the world	
6	Mobile Mental Health Applications for American Indian and Alaska Native Communities: Review and Recommendations	Alexandra B. Caloudas, Kristen Frosio, John Torous, Cynthia W. Goss, Douglas Novins, Jan A. Lindsay, and Jay H. Shore US
10	Exploring the Benefits of Tele-mental Health Care for Asian New Zealanders: A Mixed Methods Study	Yan Chen, Rodrigo Ramalho, Blake Yue, Bo Ning, Kelly Feng, and Gary Cheung New Zealand
11	A Systematic Literature Review on the Application of Telepsychiatry in Correctional Facilities/Prison Necessity and Modern Challenges	Evangelia Karachaliou, Phoebe Douzenis, Sophia Martinaki, Evdokia Misouridou, Fotios Chatzinikolaou, and Athanasios Douzenis Greece
12	Improving the Quality of Global Mental Health Services with Digital Tools: Best Practices and Lessons Learned from Rural Nepal	Bibhav Acharya, Kripa Sigdel, Rekha Khatri, Pragya Rimal, Srijana Shrestha, Dikshya Sharma, et al., and Sabitri Sapkota Nepal
13	Private-public Partnership Model in Digital Mental Health Care Domain: Way forward for India and Developing World Domain	Sandeep Vohra, Sandeep Grover, Anand Prakash, and Divyani Khurana India
14	Psychiatrists' Perspective on Telepsychiatry: The Japan's Experience with its use in Clinical Studies during the COVID-19 Pandemic	Shotaro Kinoshita, Momoko Kitazawa, Yoshinari Abe, Takashi Nakama, Tetsufumi Kanazawa, et al., and Taishiro Kishimoto Japan
	Section 3: WPA special report and guidelines on technology and well-being for mental health workers	workers

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#	Title	Authors and country of primary author
15	15 Healthcare Workers Mental Health and eHealth: A Scoping Review	Lucas Tokeshi, Eduardo de Castro Humes, Alexsandro Luiz De Andrade, Flavio Dias Silva, Maria das Graças da Silva Teixeira, and Hermano Tavares Brazil
16	16 Development and Validation of a Simple Tool for Predicting Psychological Distress Among Kristina Adorjan, Mark Sen Dong, Paul R. Wraitl, Niklas A. Schmacke, Tobias Weinberger, et al., and Nikolaos Koutsouleris Germany	Kristina Adorjan, Mark Sen Dong, Paul R. Wraitl, Niklas A. Schmacke, Tobias Weinberger, et al., and Nikolaos Koutsouleris Germany
17	WPA Digitalisation in Mental Health and Care – Empirical Report on Action Plan and Related Activities	Rodrigo Ramalho, Umberto Volpe, and Wolfgang Gaebel New Zealand
18	18 The World Psychiatric Association Telepsychiatry Global Guidelines Overview	Davor Mucic, Jay H. Shore, and Donald M. Hilty Denmark
19	19 The World Psychiatric Association Telepsychiatry Global Guidelines	World Psychiatric Association Switzerland

The widening of the treatment gap calls for large-scale capacity building at all levels (i.e., medical, para-medical, and psychosocial), possible only through such partnerships, to improve access, reduce the need for emergency services, improve outcomes, and perhaps be more cost-effective.

Section 3

Section 3 takes a broader look at workforce, professional development issues, and major initiatives of the WPA to improve access, quality, and sustainability of digital health care, as well as psychiatrist skill in delivering video and other technologies (e.g., Digitalisation in Mental Health and Care Action Plan and Telepsychiatry Global Guidelines). They focus on clinical practice, administrative, scope of practice, and technological issues, as well as approaches, procedures, and policies for populations and settings worldwide. One paper explores the ability of a machine-learning model with sociodemographic, epidemiological, and psychological data to predict levels of pandemic-related psychological distress, looking at depression and preventive interventions like resilience and coping (Adorjan et al., 2024). Another evaluates e-health applications focused on healthcare workers' mental health, using a scoping review to find observational and intervention (Tokeshi et al., 2024); the small number of studies points to a gap in the literature on this topic.

The WPA has been active in clinical care, professional education, and guideline development. WPA Digitalisation in Mental Health and Care—Empirical Report on Action Plan and Related Activities—involved a survey shared with all 145 WPA member societies to draw and to assess the availability, use, and impact of digital health globally. This has informed an official position statement on digitalization, accessibility, and equity, as well as contributing to country-adapted upscaling of digital mental health and care. Two papers describe the process toward, methods of, and consensus-based finds of the World Psychiatric Association Telepsychiatry Global Guidelines (Mucic et al., 2023; WPA, 2024) The overview first provides context on the need, process of getting input from member societies and 17 consultants across the globe, and the evidence-base. The Guidelines focus on administrative aspects, scope of practice, operating procedures/protocols, clinical practice, technical requirements, and specific populations and settings. The Guidelines promote health and technology literacy and cultural safety and provide administrative approaches to a broad array of populations and settings, including LIMCs. More attention is needed about mobile health and artificial intelligence interventions shaping care and workflow—as well as professional education and organizational change needed to support this (Table 1).



Discussion/Conclusion

In reviewing this compilation of original research, approaches by countries, and telepsychiatry global guidelines, it is clear that the evidence-base in this area is increasing dramatically and has been remarkably inclusive of diverse patient populations around the world. The Edition sets a new standard in health and behavioral health fields—as well as national and international organizations—for encouraging research at the intersection of culture, behavioral health, and technology. Clinical studies have provided evidence and research on video-based and mobile health care delivery, primarily, but more implementation and best practices approaches are needed for patients, providers, and countries with and without resources. Workflow facility for clinicians is also key to prevent or reduce technology-related fatigue and promote well-being (Hilty et al., 2022).

We hope that the articles in the special issue are of interest to a wide range of readers and inspire readers to further consider these important issues, conduct research, aner adoption of technologies in health care for all populations, particularly those in LIMCs. Due to challenges in resources and evolving patient preferences, the use of mobile technologies is on the increase as they are more accessible via mobile phones, health, cultural, and economic literacy (i.e., competency)—that latter is key for sustainability for other technology services, too (Hilty et al., 2021b). Indeed, the WPA has already begun to focus its attention to mobile health and artificial intelligence—how these are shaping care and workflow—with professional education, development of competencies, and outreach to other organizations.

Competencies in technology were suggested as part of healthcare reform in 2003 (National Academy of Science, 2020), and the competency-based education focuses on clinical skill development in addition to knowledge acquisition (Iobst et al., 2010). This would help clinicians and systems move forward with video (Hilty et al., 2015; Maheu et al., 2019), mobile health (Hilty et al., 2020), wearable sensors (Hilty et al., 2021a), and other technologies, including a look at cultural context (Hilty et al., 2021b). Institutional-level competencies are also suggested to (1) assess readiness, (2) create/hardwire the culture, (3) write policies and procedures, (4) establish the curriculum and competencies, (5) train learners and faculty, and (6) evaluate/manage change (Hilty et al., 2019).

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Declarations

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Consent for Publication Authors agree.

Conflict of Interest The authors declare no competing interests.

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