
A Qualitative study exploring the digital therapeutic alliance with fully automated smartphone apps

Rebecca Brotherdale, Katherine Berry and Sandra Bucci.

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Reviewed by Stephanie Thompson

AI Acknowledgement

I confirm I have not used any AI tools in the research and creation of this assignment. I confirm I have not presented any AI generated material as my own work. I confirm I have drafts, notes, copies and other resources I used, which I may be asked to provide in evidence.

Script

Today I will be reviewing the article “A qualitative study exploring the digital therapeutic alliance with fully automated smartphone apps” by Rebecca Brotherdale, Katherine Berry and Sandra Bucci, published in Digital Health in 2024.

This paper explores whether a therapeutic alliance can exist between users and fully automated mental health apps, how such an alliance is experienced by users, and how the alliance differs from the traditional therapeutic alliance in counselling.

Introduction

Digital mental health interventions have expanded at a heightened rate in response to the increasing demand for mental health support, prolonged waiting times, and barriers such as stigma and cost. Smartphone apps in particular are now widely used for symptom management, mindfulness, self-monitoring and cognitive behaviour therapy (Berry et al., 2019).

Research suggests that a digital therapeutic alliance can form in online and digital therapies. Studies indicate that this alliance can have similar effects to those seen in face-to-face therapy, and that it can be rated highly, even when there is no therapist involved, suggesting that a physical therapist presence is not essential for a digital therapeutic alliance.

However, despite their popularity, mental health apps consistently show high attrition rates, with many users disengaging quickly. Inadequate design and the lack of personalisation features are common factors responsible. In face-to-face therapy, the therapeutic alliance is among the strongest predictors of engagement and positive outcomes. However, this looks quite different in digital mental health interventions.

Bordin (1979) conceptualised the therapeutic alliance as shared goals, agreement on tasks, and a relational bond between therapist and client. This raises the question: *what happens to the therapeutic alliance when there is no human therapist?*

The concept of the digital therapeutic alliance, (DTA), attempts to answer this question. A large proportion of existing research has measured the DTA by adapting alliance scales, such as the Working Alliance Inventory-short Revised (WAI-SR) and the mobile Agnew Relationship Measure (mARM), which replace the word “therapist” with “app”. Brotherdale et al., (2024) argue that this approach may be conceptually problematic, as it assumes that the alliance in digital applications continues to function in the same way as the human therapist relationship.

The aim of this study was to explore the digital therapeutic alliance in digital health interventions (DHI) from the users perspective, using qualitative methods to understand whether 1) people with mental health difficulties form an alliance with mental health apps; 2) what constitutes the DTA; and 3) the similarities and differences across the traditional therapeutic alliance and DTA.

Method

The sample included seventeen participants, 14 females and 3 males that met the eligibility criteria of the study. 1) who self-identified as having a mental health difficulty, either currently or in the preceding six months, receiving mental health care treatment and/ or has a mental health diagnosis. 2) currently or within the preceding six months, a user of mental health apps from the app store. 3) English speaking. 4) aged eighteen and above. 5) capacity to provide informed consent.

Participants were recruited through social media, university counselling services and email bulletins. Interviews were conducted via online videoconferencing and lasted between thirty-five and seventy-five minutes.

Data were analysed using a qualitative design, employing semi-structured interviews and Braun and Clarke's reflexive thematic analysis, which involved identifying patterns across participants' accounts. The researchers' recognised that participants' experiences were subjective and shaped by context, and they reflected on how their own professional backgrounds may have influenced interpretation.

Fig. 1 Thematic Table

Themes	Sub-theme		
<i>1: Connection with 'an other'</i>	<i>1.1: Personification.</i> Some participants' personified mental health apps, associating them with human relationships, like friendships. Users felt a sense of commitment and loyalty from apps due to the constant availability	<i>1.2: Passive connection.</i> Some participants' described a connection to app features and content which was distinguishable from human relationships. Check-in features and space to describe feelings provided a sense of being heard and held, likened to the emotional container. Human voice features were more likely to foster a sense of connection.	<i>1.3: Non- human.</i> Some participants' described apps as disingenuous and lacking empathy, and unable to replicate a human therapist. Some participant's felt their experience were invalidated and likened apps to robots.
<i>2: Accessibility</i>	<i>2.1: User friendly.</i> Apps were valued for being easy to use and available anytime, anywhere. Personalisation of apps with characters provided a sense of familiarity and friendliness.	<i>2.2: Availability.</i> All participants' valued the on-demand availability of apps, particularly during night-time distress or when other support was unavailable. The constant availability contributed to feelings of reliability and trust	
<i>3: Choice and empowerment</i>	<i>3.1: Control.</i> Participants' valued having control over when and how they used apps, which contrasted with the rigid structure of many mental health services. This sense of	<i>3.2: Accountability.</i> Participants' described feeling more accountable for their own mental health due to apps requiring motivation to access them. This sense of ownership fostered lower expectations for apps in comparison with support they	

	autonomy reduced power imbalances and fostered self-esteem and accountability.	expect to receive from mental health services.	
<i>4: Goals and expectations</i>	<i>4.1: Differing purpose.</i> Participants' typically held short-term, symptom-focused goals for app use and had lower expectations than they did for therapy. Apps were not seen as addressing root causes or trauma, but as tools for immediate support.	<i>4.2: Lower expectations than services.</i> Again, participants' describe having lower expectations from apps than with in-person mental health services. Participants' viewed apps as an outlet rather than a tool to address problems, further supporting personal accountability. When participants' felt apps were helping, this strengthened engagement and alliance building.	
<i>5: Safe place</i>	<i>5.1: Lack of judgement.</i> Apps were experienced as non-judgemental, private and predictable, allowing participants' to disclose thoughts and feelings without fear of stigma, burdening others, or triggering safeguarding responses.	<i>5.2: Loyalty and reliance.</i> Participants' overall reflected that apps provide predictability and consistent support, leading to greater trust. Endings were on their terms.	

Findings

I will now move on to the findings. The analysis identified five interrelated themes that described how participants experienced the digital therapeutic alliance with fully automated smartphone apps.

The first theme was connection with 'an other', which captured different ways participants' related to apps. Some participants' personified apps, describing them like friendships, and spoke about a sense of commitment or loyalty that developed through the app's constant availability. Others described a more passive form of connection, where specific features, such as check-ins or spaces to write about feelings, created a sense of being heard or held, even though this was clearly distinguished from a human relationship. Human voice features appeared to strengthen this sense of connection. However, not all experiences were positive with some participants' emphasising the non-human nature of apps, describing them as disingenuous, robotic, or lacking empathy, particularly in comparison to human therapists.

The second theme was accessibility. Participants' consistently valued apps for being easy to use and available at any time. User-friendly design and personalisation features, such as characters, contributed to feelings of familiarity and

approachability. Importantly, on-demand availability was especially valued during night-time distress or when other forms of support were unavailable. This constant access to apps contributed to perceptions of reliability and trust.

The third theme was choice and empowerment. Participants valued having control over when and how they engaged with apps, which contrasted with the more structured and inflexible nature of many mental health services. This autonomy reduced perceived power imbalances and supported feelings of self-esteem. At the same time, participants described feeling more accountable for their own mental health, as app use required self-motivation. This sense of ownership was linked to lower expectations of apps compared to mental health services.

The fourth theme related to goals and expectations. Participants generally held short-term, symptom focused goals for app use and did not expect apps to address deeper issues such as trauma or root causes. Apps were seen as tools for immediate support rather than therapeutic change. Again, expectations were lower than those held for in-person services, and when apps were perceived as helpful, engagement and alliance were strengthened.

Finally, the fifth theme was safe place. Apps were experienced as non-judgemental, private, and predictable, which enabled disclosure without fear of stigma, burdening others or triggering safeguarding responses. Participants described

valuing the consistency and control apps offered, including the ability to end use on their own terms. This predictability fostered trust and, for some participants', a sense of loyalty or reliance.

Discussion

These findings suggest that users of fully automated smart phone apps do form an alliance, but that this alliance differs from the traditional therapeutic human alliance.

The authors argue that rather than being relational in the interpersonal sense, the digital therapeutic alliance appears to be shaped less by the traditional bonds of Bordin's (1979) model, which does not translate neatly into digital contexts, but instead, alliance appears to form and more by containment, realistic expectations, accessibility, autonomy, and safety.

The authors argue that the bond component of Bordin's (1979) model does not translate neatly into digital contexts.

The authors discuss the key theoretical application of Winnicott's concept of the holding environment, suggesting that apps function as a form of emotional container, allowing its users to offload distress without fear of judgement or emotional consequences including safeguarding responses. In this way, apps provide containment rather than empathy.

This re-framing challenges the widespread practice of measuring DTA using adapted traditional alliance scales. If alliance in digital applications is not fundamentally relational, then using existing measures may fail to capture its most important aspects as highlighted in this study.

Strengths

In terms of strengths, this was the first study to address a significant gap in the literature by focusing on users with lived experience of mental health difficulties and by using qualitative methods to explore subjective experience. The sample included a diverse range of participants, including from ethnically minoritised backgrounds. The researchers' strong reflexive practice further enhances the credibility of the study.

Limitations

There are some limitations to the study. Participants used a wide range of mental health apps for differing mental health needs meaning the nature of the alliance may vary depending on app design, functionality and purpose. Future research should address how the type of app, frequency, and mental health needs, impacts the DTA. The self-selected sample may over-represent digitally engaged users due to experiences shaped by COVID-19, which may have increased reliance on apps. Additionally, prompting discussion of alliance may have influenced participants to frame experiences relationally.

Ethically, the findings raise important issues. While apps provide a non-judgemental safe space, this may conflict with safeguarding responsibilities, particularly during crisis situations. Verbeke et al., (2024) argue mental health apps do not hold the same duty of care as therapists, and although app developers recognise the need to protect users, current safeguarding practices in apps vary and often rely on signposting rather than active intervention. This highlights the importance of careful integration of apps into broader mental health care.

Implications

In terms of implications for counselling practice, the findings suggest that the digital apps should not be viewed as replacements for therapy, but as additional support that provides support with containment, accessibility, choice and empowerment, goals and expectations and a safe space.

Apps may be particularly useful between sessions, during waiting periods, or for individuals who experience stigma or discomfort with disclosure. Counsellors should be aware of how clients may form meaningful, though non-relational, alliances with apps and consider how these tools can complement therapeutic work while remaining mindful of their limitations.

The findings also have implications for app design, suggesting that human voice features, customisable profiles, goal setting and interventions based on user input may contribute to lower attrition rates.

A key implication of this study is the need for better ways in measuring the DTA. In this study, Brotherdale et al. (2024) argue that many existing DTA measures are adaptations of traditional therapeutic alliance scales and do not always fit with the way users experience the DTA. A DTA scale is currently under development, designed to reflect the experiences and processes identified in this study, rather than simply adapting human alliance scales (Tong et al., 2025).

Conclusion

In conclusion, Brotherdale et al., (2024) provide strong evidence that a digital therapeutic alliance can form with fully automated mental health apps, but that it operates differently from the human therapeutic alliance.

The digital therapeutic alliance is distinctly shaped by five central aspects: connection with 'an other', accessibility, choice and empowerment, goals and expectations and safe place. This challenges existing theoretical models and measurement approaches and has important implications for counselling theory, practice and digital intervention design.

The authors emphasise the need for adaptations in the design of apps to include human voice features, user-friendly interfaces, goal setting options and further functions based on individual user input. Future research should continue to refine conceptual models of the DTA and explore how digital and human forms of support can be ethically and effectively integrated to support users' needs.

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