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Making Meaning with Mobile Health: Patients’ Lived Experiences of Chronic Disease Self-Management

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ABSTRACT

The rapid integration of mobile health (mHealth) applications into chronic diseas management has transformed digital health engagement across diverse patien populations. While numerous studies have evaluated the effectiveness of mHealth tool through quantitative outcomes, limited attention has been given to how chronically il patients interpret and emotionally experience their daily use of such technologies Despite increasing adoption, little is known about the lived experiences of these patient and how mHealth influences their sense of control, trust, and self-management—prompting the question: How do chronically ill patients make meaning of thei engagement with mHealth applications? This study adopts an interpretativ phenomenological approach to explore the subjective experiences of ten chronically il adult patients (aged 35–68, with diabetes, hypertension, or heart disease) using mHealt applications for chronic illness self-care. Data were collected through in-depth, semi structured interviews and analyzed using interpretative phenomenological analysis t uncover essential themes. Four central themes emerged: rediscovering control throug digital guidance, emotional negotiation of trust, balancing digital isolation an connection, and motivation anchored in self-worth. These findings illuminate th complex, affective dimensions of mHealth engagement and highlight the role o emotional resonance in sustaining digital health behaviors. The study contributes deeper understanding of how digital tools are integrated into the lived realities of patient and calls for more empathetic, human-centered design in future mHealth interventions These insights expand the phenomenological discourse on technology use in healthcar and provide a conceptual foundation for longitudinal and cross-cultural research i digital health experiences.

INTRODUCTION

In recent years, the integration of digital technology into healthcare has transformed the way individuals manage chronic illnesses. Mobile health (mHealth) applications—designed to monitor health indicators, provide medication reminders, and facilitate communication with healthcare providers—have become increasingly prevalent across diverse health systems (Malik dkk., 2020). This digital shift reflects broader trends in health informatics and public health modernization, aiming to empower patients and improve health outcomes through continuous engagement and personalized health tracking.

The relevance of mHealth extends beyond its clinical utility; it also intersects deeply with human experience, identity, and the evolving nature of patienthood in the digital era. For individuals living with chronic conditions, health is not merely a biomedical concern but a lived, continuous negotiation involving emotional, psychological, and social dimensions. The use of mHealth tools embeds itself into daily routines and often influences how individuals perceive control, autonomy, and their role in managing illness (Meyer dkk., 2022). As such, understanding the subjective experience of patients is essential to evaluating the actual impact and usability of these technologies.

Despite growing interest in mHealth implementation and effectiveness, much of the existing literature remains dominated by quantitative assessments focusing on adherence, outcome metrics, or technical performance. While these approaches are valuable for capturing usage patterns and clinical outcomes, they often fail to reveal how patients internalize, interpret, and emotionally respond to the integration of digital tools into their daily lives. Such methods tend to reduce rich personal experiences into standardized variables, overlooking contextual and existential dimensions that influence engagement. As Rice dkk., (2021) have noted, studies relying solely on numerical or standardized indicators may misrepresent or oversimplify how patients make sense of their digital health journeys.

This methodological gap underscores the need for approaches that give voice to the lived realities of patients—approaches capable of capturing the meanings, tensions, and emotional textures embedded in everyday use of mHealth. A phenomenological approach is therefore well-suited, as it prioritizes the lived realities and meaning-making processes of individuals, offering deeper insight into the social and emotional textures of digital health engagement.

Research on patients’ lived experiences in managing chronic illness has emerged as a critical field within digital health studies. As mHealth technologies become more embedded in everyday life, scholars have increasingly recognized the importance of exploring not only the clinical effectiveness of such tools, but also the subjective and affective dimensions of their use (Moghimi dkk., 2024). Patients' interactions with digital platforms often involve complex emotional landscapes, including hope, skepticism, motivation, and digital fatigue, which are difficult to quantify but deeply consequential for long-term engagement and wellbeing.

However, capturing the nuanced meanings embedded in these experiences presents significant methodological challenges. Traditional quantitative approaches—such as surveys, randomized controlled trials, or behavioral tracking—while valuable for measuring usage patterns and outcomes, often fall short in uncovering the interpretative and existential aspects of patient experiences. They tend to reduce complex realities into predefined variables, thereby overlooking the richness of individual narratives and the contextual influences shaping them. As Rice dkk., (2021) have noted, studies relying solely on numerical or standardized indicators may misrepresent or oversimplify how patients make sense of their digital health journeys.

This methodological limitation highlights a crucial gap in current research: the need for approaches that allow the voices of patients to be heard in their full depth and complexity. Without such approaches, existing evidence risks remaining incomplete, lacking the insight necessary to design mHealth interventions that are truly meaningful, usable, and empathetically grounded. A phenomenological perspective offers a compelling alternative by focusing on the essence of lived experiences—how individuals perceive, interpret, and ascribe meaning to their engagement with health technologies—thereby enabling a more comprehensive and human-centered understanding of the phenomenon.

In addressing the challenges of chronic disease management, current healthcare solutions have largely relied on the integration of practical digital tools such as mobile health (mHealth) applications. These tools are designed to promote adherence, track health metrics, and facilitate remote monitoring—solutions that reflect a predominantly technocentric approach. While these applications have demonstrated measurable success in improving clinical outcomes and streamlining patient-provider interactions, their evaluation has often been limited to functional or behavioral metrics, such as usage frequency, treatment compliance, or satisfaction scores (Seven dkk., 2021).

However, such approaches offer an incomplete picture of how individuals truly experience these technologies in their everyday lives. Quantitative models, though valuable in scope, rarely capture the emotional, psychological, and existential dimensions of engaging with digital health platforms—dimensions that profoundly influence patient behavior and motivation (Sharma dkk., 2023). These limitations have resulted in a superficial understanding of how patients make sense of, adapt to, or even resist digital tools designed to support their health autonomy.

To move beyond these constraints, there is a critical need for methodologies that delve into the core of human experience—methodologies that prioritize subjective meaning and contextual interpretation. Phenomenology provides such a framework by focusing not on what people do, but on how they perceive and ascribe meaning to what they do. Through a phenomenological lens, it becomes possible to explore the inner worlds of patients, to understand how mHealth technology is woven into the narrative of illness, identity, and self-care. This shift is not merely methodological; it is epistemological, recognizing that genuine insight into digital health usage requires more than measuring—it requires listening, interpreting, and understanding the essence of lived experience.

Previous studies have explored how individuals interact with digital health technologies, particularly in managing chronic conditions. Much of this literature, however, focuses on observable behavior and outcome measures, often neglecting the deeper meanings that patients attach to their digital experiences (Sharma dkk., 2024). Some qualitative studies have highlighted patient engagement and satisfaction, but few have investigated how these technologies shape identity, motivation, and emotional resilience. Theoretical frameworks from health psychology and digital sociology have been applied, yet they remain underutilized in capturing lived experience. This gap signals a need for further research grounded in the personal realities of patients.

This study uses an interpretative phenomenological approach to explore how chronically ill patients experience using mobile health applications. The chosen method allows for an in-depth understanding of how individuals interpret their interactions with mHealth in the context of their illness. Unlike traditional approaches, phenomenology emphasizes perception, meaning, and the subjective essence of experience. By focusing on how patients make sense of these technologies, this study offers insights that go beyond usability or efficacy. The findings aim to address the knowledge gap by revealing the lived dimensions of digital health engagement.

This article is organized into six sections. The introduction outlines the context, relevance, and knowledge gap of the study (Slater dkk., 2020). The methods section describes the interpretative phenomenological design, participant selection, and data collection procedures. The results section presents the key themes that emerged from the data, supported by direct quotes from participants. The discussion interprets these themes in light of existing literature and theory. Finally, the conclusion summarizes the main contributions and implications of the study.

RESEARCH METHODS

Study Design

This study employed an interpretative phenomenological approach to explore the lived experiences of chronically ill patients using mobile health (mHealth) applications for self-management. The phenomenological design was selected due to its emphasis on subjective meaning-making and its ability to uncover the nuanced, personal dimensions of a phenomenon as experienced by individuals. Interpretative Phenomenological Analysis (IPA) served as the guiding methodological lens, allowing for in-depth exploration of participants' emotional, cognitive, and behavioral engagements with digital health tools (Tighe dkk., 2022). IPA is rooted in Heideggerian philosophy, which positions human experience as contextually embedded and interpretatively constructed, thereby aligning closely with the study’s objective to uncover rich, contextual meanings behind health-related app usage. The study was conducted in Indonesia, a middle-income country with rapidly increasing mHealth adoption, particularly in urban healthcare settings.

Participants

Participants consisted of individuals diagnosed with chronic illnesses who had experience using mHealth applications for daily health management. A purposive sampling strategy was used to ensure relevance and depth of experience related to the phenomenon under investigation. Inclusion criteria comprised adults aged 40 years and above, with a minimum of six months of continuous mHealth usage. Participants were excluded if they had cognitive impairments that limited their ability to articulate experiences or if they had not used mHealth platforms consistently (Tucker dkk., 2023).

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The final sample included 10 participants (6 females and 4 males), aged between 45 and 65 years, representing diverse chronic conditions including hypertension, type 2 diabetes, and cardiovascular disease.

Data Collection

Data were collected through in-depth, semi-structured interviews guided by a thematic interview protocol. Interviews were conducted face-to-face in a private setting chosen by participants to ensure comfort and confidentiality. Each interview lasted approximately 45 to 60 minutes and was audio-recorded with informed consent. The interview guide included open-ended questions designed to elicit detailed narratives about participants' interactions with mHealth technologies, perceived challenges, emotional responses, and perceived value in managing their health. Field notes were taken to capture non-verbal cues and contextual factors. All interviews were transcribed verbatim prior to analysis.

Data Analysis

Data were analyzed using Interpretative Phenomenological Analysis (IPA), following a systematic procedure to derive thematic structures of meaning. The analysis began with repeated readings of the transcripts to ensure immersion in the data, followed by the identification of significant statements and meaning units. These units were coded and clustered into emergent themes reflecting shared and divergent experiences (Turnock & Hearne, 2025). The process included thematic reduction and abstraction to distill essential meanings, supported by iterative comparisons across participant narratives. NVivo software was utilized to assist in organizing codes and facilitating thematic linkage, although interpretation remained grounded in human-centric reflection. The final themes emerged through a layered process of interpretation that respected both the individual and collective essence of the experiences.

Ethical Considerations

Ethical approval was obtained from the relevant institutional ethics review board prior to data collection. Participants provided written informed consent after receiving clear explanations regarding the study's purpose, procedures, and confidentiality measures (Tyagi dkk., 2023). Anonymity was preserved by assigning pseudonyms and removing all identifying information from the transcripts. Data confidentiality was ensured through secure storage and restricted access. The research adhered to internationally recognized ethical standards for human subjects research, including the Declaration of Helsinki.

RESULTS

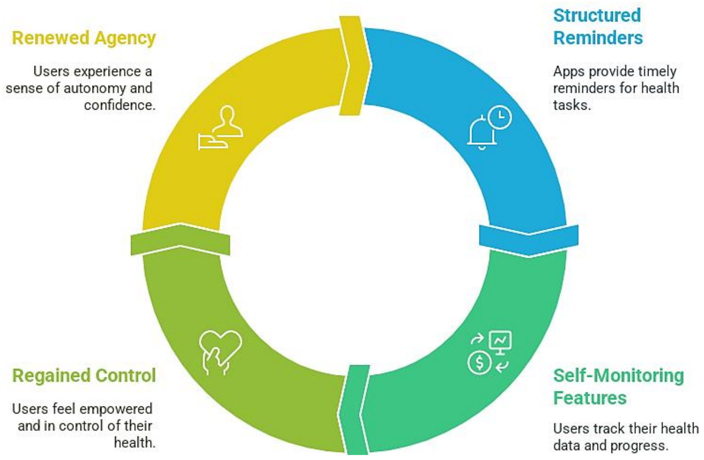
Rediscovering Control through Digital Guidance

Participants consistently described a sense of empowerment resulting from the structured reminders and self-monitoring features of the mHealth apps. These digital interventions were perceived not merely as tools, but as companions that helped reclaim autonomy over their health routines.

"When the app reminds me to take my medication, it feels like someone is actually looking out for me. It keeps me on track, even when I'm overwhelmed." (P03, female, 57)

This regained control was particularly meaningful for participants who previously felt helpless in the face of unpredictable symptoms or complex treatment regimens. The structured prompts offered through the applications provided reassurance and a renewed sense of agency.

Cycle of Empowerment through Digital Health



Emotional Negotiation of Trust and Uncertainty

While mHealth technologies were generally welcomed, they also triggered internal dialogues of doubt, particularly in relation to data accuracy and algorithm-generated health recommendations.

“Sometimes I wonder, is this suggestion really for me? The app doesn’t know my full story... I still call my doctor just to be sure.” (P07, male, 62)

Participants oscillated between appreciating the immediacy of digital feedback and questioning its reliability. The tension between technological convenience and medical judgment highlighted a persistent undercurrent of trust negotiation in digital health engagement.

Digital Isolation versus Connectedness

For many participants, mHealth apps played a paradoxical role in their social experience of illness. On one hand, the apps were described as supportive tools that reduced feelings of being “left alone” in their health journey.

“It may sound strange, but just opening the app in the morning makes me feel connected... like I’m doing something right for myself.” (P05, female, 48)

However, others expressed feelings of digital loneliness, especially when app interactions replaced human communication or when technical language created barriers to understanding.

“I don’t always get what the app says. Sometimes I wish it talked more like my nurse, not like a computer.” (P02, male, 55)

Motivation Anchored in Self-Worth

The use of mHealth apps was closely tied to participants’ evolving self-perception. Monitoring progress, setting health goals, and receiving notifications were internalized as affirmations of personal value and commitment to wellness.

“Seeing my steps count go up gives me hope. Like, yes—I can do this. I’m not broken.” (P01, female, 60)

These emotional responses were not superficial; they formed the psychological scaffolding upon which adherence to long-term health behavior was built. Motivation was sustained not only by functional features, but by the symbolic messages embedded in routine engagement.

The lived experiences of chronically ill patients using mHealth applications are marked by a delicate interplay between autonomy, trust, emotional fulfillment, and digital fatigue. Participants found value in the perceived support, motivation, and structure provided by these applications, while also negotiating the limitations and emotional ambiguities associated with algorithmic health guidance. The meaning of mHealth is thus not purely technical—it is deeply personal, situated within the socio-emotional landscapes of chronic illness and digital adaptation.

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DISCUSSION

This study aimed to explore how chronically ill patients experience and interpret the use of mobile health (mHealth) applications for self-management. Using an interpretative phenomenological approach, the study revealed four key themes: rediscovering control through digital guidance, emotional negotiation of trust and uncertainty, navigating between digital isolation and connectedness, and motivation anchored in self-worth. These themes collectively demonstrate that patients engage with mHealth not merely as technological tools, but as emotionally and socially embedded companions in their health journeys (van Doorn dkk., 2023). The core of their experiences centers around the restoration of control, trust negotiation, emotional motivation, and the tension between digital connection and isolation—all of which directly respond to the central research question concerning how patients experience and interpret mHealth usage for self-management.

These findings provide a nuanced and multidimensional answer to the research question by uncovering the lived meanings that patients assign to mHealth engagement. Rather than focusing on frequency of use or technical satisfaction, this study illustrates how mHealth technologies influence patients' sense of autonomy, dignity, and identity in the context of long-term illness. By revealing these experiential dimensions, the study extends existing knowledge by highlighting that the success of mHealth interventions is deeply contingent upon how users internalize and emotionally relate to the technology, thus addressing a critical gap in the literature.

The themes identified in this study both align with and expand upon previous research. For instance, Vitali dkk., (2023) emphasized the interpretative dimension of digital health engagement, noting that patients often anthropomorphize technology as relational entities—a finding echoed here in the theme of "rediscovering control through digital guidance." Similarly, Wickerson dkk.,(2020) discussed the ambiguity users face when interpreting app feedback, which supports the present theme of "emotional negotiation of trust and uncertainty." However, this study goes further by illuminating how emotional resonance and self-worth emerge as central mechanisms for sustained engagement. The focus on existential dimensions—such as the desire to feel connected, understood, and validated—adds depth to prior models of technology acceptance, which often overlook the phenomenological texture of user experience.

Implications of the Findings

The findings of this study carry significant implications for the design and implementation of digital health interventions. From a social perspective, the emotional and relational dimensions of mHealth usage suggest that digital tools should be designed not merely for functionality, but with empathetic interfaces that support patients' psychological and motivational needs. Culturally, the study highlights how mHealth can serve as a bridge between traditional models of healthcare and emerging digital ecosystems, particularly in settings where access to continuous, human-centered care is limited. Professionally, healthcare providers and app developers are encouraged to incorporate user feedback that reflects lived experiences, enabling more human-centered technological development. These findings may also be relevant in broader healthcare systems across diverse populations, especially where chronic illness intersects with digital literacy and self-care demands.

Limitations of the Study

Several limitations should be acknowledged when interpreting the findings. As with many qualitative phenomenological studies, the sample size was limited and context-specific, comprising patients from a particular demographic and healthcare environment. The purposive sampling method, while appropriate for depth, may limit the transferability of findings to populations with different cultural or socioeconomic backgrounds (Woerner dkk., 2022). Furthermore, the reliance on self-reported narratives may be subject to memory bias or emotional filtering. While these limitations do not undermine the richness of the insights gained, they point to the need for cautious interpretation and contextual application of the results.

Future Research Directions

The insights uncovered in this study provide a strong foundation for future research exploring digital health engagement through phenomenological or other qualitative lenses. Further studies could examine similar experiences across different cultural contexts or chronic conditions to explore the variability and commonality in mHealth usage. Longitudinal phenomenological research may also be valuable in understanding how these experiences evolve over time as patients continue to interact with digital health tools. Moreover, interdisciplinary approaches that integrate phenomenology with behavioral science or human-computer interaction could offer a more holistic view of digital health behavior. These avenues would not only deepen theoretical understanding but also guide the ethical and empathetic design of future digital health interventions.

CONCLUSION

This study explored the lived experiences of chronically ill patients in using mobile health (mHealth) applications for daily self-management. Through an interpretative phenomenological approach, the research revealed how patients construct meaning around digital health tools, particularly in terms of regaining control, negotiating trust, maintaining motivation, and navigating emotional connectedness. The findings underscore the intricate interplay between technology and patient identity, showing that mHealth engagement is shaped by emotional resonance, perceived agency, and social context. By addressing gaps in prior research, this study contributes valuable insight into the emotional and cognitive dimensions often overlooked in quantitative evaluations. The results suggest that digital health interventions should prioritize empathy-driven design and patient-centered narratives to ensure long-term adoption and meaningful impact. Future studies may build upon these insights by examining cross-cultural perspectives or longitudinal changes in patient experiences over time.

CONFLICT OF INTEREST

The authors declare no conflict of interest. All procedures performed in this study were conducted independently of any commercial or financial relationships that could be construed as a potential conflict. The funder had no involvement in the study design, data collection, analysis, interpretation, or publication decision.

REFERENCES

Malik, A., Kalidhar, A., & Hanon, C. (2020). InnerHour: Solving the Treatment Gap in Mental Health. Using technology to disrupt the mental health landscape. *Information Psychiatrique*, *96*(5). Scopus. https://doi.org/10.1684/ipe.2020.2113

Meyer, C. L., Surmeli, A., Hoeflin Hana, C., & Narla, N. P. (2022). Perceptions on a mobile health intervention to improve maternal child health for Syrian refugees in Turkey: Opportunities and challenges for end-user acceptability. *Frontiers in Public Health*, *10*. Scopus. https://doi.org/10.3389/fpubh.2022.1025675

Moghimi, E., Gutierrez, G., Stephenson, C., Gizzarelli, T., Jagayat, J., Holmes, C., Patel, C., Omrani, M., Simpson, A. I. F., & Alavi, N. (2024). Experiences using an online therapist-guided psychotherapy platform (OPTT) in correctional workers with depression, anxiety, and PTSD. *Frontiers in Psychiatry*, *15*. Scopus. https://doi.org/10.3389/fpsyt.2024.1365746

Rice, S., O'Bree, B., Wilson, M., McEnery, C., Lim, M. H., Hamilton, M., Gleeson, J., Bendall, S., D'Alfonso, S., Russon, P., Valentine, L., Cagliarini, D., Howell, S., Miles, C., Pearson, M., & Álvarez- Jiménez, M. (2021). Development of a graphic medicine-enabled social media-based intervention for youth social anxiety. *Clinical Psychologist*, *25*(2), 140–152. Scopus. https://doi.org/10.1080/13284207.2021.1923128

Seven, Ü. S., Stoll, M., Dubbert, D., Kohls, C., Werner, P., & Kalbe, E. (2021). Perception, attitudes, and experiences regarding mental health problems and web based mental health information amongst young people with and without migration background in Germany. A qualitative study. *International Journal of Environmental Research and Public Health*, *18*(1), 1–24. Scopus. https://doi.org/10.3390/ijerph18010081

Sharma, P., Tranby, B., Kamath, C., Brockman, T. A., Lenhart, N., Quade, B., Abuan, N., Halom, M., Staples, J., Young, C., Brewer, L., & Patten, C. (2024). Beta Test of a Christian Faith-Based Facebook Intervention for Smoking Cessation in Rural Communities (FaithCore): Development and Usability Study. *JMIR Formative Research*, *8*. Scopus. https://doi.org/10.2196/58121

Sharma, P., Tranby, B., Kamath, C., Brockman, T., Roche, A., Hammond, C., Brewer, L. C., Sinicrope, P., Lenhart, N., Quade, B., Abuan, N., Halom, M., Staples, J., & Patten, C. (2023). A Christian Faith-Based Facebook Intervention for Smoking Cessation in Rural Communities (FAITH-CORE): Protocol for a Community Participatory Development Study. *JMIR Research Protocols*, *12*(1). Scopus. https://doi.org/10.2196/52398

Slater, H., Stinson, J. N., Jordan, J. E., Chua, J., Low, B., Lalloo, C., Pham, Q., Cafazzo, J. A., & Briggs, M. (2020). Evaluation of Digital Technologies Tailored to Support Young People's Self-Management of Musculoskeletal Pain: Mixed Methods Study. *Journal of Medical Internet Research*, *22*(6). Scopus. https://doi.org/10.2196/18315

Tighe, S. A., Ball, K., Kayser, L., Kensing, F., & Maddison, R. (2022). Qualitative study of the views of people living with cardiovascular disease, and healthcare professionals, towards the use of a digital platform to support cardiovascular disease self-management. *BMJ Open*, *12*(11). Scopus. https://doi.org/10.1136/bmjopen-2021-056768

Tucker, I., Easton, K., & Prestwood, R. (2023). Digital community assets: Investigating the impact of online engagement with arts and peer support groups on mental health during COVID-19. *Sociology of Health and Illness*, *45*(3), 666–683. Scopus. https://doi.org/10.1111/1467-9566.13620

Turnock, L. A., & Hearne, E. (2025). Novel wellbeing and repair peptide use in the UK: Netnographic findings. *Performance Enhancement and Health*, *13*(1). Scopus. https://doi.org/10.1016/j.peh.2024.100293

Tyagi, V., Khan, A., Siddiqui, S., Kakra Abhilashi, M., Dhurve, P., Tugnawat, D., Bhan, A., & Naslund, J. A. (2023). Development of a Digital Program for Training Community Health Workers in the Detection and Referral of Schizophrenia in Rural India. *Psychiatric Quarterly*, *94*(2), 141–163. Scopus. https://doi.org/10.1007/s11126-023-10019-w

van Doorn, M., Monsanto, A., Boeschoten, C. M., van Amelsvoort, T., Popma, A., Öry, F. G., Alvarez-Jimenez, M., Gleeson, J., Jaspers, M. W. M., & Nieman, D. H. (2023). Moderated digital social therapy for young people with emerging mental health problems: A user-centered mixed-method design and usability study. *Frontiers in Digital Health*, *4*. Scopus. https://doi.org/10.3389/fdgth.2022.1020753

Vitali, C., Fusari, G., Baldanzi, C., Cacciatore, D. M., Crispiatico, V., Carullo, A., Rovaris, M., Cattaneo, D., Baglio, F., & Isernia, S. (2023). Telerehabilitation for Lee Silverman Voice Treatment (Tele-LSVT)-Loud on voice intensity and voice use in daily living in people with multiple sclerosis: A protocol for a feasibility and pilot randomized controlled study. *Digital Health*, *9*. Scopus. https://doi.org/10.1177/20552076231218150

Wickerson, L., Fujioka, J. K., Kishimoto, V., Jamieson, T., Fine, B., Sacha Bhatia, R., & Desveaux, L. (2020). Utility and Perceived Value of a Provincial Digital Diagnostic Imaging Repository: Multimethod Study. *JMIR Formative Research*, *4*(7). Scopus. https://doi.org/10.2196/17220

Woerner, M., Sams, N., Rivera Nales, C., Gorstein, T., Johnson, M., Mosser, B. A., & Areán, P. A. (2022). Generational Perspectives on Technology’s Role in Mental Health Care: A Survey of Adults With Lived Mental Health Experience. *Frontiers in Digital Health*, *4*. Scopus. https://doi.org/10.3389/fdgth.2022.840169