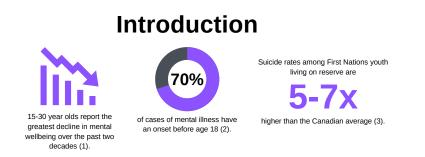
# A Literature Review of Digital Platforms for Youth Mental Health

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- Trends in Canadian youth mental health are concerning, and Indigenous youth face disproportionately high rates of mental illness and suicide.
- Digital platforms are a potential way to reach remote and rural communities and reduce inequities in mental health.
- InSync is a new digital mental health platform that is currently being developed to address Indigenous youth mental health and wellbeing.

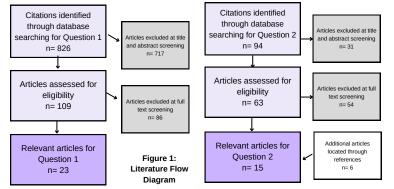
# **Objective**

To review the literature on existing digital platforms for youth mental health in order to take an evidence-based approach to designing the InSync platform.

### Methods

A literature search was conducted for two research questions (Figure 1):

- 1. What digital platforms currently exist to address youth mental health?
- 2. Are there any Indigenous-focused digital platforms for mental health?



# **Key Findings**

- Digital platforms are generally acceptable, effective, and feasible for addressing youth mental health.
- Common app features included mood ratings, surveys, diary or journalling, gamification, rewards and progress tracking, push notifications, contacts, chat channels, and resources.
- Although the literature on Indigenous-focused mental health apps is lacking, it is suggested that cultural relevance is critical.

#### Table 1: A sample of articles reviewed.

Article	Population and study location	Indigenous- focused?	Methods	App/platform features	Study outcomes
Kenny et al. 2015 (4)	Age: 15-17 years Location: Dublin, Ireland	No	Feasibility evaluation using self-report questionnaires of open-ended and closed-ended questions	CopeSmart • Self-directed mobile app designed to improve mental health via emotional self-monitoring and positive coping. • Features: Settings (default reminders), Rate My Mood, Coping Tips, Resources (contact details for phone, text, online, and face-to-face resources), and Mood History.	The app generated reasonably positive responses - 79% found it at least somewhat useful and 93% reported ease of use.     Rate My Mood" feature was found to be the most used and most useful.     Engagement with the app was varied, suggesting that young people engaged with the app in different ways.
MacIsaac et al. 2021 (5)	Age: mean = 19.02 years Location: Thunder Bay, ON, Canada	No	Evaluation study using surveys and multilevel modelling	JoyPop App • Smartphone app designed to improve youth resilience through the use of self-regulatory skills. • Features: Rate My Mood, Activities (breathing exercises, art, etc.), Journal, Calendar, Circle of Trust (safe social contacts), Call for Help.	There was a dose-response relationship between days of app usage and improvements in difficulties with emotion regulation and depression symptoms.     Participants with higher baseline ACES scores experienced faster rates of change. suggesting that those with more adversity had more to gain from an intervention.
Newton et al. 2020 (6)	Age: 13-18 years Location: Halifax, NS, Canada	No	3-phase user- centred design approach	MindClimb • Smartphone app to help promote independent CBT skills practice and provide youth with a sense of ownership over their treatment. • Features: She Ladders (exposures), Dashboard, Relaxation, Thinking Traps, Rewards, Settings, Help Sessions.	Adolescents and therapists were satisfied with the app and found it easy to use and helpful as an adjunct to CBT treatment.     Youth found relaxation strategies and step ladders with reminders to be the most helpful components.     Suggests feasibility of incorporating app use into CBT treatment.
Povey et al. 2016 (7)	Age: 10-18 years Community: Aboriginal and Torres Strait Islander Location: NT, Australia	Yes	Focus group sessions and survey	AIMhi Stay Strong App • Therapist-guided app intervention and care planning tool designed for Aboriginal and Torres Straft Islander youth, aimed at promoting wellbeing by reviewing strengths, worries, and goals/changes one wants to make in their life. • Users explore personal strengths and weaknesses in relation to various spiritual, cultural, physical, and family aspects of one's life.	<ul> <li>This study found apps to be a solution to overcome barriers by increasing mental health literacy, enabling anonymity, and providing young people with thrther help.</li> <li>App characteristics that were preferred: a strengths-based approach, mental health information, relatable content, a fun, appealing, easy to use interface that encouraged app progression.</li> </ul>
Tighe et al. 2017 (8)	Age: 18-35 years Community: Aboriginal and Torres Strait Islander Location: NW Australia	Yes	Two-arm randomized controlled trial	IBobbly Self-directed self-help app designed to reduce suicidal ideation and plans in Aboriginal and Torres Strait Islander communities. Features: Content & Activity Modules, Regular Self-Assessments, Emergency Referal, content created by Indigenous artists, Progress Tracking, designed with community members.	<ul> <li>Participants in the iBobbly group showed significant reductions in depression and distress scores, and no differences in impulsivity were observed.</li> <li>This study suggests that suicide prevention apps reduce distress and depression, but do not show significant reductions on suicide ideation or impulsivity.</li> </ul>

# **Recommendations and Next Steps**

- Based on the evidence and evaluation of existing platforms, the InSync platform should focus on incorporating these proven elements and consider key factors such as cultural appropriateness, language differences, and digital literacy.
- More research should be done to investigate the potential of digital platforms for reducing mental health disparities for Indigenous youth.

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