Gaming my way to recovery: Understanding how to integrate serious video games into youth mental health services.

Manuela Ferrari, Sarah McIlwaine
Douglas Mental Health University Institute/McGill University, Canada
manuela.ferrari@douglas.mcgill.ca

Jennifer Reynolds
Concordia University, Canada

Suzanne Archie
McMaster University, Canada

Katherine Boydell
Black Dog Institute, Australia

Shalini Lal
University of Montreal/CRCHUM/Douglas Mental Health University Institute, Canada

Jai Shah
Douglas Mental Health University Institute/McGill University, Canada

Joanna Henderson
Center for Addiction and Mental Health, Canada

Mario Alvarez -Jimenez
eOrygen, University of Melbourne, Australia

Neil Andersson
McGill University, Canada

Espen Aarseth, Rune Kristian Lundedal Nielsen
Centre for Computer Games Research, IT University of Copenhagen, Denmark

Srividya Iyer
Douglas Mental Health University Institute/McGill University, Canada

Keywords

INTRODUCTION

The proliferation of research in e-mental health shows how technologies can be effective in improving accessibility of services; prompting clinical effectiveness; supporting standardization and personalization of care; encouraging patients' engagement through its interactivity; reducing stigma; while being cost effective (Lal & Adair, 2014). Youth with mental health problems strongly endorse the use of technologies for receiving information about, medication, education/career paths, and mental health; to support their treatment journey (e.g., decision-making tools); and to facilitate recovery (Lal, Dell'Elce, Tucci, Fuhrer, Tamblyn, Malla, 2015; Lal & Adair, 2014; Boydell, Volpe, Pignatiello, 2010; Abdel-Baki, Lal, D.-Charron, Stip, Kara, 2017; Horgan & Sweeney, 2010).

Video games are played by millions of adolescents and young adults around the world and are one of the preferred and used technologies by youth who are accessing mental health services (Abdel-Baki, Lal, D.-Charron, Stip, Kara, 2017). There is a growing body of literature which explores the advantages of playing video games in promoting better attention, memory, and problem-solving skills; enhancing gamer's ability to cope with failures; managing emotions; improving retention of information; facilitating deep learning; supporting and promoting behavior change (Granic, Lobel, Engels, 2014; Boot, Blakely, Simons, 2011); and, treatment for mental health conditions (e.g., anxiety, depression, PTSD) (Lau, Smit, Fleming, Riper, 2017; Barnes & Prescott, 2018). However, recently the WHO identified a new classification gaming disorder (11th Revision of the International Classification of Diseases, 2018; Gentile, 2009). This new classification leaves healthcare providers with unique challenges associated with detecting, assisting, and treating this disorder (Kardefelt-Winther, 2014; Kardefelt-Winther, Heeren, Schimmenti, van Rooij, Maurage, Carras, et Al., 2017). To help address this challenge, there is a demand for a specific knowledge synthesis that can provide clear recommendations on how serious video games can be effectively adopted and integrated into existing youth mental health clinical services.

AIMS AND FRAMEWORK

Using a stepped care conceptual framework (Bower & Gilbody, 2005), this knowledge synthesis aims to understand where, when, how, and for what purpose serious video games can best be implemented into youth services for mental health and substance misuse, and also if it is appropriate to do so.

Population	What do the video game interventions focus on?	Assessing state of our knowledge about
		equity, effectiveness, impact, processes, efficiency, sustainability, engagement, and ethical practices

Step 4	Severe mental illness and/or risk of life	Support psychotherapy	What is known?
		CBT therapy	What are the practice/research gaps?
		Exposure therapy	Recommendations

Step 2 & 3	Mild to moderate mental illness problems	Psychoeducation	What is known?
		Monitoring symptoms	What are the practice/research gaps?
		Coping with symptoms	Recommendations
		Self-help and peer support	

Step 1	At-risk groups	Assessment	What is known?
		Psychoeducation	What are the practice/research gaps?
		Pathways to care	Recommendations
		Navigate services	

Step 0	Youth-population based intervention	Promoting physical and mental wellness (e.g., physical health, healthy lifestyle, attentions, memory, etc.)	What is known?
			What are the practice/research gaps?
			Recommendations

METHODS

Using Arksey and O'Malley's scoping review methodology, our aim is to systematically map the primary sources of evidence, types of evidence, quality of the evidence, and gaps in the research on a specific topic area (Arksey & O'Malley, 2015). The scoping review will unfold as follows: Stage 1: Identifying the research question(s) and protocol; Stage 2: Identifying relevant studies (Databases searched: Medline (Ovid), EMBASE (Ovid), PsycInfo (Ovid), Cochrane Library); Stage 3: Study selection; Stage 4: Data collection and extraction; and, Stage 5: Data summary and synthesis of results.

RESULTS

Stage 1: Protocol revisions, stakeholder engagement, and identification of relevant studies began in October 2018. By the end of November 2018, the librarian identified a total of 6299 citations, without duplicate items. We are expecting stage 2-4 will be complete by March 2019, at which time we will have all pertinent articles for data extraction. Stage 5: Data summary and synthesis of results will take approximately

one month (April 2019). We will use the conceptual framework (see Model) to synthesize the results.

The scoping review will gain knowledge on the relevance, effectiveness, impact, efficiency, and ethics of serious video games for youth aged 11-29 with mental health and substance misuse concerns. Specifically, in relation to:

1. Specific disorders (e.g., anxiety, depression, psychosis, PTSD, eating disorders);
2. Level of treatment (mental health promotion, prevention, treatment);
3. The modality of treatment (self-help, psycho-education, psychotherapy);
4. Population (e.g. Indigenous, ethno-racial, LGBTTIQQ2S, disability, linguistic, low income);
5. Settings (e.g., community care, primary care, specialized services, rural/remote); and
6. Ethical practices and level of users' engagement.

This presentation will discuss:

1. Recommendations on how best to integrate serious video games into youth mental health settings and services.
2. Research and practice gaps in the literature to inform future video game research studies.

CONCLUSIONS

Overall, video game technologies and solutions hold the promise of being learning machines (Gee, 2010) because of their ability to build on learning principles. They can employ unique features to motivate and facilitate learning processes, opening up new possibilities for designing and envisioning new modalities to provide care to youth, support caregivers, and providers. This review on serious mental health video games will help mental health providers, and policymakers to access evidence-based knowledge to assess potential usage and risks, and, effectively promote its implementation in youth mental health services to support monitoring, assessment, and treatment.

Clinical knowledge gleaned from this review will generate valuable knowledge on where, when, how, and for what purpose serious video games can best be implemented into youth services for mental health and substance misuse, and if it is appropriate to do so. Methodological knowledge gained from this scoping review process can be implemented and used to systematically assess evidence on the impact of serious mental health video games related to other conditions and/or context.

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