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Knowledge Synthesis: COVID-19 in Mental Health and Substance Use

Synthesis Title:

Digital Health Interventions for The Detection, Prevention and Management of Mental Health Problems in People with Chronic Diseases: A Knowledge Synthesis (Interventions numériques pour détecter, prévenir et prendre en charge les problèmes de santé mentale chez les personnes atteintes de maladies chroniques : Synthèse des connaissances.)

Nominated Principal Applicant (name and affiliation):

Marie-Pierre Gagnon, Université Laval

Authors (names and affiliations):

Annie LeBlanc, Université Laval

Maxime Sasseville, Université du Québec à Chicoutimi

Maud-Christine Chouinard, Université de Montréal

Marianne Beaulieu, Université Laval

Pascale Cholette, Clinique Proactive santé

Christine Aspiros, patient partner

Alain Larouche, Groupe santé Concerto

Guylaine Chabot, Groupe santé Concerto

Nicolas Beaudet, Omnimed

For more information, please contact:

Mylène Boucher, Research coordinator, Mylene.Boucher.ciussscn@ssss.gouv.qc.ca

Target/priority population(s) in synthesis:

- Adults suffering from any chronic disease AND presenting, or at risk of presenting, a concomitant mental health problem.

What is the issue?

- A large number of digital health interventions have been tested and proven to be effective for mental health problems, but there is a lack of evidence synthesis for their application in the population with concomitant chronic diseases.

Key messages (max 100 words):

- Digital mental health interventions are effective to improve anxiety, depression, distress and post-traumatic stress symptoms as well as quality of life in adults living with a chronic disease.

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- The effectiveness of internet-based interventions, especially Cognitive Behavioral Therapy, is consistent across studies.
- More evidence is needed to conclude about the effectiveness of other types of digital mental health interventions (e.g., online forum, teleconsultation, virtual reality).
- There is not enough evidence to support the use of digital mental health interventions in the children and youth population.

How was the synthesis conducted?

This synthesis was conducted in two stages. First, we conducted a rapid review of systematic reviews by performing comprehensive searches in seven bibliographic databases. The results were presented to knowledge users who were invited to identify current knowledge gaps to inform the second stage of the knowledge synthesis. Based on the knowledge gaps identified, we conducted a two-round Delphi study where knowledge users were invited to prioritize one question for further analysis. Using a systematic approach, we conducted a secondary analysis of the primary studies included in the systematic reviews identified at Stage 1. Meta-analyses were performed to assess the effectiveness of digital mental health interventions on five outcomes of interest (anxiety, depression distress, quality of life and post-traumatic stress disorder). We also assessed the risk of bias in the included studies.

What did the synthesis find? Provide a lay summary of the outcomes (max 300 words):

For the first stage of the knowledge synthesis, a total of 35 reviews were included in the preliminary analysis. The included reviews were structured in 4 population clusters: 1) chronic diseases; 2) cancer; 3) mental health; and 4) children and youth. The mental health outcomes targeted by the included reviews were mainly depression and anxiety symptoms, evaluated with heterogeneous outcomes measures. For the population with chronic diseases, reviews identified improvement on depressive symptoms. For people currently affected by, or survivors of cancer, reviews showed that digital health interventions were effective to improve depression, anxiety, distress, and quality of life. For the population with multiple mental health problems, reviews showed improvements in anxiety, depression and PTSD symptoms. Finally, for the children and youth populations, there were inconclusive results regarding effectiveness of digital mental health interventions.

For the second stage of the knowledge synthesis, a total of 121 primary studies targeting adults were considered, for a total sample of 2940 participants. Most studies described interventions performed in the community (30%), and evaluated internet or web-based interventions to manage and treat mental health issues (98%). Most interventions (70%) were based on cognitive behavioral therapy (CBT). Most studies compared digital health intervention to usual care (71%), although some studies compared two or more digital interventions (28%). The target populations were mostly people affected by chronic mental health conditions (42%), cancer (18%) or various chronic diseases (41%). Overall, the results show that digital health interventions are more effective than usual care to manage mental health issues in adults living with a concomitant chronic condition. The magnitude of the effect varies for each outcome, and heterogeneity is generally high, but the positive results are consistent across studies. When comparing different digital health interventions, the overall effects are also significant for all five outcomes of interest.

What are the implications of this synthesis?

- To help with the management of potential COVID-19 repercussions for people with chronic diseases, digital mental health interventions including internet-based therapy should be implemented.

- At this moment, there is a lack of evidence to support the use of smart phone apps, online chats and forums, and text messages. Thus, internet-based interventions should be prioritized.

- There is insufficient information to make recommendation regarding digital mental health intervention for children and youth with a chronic disease. More evidence is needed in that respect.

List up to 10 keywords specific to this synthesis to facilitate website search filters and sorting:

- E-health, Internet, Digital health, Chronic diseases, Mental health, Anxiety, Depression, Comorbidity, Rapid review