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The Unseen Complexities of Digital Mental Health Services in Indonesia (COVID-19 Era): A Qualitative Study

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ABSTRACT

The COVID-19 pandemic accelerated the adoption of digital mental health services (DMHS) in Indonesia as an alternative approach to addressing limited access to conventional psychological services. However, the rapid implementation of these services also revealed various structural, technological, and regulatory challenges within Indonesia's mental health system. This study aimed to explore stakeholders' experiences in implementing DMHS during the COVID-19 era, including the challenges encountered, adaptive strategies employed, and recommendations for future service development. This research employed a qualitative exploratory design using semi-structured interviews involving 14 stakeholders, consisting of psychologists, platform managers, founders, and representatives of professional organizations in Indonesia. Data were collected through online interviews and analyzed using inductive thematic analysis supported by NVivo 14 software. The findings identified several major themes, including community and client readiness, service provider readiness, regulatory and legal conditions, technological limitations, service effectiveness and quality challenges, and capacity building and innovation. The study revealed that stigma, digital inequality, unclear regulations, and therapist burnout significantly affected the effectiveness of DMHS implementation. Nevertheless, stakeholders adopted adaptive strategies such as hybrid services, peer learning, structured evaluations, and digital innovation to maintain service quality. In conclusion, strengthening regulations, infrastructure, professional competence, and ethical standards is essential to ensure sustainable and effective digital mental health services in Indonesia.

Keywords: digital mental health; COVID-19; psychologists; online services; regulation; service quality

INTRODUCTION

Globally, mental health issues reach nearly 30% of the lifetime prevalence of common mental disorders across populations (Steel et al., 2014). In 2021, over 444 million new cases of mental disorders were recorded, and 155 million people were living with disabilities (Fan et al., 2025). When left untreated, mental health conditions exacerbate poverty, social exclusion, and gender inequality since severe mental problems could limit access to employment, education, and healthcare.

In LMICs, mental disorders account for 11.1% of the total disease burden, 76–85% of which do not receive adequate treatment (Patel, 2007). The gap can be influenced by the lack of and uneven distribution of professionals in LMICs, which limits access to healthcare (Lora et al., 2012; Patel, 2009). This lack of integrated mental health services leads to fragmented care and difficulty in receiving continuous and comprehensive care (Wainberg et al., 2017). Therefore, digital mental health services (DMHS) offer great potential as an innovative solution to bridge the service gap, especially in areas with professional and infrastructure constraints.

DMHS has emerged as a solution to bridge workforce shortages and increasing demand for mental health services with accessible, scalable, and cost-effective care (Aderinwale et al., 2025). Digital technology can support non-specialist healthcare workers through training, diagnostic tools, treatment guidelines, and supervision, so evidence-based services could be delivered in resource-limited settings (Naslund, Shidhaye, & Patel, 2019). As a strategic alternative since the COVID-19 pandemic, when access to in-person services was limited and the need for remote services was increasing, the use of telehealth, mobile apps, and online platforms has enabled individuals to receive mental health support without the need for physical travel (Balcombe & De Leo, 2020; Zhong et al., 2023). Despite their benefits, rigorous evaluation of digital interventions is also needed to ensure their quality, effectiveness, and confidentiality. Particularly, the development of consistent guidelines and standards for digital mental health services is critical to their successful implementation and integration into existing healthcare systems (Balcombe & De Leo, 2020; Ellis et al., 2021).

Mental health problems remain a pressing concern in Indonesia. The prevalence of mental disorders in Indonesian adolescents ranges from 5.5% to 24% varying from depression, anxiety, to suicidal behaviour (Erskine et al., 2024; Pham et al., 2024).

Indonesia is in critical need of mental health professionals, yet continues to struggle with a severe workforce shortage. There are only about 0.31 psychiatrists, 2.52 psychiatric nurses, and 0.17 social workers per 100,000 people, which is four times less than the WHO's global median of 13 (WHO, 2017, 2021). Additionally, most mental health workers are concentrated in urban areas, leaving those in remote regions with minimal access to mental health services, often relying on unqualified religious leaders to address complex psychological conditions (Subu et al., 2022).

In response, Indonesia has leveraged technology to expand digital mental services, particularly after COVID-19 led to widespread psychological distress affecting 74.2% of Indonesians, mainly young people under 30 years old (Widati & Nordin, 2022). The adoption rate of these various DMHS also peaked during the COVID-19 pandemic. One of them is the telemental health app Riliv, whose number of downloads increased by 50% in 2020, and the number of its users rose drastically by around 300% in 2022 (Suminar, 2020). Furthermore, a Populix (2022) survey revealed that 54% of 1,005 respondents had accessed mental health services digitally. The paradigm shift towards DMHS in Indonesia has experienced significant acceleration, driven by the pandemic and the growing need for more affordable and accessible psychological support.

Digital mental health services enable users to receive support regardless of their location, helping those in rural or underserved areas to seek assistance (Fortney et al., 2015; Olden et al., 2010). This broader reach can potentially serve a larger population. Furthermore, the anonymity and comfort of online environments encourage individuals to seek help without fear of judgment, boosting engagement with mental health services. However, not all clients are suitable for DMHS, especially those with severe disabilities, limited digital access, or a preference for face-to-face interaction (Feijt et al., 2023; Thara, 2012). Hence, many professionals now plan to adopt a blended approach combining digital and in-person services due to its increased efficiency and accessibility (Feijt et al., 2023; Zangani et al., 2022).

Despite the swift rise in DMHS adoption, a gap remains in understanding their implementation in crises, especially in lower-middle-income countries like Indonesia (Geraldina, Suen, & Suanrueang, 2023). Variations in infrastructure, complex socio-cultural dynamics, and evolving policies make the execution challenging. Stigma in Indonesia is not only related to mental health, but also intersects with other social obstacles such as gender, socio-economic status, and religion, resulting in people's reluctance to access psychological services openly (Rai et al., 2020). A similar study by Galvin et al. (2023) in Ireland showed that service providers are aware of the effects of stigma that cause such unwillingness. Marginalized groups tend to be sceptical of this new approach, which ultimately limits the implementation. The challenges in infrastructural aspects are also of paramount importance in delivering digital mental health services, especially in rural areas. Penetration and high speeds on the internet are not evenly distributed, as many regions do not have access to reliable or cheap internet (Mendes-Santos et al., 2022).

Furthermore, digital literacy is a crucial factor to consider since not all users— including some mental health professionals—are skilled in using online tools. These infrastructural challenges create obstacles to equal access, diminishing the overall effectiveness of digital mental health services (Galvin et al., 2023). In Indonesia, the delivery of digital services is often limited by traditional preferences for in-person therapy and professionals' uncertainty in managing crises remotely.

Moreover, Indonesia lacks well-established regulations for digital mental health care. Law No. 23 of 2022, which governs psychology education and services, does not address specific technical or ethical issues related to online service delivery (Pusat, 2022). This regulatory gap leads to inconsistencies in data privacy, security, informed consent, and service standards.

Without clear policies and guidelines, mental health providers may lack guidance on best practices for remote treatment, and users are vulnerable to poor data confidentiality and variable service quality (Koly et al., 2022; Mendes-Santos et al., 2022). Building a comprehensive regulatory framework is essential to safeguard users' rights and promote provider accountability.

Digital transformation in post-pandemic mental health services offers the potential for long-term benefits, allowing it to develop as a future mitigation measure in Indonesia. However, existing studies have focused more on developed countries with better infrastructure and policy conditions. Meanwhile, the implementation of DMHS in developing countries still faces various challenges, including cultural, technological, and resource barriers (Fu et al., 2020; Narvaez, 2022). Exploring DMHS implementation in Indonesia from the stakeholders' perspective is essential to tailor services, ensure provider training, supervision, and regulatory frameworks, which are key to maintaining quality and protecting users. Their invaluable perspective can help identify local challenges and enabling factors that influence the adoption of innovations (Hamilton & Finley, 2019; Mendes-Santos et al., 2022). In addition, therapeutic relationships in digital sessions are often not as strong as face-to-face interactions, requiring approaches designed with input from service providers to elevate effectiveness (Galvin et al., 2023).

With the scarcity of mental health professionals in Indonesia, digital services can extend care to underserved areas. The perspective of service providers, therefore, is a key foundation for the ethical, effective, and sustainable integration of digital technologies into mental health systems (Koly et al., 2022; Mendes-Santos et al., 2022).

This study aims to understand stakeholders' experiences in implementing DMHS in Indonesia during the COVID-19 pandemic, including available resources, existing policies or legal frameworks, obstacles, and adaptations that emerged in overcoming these challenges (Galvin et al., 2023; Mendes-Santos et al., 2022). This study fills a gap in the literature by being one of the few empirical studies to examine stakeholder experiences, challenges, and quality assurance in DMHS in developing countries, especially Indonesia (Fu et al., 2020; Narvaez, 2022). This study aims to provide recommendations for strengthening DMHS in Indonesia that are more effective, sustainable, and tailored to community needs.

The main research questions of this study are:

RQ1. What were stakeholders' experiences in delivering digital mental health services in Indonesia during the COVID-19 pandemic?

RQ2. What challenges did stakeholders face in implementing these services during the COVID-19 pandemic, and how did they adapt to address these challenges?

RQ3. What recommendations can be made to improve the delivery of digital mental health services in Indonesia?

RESEARCH METHODS

Design

This study employed a qualitative exploratory methodology that takes an interpretive approach and provides insights into healthcare by investigating complex experiences or phenomena such as access barriers or unmet needs (Braun & Clarke, 2006). This methodology establishes and strengthens practical solutions with a thorough understanding of a person's experience (Wigginton et al., 2020). To comprehensively understand the experiences and perceptions of stakeholders in providing DMHS in Indonesia, this design was selected in the context of the COVID-19 pandemic. In addition, COREQ (Consolidated Criteria for Reporting Qualitative Research) was applied to improve the credibility of research findings through systematic and transparent reporting (Tong, Sainsbury, & Craig, 2007).

A semi-structured interview was used to explore perceptions of digital mental health services quality, barriers or facilitators to implementation, adaptation during the transition to online services, and views on innovation and long-term sustainability. These included online psychological assessments, counselling services, and interventions.

Sampling and Recruitment

Referring to prior research (Galvin et al., 2023; Mendes-Santos et al., 2022), 14 participants were included. Previous studies determined the sample size, and the researchers referred to the concept of information power developed by Malterud, Siersma and Guassora (2016) which indicates that the stronger the relevance to the research objectives and the richer the information of the participants, the smaller the sample size needed.

To increase representativeness, purposive and snowball sampling methods were implemented to recruit participants. Purposive sampling guarantees that the initial participants are well-suited to the research objectives, while snowball sampling broadens the sample by incorporating participants from the initial subjects' networks (Chamberlain et al., 2011). All eligibility criteria are outlined in the table below.

Table 1. *Eligibility Criteria*

Eligibility Criterion	Description
1	Participants must be mental health professionals (psychologists/psychiatrists) with an active practice license in Indonesia who have provided mental health services online at least twice in the past year.
2	Managers/founders have overseen digital mental health platforms in Indonesia over the past two years.
3	Mental health professionals in Indonesia have a background in research or academia, or they have been members of professional organizations like the Indonesian Psychological Association within the last two years.
4	Participants must be at least 18 years old and able to provide informed consent.

Participants who were unwilling to provide their consent, lacked experience in delivering DMHS, or were not mental health professionals (peer counsellors, unlicensed practitioners, nurses, or mental health volunteers) were excluded from this study to guarantee that the study included only participants with direct and relevant experience in implementing DMHS.

Initial participants were recruited through the researcher's personal and professional contacts, who were subsequently requested to distribute flyers to or recommend their colleagues who might meet the criteria. In addition to email invitations, the researcher's social media profiles were utilized to advertise the study, and prospective participants were encouraged to contact the principal investigator.

Data Collection

This study used in-depth semi-structured interviews, whose guide was created based on a literature review and the results of previous studies (Galvin et al., 2023; Mendes-Santos et al., 2022) with pertinent probing questions derived from a brief demographic questionnaire (see Appendix IV). Probing questions can assist in the discovery of a more nuanced understanding of the research topic by encouraging participants to elaborate on their initial responses (De Souza, Neri, & Costa, 2016).

In collecting the data, participants were provided with a privacy notice and information sheet outlining data usage and storage. They were invited to ask questions and could withdraw consent at any point, promoting comfort with the technology and safeguarding digital privacy (Engward et al., 2022). Subsequently, the demographic questionnaire was also delivered to be completed along with the informed consent, which was then signed digitally and submitted to the researcher.

The participants were contacted again to discuss their availability for the interviews, which were then held online between April and May 2025 via Microsoft Teams and Zoom. To accommodate geographical and time zone differences, interviews were conducted online. Sessions lasted 35–50 minutes and were held in Indonesian to encourage more open and candid responses, with only the participant and researcher present. Audio recordings were made with

consent, and nonverbal cues were attentively observed throughout the session.

Prior to each interview, participants were briefed on the research background and given verbal consent. The conversation started with participants' background and role in mental health in Indonesia, followed by an in-depth discussion on their DMHS experiences (Table 2).

For confidentiality, all transcripts were removed from digital platforms after being downloaded. The automatically generated transcripts were manually verified and reviewed by participants before being translated into English to ensure research validity. This manual translation helps retain contextual meaning, cultural nuances, and affective expressions that might have been lost in automatic translation because idiomatic expressions are culturally specific and may not have direct equivalents in other languages (Helmich et al., 2017; Schumann et al., 2024). Throughout the translation process, terms that lacked direct English equivalents were identified and contemplated to ensure the participants' intended meaning was not deviated from.

The personal information of participants and audio recordings were subsequently deleted to ensure anonymity. All data were stored in an encrypted digital folder (OneDrive for Business) with restricted access.

Table 2. *Interview Guide*

Interview Topic	Sample Questions
Building Rapport	● Can you tell me about your background and current role in mental health? ● How has your experience with digital mental health services been during the COVID-19 pandemic?
Experiences	● What experiences have you gained in providing digital mental health services during the COVID-19 pandemic? ● Can you describe the process of implementing digital mental health services in your organization? ● What is your perspective on the development of digital mental health services in Indonesia during the pandemic? ● What strategies have you found effective in integrating these services into your existing workflows? ● How would you assess the quality of digital mental health services?
Challenges	● Can you describe the main challenges you have faced when providing digital services during the COVID-19 pandemic? ● How do these challenges impact the effectiveness of the services provided? ● How have you addressed or overcome these barriers?
Recommendations	● In your opinion, what innovations are needed to improve the quality of digital mental health services going forward? ● Based on your experience and knowledge, what are your main recommendations for improving the implementation and quality of digital mental health services in Indonesia?

Analysis

The data analysis was conducted using an inductive thematic approach, following the six stages of analysis developed by Braun and Clarke (2006) (Table 3). This approach allowed themes to emerge naturally from the data without being constrained by a pre-existing theoretical framework, making it highly suitable for exploring participants' experiences and perspectives on digital mental health services. After all transcripts were anonymized, they were input into QSR NVivo 14 for data management.

To enhance the validity of the analysis, analytical triangulation was employed by discussing key themes with the academic advisor. Additionally, 10% of randomly selected and anonymized transcripts were coded with a secondary researcher to enrich the analysis and develop a deeper understanding of the data (Edwards et al., 2021).

Table 3. *Analysis Stages*

Braun and Clarke (2006)	
1 = Data Familiarization	Reading and re-reading interview transcripts to gain a deeper understanding of the data.
2 = Formation of Initial Code	Created code with the help of NVivo14 software by marking important text to identify data segments.
3 = Construction of Themes	Grouped codes into potential sub-themes and created a theme from a collection of sub-themes.
4 = Re-Examination of Themes	Eliminate overlapping themes. Check whether the themes consistently align with the research questions. Revise themes that are not sufficiently representative.
5 = Defining and Naming Themes	Determine the final theme and sub-themes. (see Appendix II) Ensure the theme aligns with the research questions.
6 = Writing Research Reports	Writing research results.

Ethical Considerations

Prior to the research, ethical approval was granted by the University of Glasgow's College of MVLS Ethics Committee under the number 200240274. To ensure responsible research, the study's purpose, procedures, and potential risks were initially explained to the participants, who then submitted their informed consent forms, which remain essential to ethical research despite being complicated due to the lack of face-to-face interaction (Engward et al., 2022).

In appreciation of the participants' voluntary involvement, a £20 Love2Shop Global gift is awarded to overcome a lack of awareness or trust in research (Grady, 2005). Although stated in the participant information sheet, the incentives were disclosed post-interview to prevent reward-driven bias.

Participants were notified verbally and in writing that the interviews would be recorded for analysis, and they could either consent to or decline recording without any adverse consequences (Silverman, 2020). Thus, the recording was started only after the consent was explicitly granted. To comply with research ethics standards, an encrypted platform that integrates with the university email was applied, as the use of technology in research must consider privacy, data security, and participant protection (Nebeker, Torous, & Bartlett Ellis, 2019). Additionally, on the university server, all personal data of participants is stored and accessible exclusively to researchers. The data of all participants were anonymized by assigning a numerical identifier to each individual, as breaches can have significant ethical repercussions (Engward et al., 2022). Upon completion of the transcripts, all audio recordings of interviews were automatically deleted from the server.

To overcome challenges during online interviews, Willemsen et al. (2023) suggests that researchers devise strategies such as providing technical assistance to participants, ensuring a stable internet connection, and creating a comfortable and distraction-free interview environment. Furthermore, developing positive relationships with participants is crucial for enhancing the quality of the data. By adhering to applicable ethical guidelines, researchers ensure that their findings are not only scientifically valid but also ethical and beneficial.

Reflexivity

Researcher experience in digital mental health services potentially influenced this research process, including topic selection, methodological approach, and interpretation of findings. Prior involvement in DMH services provided in-depth insight into field practice, but also shaped expectations about its effectiveness and challenges. Awareness of this positioning encouraged the researcher to actively maintain objectivity throughout the analysis process.

Researcher interactions with participants, particularly during interviews, took place in a relatively open atmosphere. Some participants knew researcher background, which may have influenced their responses. While this familiarity sometimes offer deeper insights, it also posed a risk of confirmation bias. To mitigate this, the researcher used reflective notes and peer reviews

to identify potential bias.

The researcher also strived to critically examine the data and consider diverse perspectives and challenges to digital services. By maintaining a reflective awareness throughout the research process, a more authentic, transparent, and contextual analysis could hopefully be produced.

RESULTS AND DISCUSSION

Participants in this study included fourteen stakeholders (Table 4), including psychologists, service managers or founders, and expert judgments from Indonesian psychology professional organizations.

Table 4. *Participant Demographics*

Participant	Gender	Age	Occupation	Previous experience with remote consultations	Years of Experience in Current Role
P1	F	26	Clinical Psychologist	Yes	1-2 years
P2	M	25	Clinical Psychologist	Yes	1-2 years
P3	M	30	Clinical Psychologist, Founder	Yes	3-5 years
P4	M	26	Clinical Psychologist	Yes	1-2 years
P5	F	26	Platform Manager	No	3-5 years
P6	F	28	Clinical Psychologist	Yes	3-5 years
P7	F	27	Clinical Psychologist	Yes	1-2 years
P8	F	28	Clinical Psychologist	Yes	3-5 years
P9	F	29	Clinical Psychologist	Yes	3-5 years
P10	F	31	Clinical Psychologist	Yes	>5 years
P11	F	28	Platform Manager	No	3-5 years
P12	F	31	Clinical Psychologist, Founder	Yes	>5 years
P13	M	56	Clinical Psychologist, Board Member of Indonesian Psychological Association	Yes	>5 years
P14	F	40	Clinical Psychologist, Board Member of Indonesian Psychological Association	Yes	>5 years

Note: M=Male, F=Female

The purpose of this study was to explore the implementation of DMH services in Indonesia as well as the barriers encountered during COVID-19. The data analysis results revealed six themes and 19 subthemes (Table 5) related to the stakeholders' experiences.

Table 5. *Themes and Sub-themes*

Themes and Sub-themes
Community and Client Readiness
● Client cooperation
● Digital inequality
● Stigma and cultural barriers
Service Provider Readiness
● Adapting to technology
● Organizational capacity
● Learning Gap
Regulatory and Legal Conditions
● Lost in digital regulation
● Licensing issues
● Psychologist's safety and protection
● Supervision and enforcement

Themes and Sub-themes
Technological Limitations
● Digital clinical practice challenges
● Software limitations
Service Effectiveness and Quality Challenges
● Digital burnout
● Feedback and service improvement
● Client engagement and dropout
Capacity Building and Innovation
● Professional development and workforce readiness
● System strengthening
● Regulatory and ethical enhancement
● Adapting to AI

Theme 1: Community and Client Readiness

This theme explores the influences of low client motivation and cooperation, limited digital literacy and access, minimal public awareness, and persistent stigma related to mental health issues on the implementation of DMHS in Indonesia during the COVID-19 pandemic.

Client cooperation

Psychologists said that some clients are uncooperative during online sessions, such as refusing to turn on the camera, place, cancelling the session, or disappearing without notice, which affects readiness to accept mental health services.

"Because the success of an intervention really depends on the client's level of readiness. If they're not even ready to meet their psychologist properly, how can the intervention succeed?" (P14)

Digital inequality

Psychologists observed that some clients were unfamiliar with video conferencing tools, despite receiving tutorials. Structural barriers that had existed before the pandemic significantly limited the ability of certain groups, particularly those with low levels of education, children, and the elderly, to access and use DMHS during the pandemic.

"At that time, the client himself did not understand how to use Zoom. So, this became a challenge for me." (P7)

"Then, the digital platform is probably more familiar to young people so it's really difficult for us to do assessment or counselling for children and the elderly [...]" (P10)

Stigma and cultural barriers

Many service providers experienced that some clients believed visiting a psychologist was only necessary for those with severe conditions like schizophrenia. Fearing negative labels from their communities, some psychologists shared that clients often hesitated to seek help from psychologists and, instead, chose religious leaders to address psychological distress. These cultural norms hindered DMHS from gaining acceptance even before the pandemic.

"Before or at the time of COVID, many people were not aware. They felt like they were considered crazy, so they were embarrassed." (P3)

"For example, if there are people who are depressed, they will be more likely to go to Kanhuru. So, a Kanhuru is a religious figure or religious expert." (P5)

Theme 2: Service Providers' Readiness

This theme discusses the resource situation in implementing DMHS during the pandemic. Many service providers had to adapt to the use of digital tools and the lack of capacity to provide technical support for psychologists. The knowledge and training gaps in delivering digital services also highlight the challenges of service delivery during the pandemic.

Adapting to technology

Participants stated they had to adapt to various online platforms to deliver psychological interventions, such as text-based counselling, at the beginning of the pandemic. This adaptation

required them to explore issues solely based on client questions and responses, without being able to observe behaviour.

"In the early days of COVID, the platform was very limited, so it was only available by text or video call. The platform options currently only include Zoom and Meet, and even if it's by text, it can only be via WhatsApp […]." (P10)

"I used to have a client who was by chat but the response was long, so within one hour, we must be able to explore the problem, the purpose of counselling, and the next step." (P10)

However, technological adaptations have allowed psychologists to easily access diagnostic information and case studies through various online scientific journals, search engine, and discussion forums. Thus, references could be found quickly during counselling sessions. This direct access helps psychologists gain a deeper understanding of their clients' conditions and deliver more targeted interventions.

"Back then, we really had to explore everything from scratch, which took time—almost like having to go through a full diagnostic process to understand the issue. That process was quite long and complex. Now, with the help of technology, we can quickly pick up keywords that point us toward the client's main issue." (P7)

Organisational capacity

Service providers said challenges were found in providing psychologists with specialisations that were appropriate to handle complex or urgent cases.

"[...] there are some who are experts in certain fields. It can be quite challenging when a client requests a specialist in a particular issue, but we don't always have someone with that exact expertise available." (P5)

"We can only provide limited handling, such as ... providing further treatment to be referred, even if there is a tendency to end life, we direct it to the nearest hospital." (P9)

During the pandemic, companies' capacity to provide services to psychologists was impacted by financial constraints and managerial challenges. Companies' priorities, which were divided into delivering affordable services to clients, ensuring fair compensation for psychologists, and meeting various operational needs, indicated a structural unpreparedness to allocate resources optimally. Consequently, companies were unable to provide adequate support in the form of either digital infrastructure or other facilities essential for psychologists.

"And then trying to balance between... I want to provide affordable services, but I don't want to be unjust to psychologists, plus I still need to have money for the company. Because it turns out, there are so many needs. Paying taxes, paying tax consultants, paying salaries, hiring people, it turns out to be big expenses too […]." {P12)

Learning gap

Professional training and knowledge sharing for mental health practitioners in Indonesia showed insufficiency or irrelevance, particularly in the context of digital interventions in the early stages of the pandemic. Practitioners struggled to learn independently how to conduct digital interventions while addressing issues like cybersecurity and client privacy, in addition to transforming traditional in-person counselling skills into practical online formats.

"The obstacle is discussing something and making it into text. Discussing language that we usually do in direct counselling, but we need to treat it as text in text messaging counselling. Therefore, the need to examine spoken language and convert it to text sometimes requires tricks. For example, a little use of emojis to... make it polite." (P11)

"[...] so there are supports provided in the platform that I joined, but I feel that I still need to learn a lot to be able to handle situations online or digitally. So, I keep learning." (P7)

Theme 3: Regulatory and Legal Conditions

This theme specifically discusses how DMHS were implemented during the pandemic, which still had many gaps in regulations and the adaptation of codes of ethics from professional institutions that had not yet fully accommodated digital practices.

Lost in digital regulation

According to the participants, at the beginning of the pandemic, regulations and codes of ethics related to digital services in Indonesia remained unclear. Neither the Indonesian Psychological Association's (HIMPSI) code of ethics nor government standards for psychological services had been fully adapted to digital practices, creating room for diverse interpretations of the principles, security, and limitations of tele-counselling.

"So there's no standard at the same time. If the existing standards are more of a standard of facilities and infrastructure for offline counselling, but for online, it doesn't exist." (P1)

"But related to deeper regulations from the government, as far as I understand, there may not be, because it is still a grey area, like doctors can do tele-counselling, this is actually a grey area too. To what extent can they provide intervention?" (P9)

Licensing issues

Many practitioners also highlighted the lack of clear and unified licensing procedures. Dual administration through HIMPSI, the Association of Clinical Psychologists (IPK), and the Ministry of Health has created a complicated and burdensome licensing process. Consequently, some digital platforms often promote clinical psychology services without verifying any official government-issued licenses.

"For psychologists, there is a double administration, which is the Association of Clinical Psychologists and the HIMPSI. Then you have to register with the Indonesian Ministry of Health. So the technicalities are not clear." (P6)

"Yes, and sometimes what they use is just a general psychologist license, not a clinical psychologist license. And that's actually not acceptable." (P14)

Psychologist's safety and protection

Continuing the absence of a code of ethics for DMHS, psychologists raised concerns about personal safety and the protection of professional boundaries when providing services online. Cases of harassment or intimidation toward psychologists were reported, yet the vulnerable professionals felt unsure how to protect themselves without violating confidentiality.

"Maybe there should be clearer explanations around the code of ethics. Because sometimes, like I said earlier, when it comes to confidentiality, but then a situation like this happens— how flexible can we be in applying the code of ethics?" (P8)

Supervision and enforcement

Professional associations and the government relied solely on reports from the public to identify violations, with limited proactive oversight. Inaccurate licensing claims and misleading information about psychologists' credentials often went unchecked unless actively challenged by professionals.

"Again, when it comes to digital services, if there's a violation and it's reported, then we can follow up. If there's no report, we can't do anything either." (P14)

"The government should be able to intervene in those who commit these violations. But in the end, the regulation still cannot overcome the problems of those who are not psychologists." (P4)

Theme 4: Technological Limitations

Participants discussed how technological limitations posed a significant barrier and impacted the effectiveness and quality of DMHS and the therapeutic process provided to clients during the COVID-19 pandemic.

Digital clinical practice challenges

Practitioners reported challenges in maintaining online therapeutic presence for addressing complex mental health cases due to the lack of nonverbal cues and in reading emotional expressions or gestures. Moreover, some psychological interventions, such as music or art therapy, were harder to replicate effectively through online systems.

"Calls and videos are more or less the same. It might be confusing, because you can't observe the person." (P12)

"For example, cases like bipolar, severe depression with psychotic features—those can't be done. Cases that already have psychotic elements, they can't be handled online." (P14)

Software limitations

The finite use of free video conferencing platforms, complex systems, and the need for frequent reinstallation made practitioners hesitant to fully adopt these platforms. Therefore, better investment is needed in stable, secure, and easy-to-use digital infrastructure.

"[...] having to reinstall the program and all that—it just felt like a hassle. It didn't feel very efficient, and to be honest, that made me a bit unmotivated to keep going." (P6)

Theme 5: Service Effectiveness and Quality Challenges

This theme explores how busy counselling schedules, uneven distribution of psychologists, client engagement, and feedback could impact service effectiveness and quality.

Digital burnout

Psychologists described that their business structures lacked work-life balance due to being chronically online and always "on-call," creating burnout risks. The large number of counselling sessions in a single day triggered emotional exhaustion in psychologists, which then reduced the overall effectiveness of services.

"I feel like there is no work-life balance. Why? […] Even though there are no clients, I am always in an 'aware' condition automatically." (P1)

"Sometimes, one psychologist can handle five or more clients in one day and still conduct counselling until night." (P5)

Feedback and service improvement

Another challenge was sustaining service quality through consistent feedback and improvement efforts. Amid concerns might conceal a declining standards, providers addressed this through structured evaluations and regular follow-ups to ensure genuine client satisfaction.

"So actually, understanding client satisfaction, definitely yes. But I think we have to be able to cross-check again whether it's because of the client's review, or maybe our quality has decreased." (P1)

"Usually, after the counselling session, a form is given to assess what the counselling session was like today and how the psychologist's assessment was." (P5)

Client engagement and dropout

Psychologists revealed that clients often gave short responses without fully understanding the essence of counselling due to technical difficulties. This obstacle directly impacted the quality of interactions and client engagement in online counselling sessions, thus decreasing their motivation to continue their regular sessions.

"[…] when we give input to the client, ideally they should be able to understand it and know what their action plan is moving forward. But there were times when, due to disruptions, the client could only respond with "yes, yes" without really grasping what was being said. As a result, they didn't clearly understand what steps they needed to take." (P6)

Furthermore, providers focused on improving preparation and follow-up strategies to maintain client engagement. For instance, reading intake forms in detail and conducting pre-session psychological preparedness before sessions helped create a more comfortable environment. Additionally, several services offered extra or rescheduled sessions to uphold client rights in the event of disruptions.

"For mental health screening and psychological tests, we usually give the concern form first, and then, after that, we do an initial screening to see and record our clients' personal data or demographic data, and to find out the general description of the client or the problems faced by the client." (P5)

"[...] we will provide an additional session. So, the client can choose one session, but with the condition that the selected psychologist is available at that time. (P5)"

Theme 6: Capacity Building and Innovation

This theme illustrates the various strategic efforts undertaken by mental health

professionals and service organizations to adapt and strengthen their capabilities in the face of digital service transformation during the pandemic. It demonstrates that the success of digital services depends not only on technology but also on the quality of human resources, institutional adaptability, and innovative responses to operational and ethical challenges.

Professional development and workforce readiness

Stakeholders stated that continuous learning and upskilling are needed, especially in using digital platforms to deliver interventions. Frequent case-sharing sessions or training have strengthened their technical and ethical understanding to help meet clients' needs. Furthermore, developing competence and updating curricula for psychologists can align educational standards with current industry needs.

"The biggest challenge is how to increase the competence of psychologists to be able to provide that digital service" (P13)

"Usually, we gather for service evaluation and case sharing. Sharing cases, the obstacles, and so on" (P11)

"This additional information is related to the Professional Master's Degree in Psychology education system. In my opinion,adding more courses or practical sessions is necessary because we cannot choose clients in the real world." (P3)

In addition, changes in recruitment methods can ensure the readiness of the workforce to meet digital challenges. Organizations began screening psychologists more thoroughly, including interviews, role-plays, and prioritized hiring psychologists familiar with online counselling to guarantee their skills and experience to handle diverse and complex cases in digital environments.

"Not only related to CVs, seeing how this psychologist approaches when meeting with clients, because each psychologist has their own approach. Now, through role play, it is very noticeable how they see competence, especially when observed directly by direct psychologists." (P9)

System strengthening

Stakeholders recognized that the DMHS system has developed through platform advancements in registration, payment, and intervention delivery. Despite the growing accessibility and public acceptance of digital services, technical challenges such as uneven internet connections and varying technological understanding among clients remain obstacles. These issues require service providers to master digital platforms while providing clear and practical guidance to clients to maintain optimal service quality.

"The system should be easy for clients to use—easy to register, easy to schedule sessions, and so on." (P8)

"[…] then we are familiar with the apps that we use. Because it's very possible that during the counselling process we want to show something, for example we want to show pictures, videos and so on, how can we do that if we are not familiar enough with the technology." (P10)

Furthermore, participants expressed that the system could be strengthened through strategic innovations such as ongoing research into intervention models to improve service quality.

"So firstly, innovation related to service methods. It takes in-depth research. How to do counselling through zoom. […] This is what needs innovation. What about online CBT? Is it the same as offline CBT? Well, that needs innovation there." (P13)

Regulatory and ethical enhancement

Stakeholders recognized the importance of updating regulations and ethical procedures by professional bodies or governments in implementing DMHS. The rapid growth of digital services during the pandemic demonstrates the need for clear operational standards for service delivery. Ultimately, some platforms are creating regulations on how to provide services following the current ethics, because, as far as professionals know, the government has not issued official rules related to DMHS.

"For example, the code of ethics. We don't have a code of conduct for digital services. Can we, for example, have a Zoom meeting, and then I'm counselling people wearing

this t-shirt? And then, can I record it? The point is, there is no ethics for digital services. In fact, we cannot talk about law if there is no ethics." (P13)

"We also have ethics, for example, we have a rule that we can't wear a big headscarf. Because in the beginning, there was a debate [...] So finally we made agreements like that. Then like using a virtual background, or using a plain background. That's what we finally agreed on." (P12)

Service platforms should also transparently communicate data storage procedures and a standard secure system for medical records that can be used independently to protect client privacy while improving service quality.

"Yeah, ideally there should be server-side encryption. Some psychologists, they actually build their own platforms, specifically for storing client data [...]" (P14)

"[...] platform has given details of what the confidentiality of the data is like and how it will be planned, maintained, and how long. We already know that from the start." (P10)

Adapting to AI

The rise of AI-based alternatives has highlighted the need to redefine SOPs to preserve professional value and trust. This encouraged services to rethink how to adapt their systems while maintaining ethical practices.

"Now the effect is that these clients end up looking for other ways, such as AI, to ask questions, cheap and free, and again, they are happy. The Ministry finally needs to create a limit for this ... to provide innovation in limiting this. How can we do something about this? We should be wise in using technological innovations [...]." (P7)

Findings showed that DMHS implementation was affected by three interconnected factors: stigma around mental health, limited digital infrastructure and literacy, and fragmented policies. These barriers caused low client engagement, operational issues, and inconsistent care quality. Stakeholders adopted strategies like improvising protocols, offering hybrid care, boosting peer learning, and conducting internal evaluations. These insights can help improve the delivery, sustainability, and effectiveness of DMHS in Indonesia.

Context and Readiness of Digital Mental Health Services

The COVID-19 pandemic triggered a rapid shift to digital health services worldwide, including in Indonesia. The implementation of DMHS occurred under complex conditions shaped by sociocultural stigma, digital inequality, and policy fragmentation. The findings highlight stigma as a major barrier, with clients shunning professional psychological services due to fear of being labelled as "crazy" or weak, causing some to prefer religious or traditional healers instead. This echoes Geraldina, Suen and Suanrueang (2023), who identified cultural beliefs as a barrier to mental health help-seeking. This deep-rooted stigma also discouraged open dialogue about mental health in families and communities, making it difficult for individuals even to acknowledge the need for professional help. Practitioners often noted that clients hesitated to speak freely during sessions, fearing eavesdropping or judgment from others in the household. This stigma, deeply rooted in Indonesian society, created a significant barrier for DMH adoption, particularly when sessions moved into clients' private spaces.

Digital literacy and internet access also hindered DMHS's effectiveness. Many clients lacked the skills to use platforms like Zoom, and internet instability further interrupted sessions. Mendes-Santos et al. (2022) reported similar difficulties, citing a lack of user-friendly technology as a global barrier to digital service delivery. Wind et al. (2020) emphasized the digital divide as a worldwide public health concern. The results of this study showed that technical barriers were most pronounced among older adults, people living in rural areas, and those from lower socioeconomic backgrounds. Psychologists reported spending significant time guiding clients on how to use basic features, which detracted from therapeutic goals. The need to rely on mobile data rather than stable Wi-Fi further limited the duration and quality of sessions, especially in households with shared devices or limited connectivity. These issues were exacerbated in rural and economically disadvantaged communities, where internet access was limited and expensive

(Galvin et al., 2023).

Regulatory gaps introduced additional complexity. When the pandemic began, Indonesia did not have clear guidelines for DMHS, causing licensing confusion among practitioners due to overlapping roles between the Indonesian Psychological Association (HIMPSI), Indonesian Clinical Psychologists Association (IPK), and the Indonesian Ministry of Health. Similar issues appeared in other LMICs like the Philippines and India, where the rapid growth of DMH services during the pandemic outpaced the creation of formal standards and ethical guidelines (Jain, 2023; Narvaez, 2022). This reflects a broader trend in LMICs, where vague regulations have led to inconsistent service quality, data privacy concerns, and unclear accountability. In the absence of clear legal protection and explicit ethical guidelines, some providers were reluctant about full digital adoption, while others adopted ad hoc protocols. Consequently, service delivery, record management, and client consent procedures varied across platforms.

Pandemic-Driven Barriers and Adaptive Strategies

Client Engagement Challenge

Stakeholders faced challenges during DMHS implementation, including low client engagement and comparison with AI. Participants reported clients attended therapy mainly due to external pressure and noted frequent cancellations or low participation. Online formats increased distractions and passive engagement, with clients responding minimally and showing less emotional involvement (Geraldina, Suen, & Suanrueang, 2023), partly due to the environment and unfamiliarity with digital therapy. Studies indicate passivity can harm outcomes by weakening the client–therapist bond and reducing effectiveness (Geraldina, Suen, & Suanrueang, 2023; van Lotringen et al., 2021). The informal online setting may also lessen focus and commitment, especially in homes with disruptions or other challenges.

Moreover, several participants revealed that clients often compare counselling sessions with psychologists to artificial intelligence-based chatbots, such as Meta or ChatGPT. This perception reflects a shift in client expectations about therapeutic relationships and the importance of human involvement in the digital space. While AI can foster a more realistic view of therapy, it may also impact the sense of genuineness, as indicated in studies where AI interventions led to a decline in perceived authenticity (Stefana et al., 2024).

Technological Barriers and Competence of Service Providers

Recent studies (Galvin et al., 2023; Smith et al., 2023) also reported similar limitations in digital technology for handling certain complex or high-risk cases. The psychologists felt restricted in digitally reading clients' nonverbal expressions and body language, thus affecting interventions in cases that rely on nonverbal communication, such as depression. Furthermore, professionals had to navigate the complexity of software, which was mostly not intuitively designed for psychological practice, making it difficult to integrate with existing health practice management systems. As found in this study, virtual visits and digital interventions were often designed for treatment and monitoring rather than prevention (Smith et al., 2023). To compensate, some therapists developed new verbal strategies, such as explicitly checking in on clients' emotions more frequently or using scaled questions to gauge mood. Others extended the session time slightly to allow for a more emotional connection. However, these improvisations were often limited by technical difficulties and tight scheduling.

Organizationally, platforms struggled to match specialist availability and maintain financial sustainability. Some had difficulty compensating psychologists fairly while offering affordable services. Galvin et al. (2023) noted that remote care reshaped administrative workflows, straining operational systems. Smaller platforms often lacked the administrative staff to manage scheduling, invoicing, and follow-up communications efficiently, placing additional burdens on therapists to handle non-clinical tasks.

Psychologists Burnout

Moreover, the online movement made the work of psychologists busier and more stressful. In this study, psychologists were found to experience burnout due to the surging demand and the

organizational systems that require them to be on standby without guaranteed client availability, consistent with other research (Serrão et al., 2022). This burnout could result in less empathetic interactions and a decreased capacity to respond to client needs, ultimately impacting the therapeutic alliance and treatment efficacy (Tawfik et al., 2019; Yang & Hayes, 2020), as well as the sustainability of services and the retention of professionals.

Safety, Privacy, and Ethical Issues

Indonesian Law No. 17/2023 recognizes DMHS as healthcare services, but it does not yet detail operational standards, authority limitations, or service evaluation mechanisms (Wijayanti, Sutarno, & Panjaitan, 2024). Consequently, as professionals emphasized, ethical boundaries could be interpreted independently during interventions. Furthermore, not all digital services have encryption standards or transparent privacy policies (Hopkin et al., 2025; Smith et al., 2023), which means DMHS could potentially store, process, or even share client data without oversight. Besides, the lack of an integrated reporting and enforcement system led to the risk of verbal harassment in the digital space, resulting in low active participation in providing digital services. This inadequate professional protection indicates that the issue of workforce welfare and security in digital systems has not received sufficient attention. Furthermore, changes during the pandemic revealed a mismatch between technological readiness and the capacity of governments or professional bodies to address violations, such as the use of fake or expired licenses. These findings indicate that the challenges of implementing digital services are not only technical or individual but also systemic, thus requiring comprehensive policy interventions.

Stakeholders Adopted Creative Solutions

Peer learning, case discussions, and independent study became widely adopted. Some platforms introduced structured intake forms and feedback mechanisms to enhance service quality. Torous et al. (2020) encouraged such strategies, advocating for collaboration and training to support DMH delivery. Additionally, several platforms started conducting pre-counselling screening before sessions and offered follow-up appointments in cases of session disruption. Such adjustments helped maintain client engagement and reinforced the therapeutic alliance even under suboptimal conditions. Moreover, service providers are beginning to prioritize professionals with strong technological literacy, accompanied by rigorous recruitment processes that include professional licensing and counselling skills simulations through case role-plays. These methods can ensure consistent service quality and client safety (Dobson et al., 2022).

Suggestions for Sustainable Development of DMHS

To strengthen digital mental health services (DMHS) in Indonesia, comprehensive improvements are required across professional training, regulatory frameworks, technology, service innovation, research, and ethical AI integration. Practitioners should receive formal education on digital interventions, including virtual assessment tools, confidentiality, and rapport-building, while psychology curricula incorporate digital readiness through simulations, mentorship, and virtual practicums (Linardon et al., 2019; Mendes-Santos et al., 2022). Clear regulations and ethical guidance are essential, with harmonized policies addressing consent, data protection, therapist liability, and reporting mechanisms, supported by SOPs from HIMPSI and the Ministry of Health. Investment in mobile-friendly, secure, and low-bandwidth-compatible technology is necessary to enhance accessibility and user experience (Torous et al., 2020). Innovative hybrid service models combining in-person and online sessions can optimize flexibility and service quality, while standardized assessments and digital tools support tailored interventions (Smith et al., 2023). Ongoing research, client satisfaction monitoring, and evaluation of cost-efficiency are critical to evidence-based service scaling. Finally, AI integration should augment rather than replace human-centered care, providing support for screening, triage, and psychoeducation with transparency, accountability, and human oversight to maintain therapeutic integrity and client trust (Monteith et al., 2024).

Limitations

The study has several limitations, including potential sample bias due to its small size and

focus on the Indonesian population, which restricts the generalizability of the findings. Recruitment bias may have occurred because the primary researcher was familiar with some participants, potentially affecting objectivity. Technical challenges such as poor internet connectivity, software glitches, and audio-visual issues also disrupted interviews and data collection. Additionally, since the data were primarily analyzed by a single researcher, interpretation bias cannot be fully ruled out despite supervisory review. The study's participants were mainly urban and affiliated with formal organizations, leading to underrepresentation of rural experiences; however, the results align with findings from LMICs and similar research, suggesting broader applicability. Future studies should include rural populations or clients to provide a more comprehensive perspective.

CONCLUSION

The findings of this study demonstrate that the rapid adoption of digital mental health services (DMHS) in Indonesia during the COVID-19 pandemic created both opportunities and complex challenges for mental health stakeholders. The implementation of DMHS successfully expanded access to psychological services, particularly for individuals living in underserved areas and those requiring flexible support during mobility restrictions. However, the study also identified several significant barriers, including limited digital literacy, unequal internet infrastructure, persistent social stigma toward mental health, unclear regulatory frameworks, technological limitations, and the risk of burnout among mental health professionals. Stakeholders responded to these challenges through adaptive strategies, such as peer learning, hybrid counseling approaches, structured client screening, internal service evaluations, and technological innovations. The study further highlights that sustainable DMHS implementation requires comprehensive reforms involving professional training, ethical and legal standardization, infrastructure development, organizational readiness, and stronger governmental oversight to ensure service quality, confidentiality, and equitable access across Indonesia.

Future research is recommended to expand the scope of investigation by involving broader and more diverse participant groups, particularly clients, rural communities, policymakers, and non-formal mental health providers, in order to gain a more comprehensive understanding of digital mental health implementation in Indonesia. Further studies should also examine the long-term effectiveness of hybrid mental health models, the impact of AI-assisted counseling systems, and the development of culturally sensitive digital interventions adapted to Indonesian sociocultural contexts. Quantitative and mixed-method studies are also needed to measure service outcomes, client satisfaction, therapeutic effectiveness, and cost efficiency across different digital platforms. Future researchers are encouraged to explore ethical concerns related to privacy protection, cybersecurity, professional boundaries, and regulatory compliance in digital counseling practices, as these aspects remain underdeveloped in the current Indonesian mental health system.

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