

A4i (TheApp4Independence) Research Compilation Abstract

The Problem: In Schizophrenia spectrum populations, there is limited treatment adherence and few available community-based supports. Thus, efforts to foster illness self-management have limited success ([Kidd et al., 2020](#)). While digital health strategies hold promise to address these problems (Kidd et al., 2019), limited digital health interventions exist for schizophrenia spectrum disorders ([Lagan, Camacho & Torous, 2021](#)). Even fewer of these interventions are evidence-based and supported by empirical research.

Background: Schizophrenia Spectrum disorders have been a long-standing challenge to the health care systems, individuals and their families, which has led to poor treatment engagement and extensive use of crisis services ([Zhou et al., 2022](#)). A recent review paper revealed that while there is significant support for feasibility and interest in technologies for Schizophrenia Spectrum Disorders, there is mixed efficacy and effectiveness of the few technologies that have been implemented. Further, while these technologies are often integrated with traditional care, there is little clarity on the process, making it unclear how technology may impact treatment outcomes. What has been observed, however, is the importance of peer support in facilitating treatment outcomes and engagement alongside technological intervention.

Method: In order to address the gaps in the available digital health technologies to facilitate care for individuals with Schizophrenia Spectrum Disorders, A4i was developed. A4i is a multi-feature app that uses community feed, scheduling, and text-based functions co-designed with service users to enhance illness self-management ([Kidd et al., 2019](#)). After a feasibility study, A4i was implemented across three contexts, as a pilot and a trial at CAMH ([Kassam et al., 2022](#)) and a peer support adjunct intervention ([Zhou et al., 2022](#)).

Results: The first study investigating A4i at CAMH demonstrated A4i to be feasible regarding outcome and process indicators. Also, the study revealed significant improvements in psychiatric symptoms ([Kidd et al., 2019](#)). Implementations across all three contexts revealed high engagement. The peer support implementation of A4i revealed high levels of peer support correlated with strong engagement of A4i users on the app ([RHUS-BS, 2022](#); [Zhou et al., 2022](#)). Furthermore, preliminary pilot outcomes demonstrated significant increases in quality of life, with strong engagement with the community news feed ([Moreno & Juarez-Williamson, 2023](#)). The CAMH pilot and trial outcomes will be released in the upcoming future.

Implications: A4i addressed some of the gaps in the digital health literature surrounding limited randomized control trials through a multi-site implementation as a pilot project, RCT and a peer support implementation. Further, A4i has addressed some of the current concerns surrounding engagement with digital health technologies by demonstrating strong engagement when coupled with peer support interventions and outlining specific adjunct care services, which has traditionally been a shortcoming in the schizophrenia spectrum disorder intervention literature. Future directions for A4i include a fully powered RCT which is currently in progress, validating machine learning and digital phenotype learning, as well as dismantling specific effects of the tools provided in A4i such as the hallucination detector.

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Upcoming Publications:

- The Landscape of Digital Mental Health Interventions in the Treatment of Schizophrenia Spectrum Disorders: A Scoping Review
- Brief Report: Supporting schizophrenia and psychosis recovery through a digital platform: multi-site implementation findings.

Ask us for the full data, evidence and validation presentation available upon request.