EPP0834

Current Evidence on Virtual Reality–Based Interventions for the Treatment of Mental Disorders

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Introduction: Virtual reality (VR) enables immersion in an interactive digital world with realistic experiences, that can be applied for controlled and personalized interventions.
Objectives: This presentation aims in summerizing the current research on VR in the treatment of mental disorders.
Methods: Selective literature search in PubMed and Google Scholar.
Results: An increasing number of publications report the therapeutic application of VR for the treatment of mental disorders. Most VR applications are based on established therapy approaches, such as exposure therapy. According to meta-analytic data, virtual exposure therapy (VRET) for specific phobia and agoraphobia with panic disorder is as effective as traditional in vivo exposure therapy. VRET for the treatment of social phobia is significantly more effective than waitlist and placebo control groups with, however, currently inconsistent metanalytic results when compared to in vivo exposure therapy. VRET for the treatment of posttraumatic stress disorder (PTSD) is similar in effectiveness compared to active psychotherapy. For psychosis, positive results have been reported for the VR-based treatment of auditory verbal hallucinations. For patients with a substance use disorder, VR can induce craving, with still unverified diagnostic and therapeutic relevance.
Conclusions: VRET can broaden the psychotherapy options for anxiety disorders. Encouraging results of VR-based treatments for psychosis and PTSD indicate the need for further research concerning its effectiveness and safety. In the field of substance use disorders, evaluation of clinical-orientated VR applications is needed.

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EPP0835

Using Best-Worst Scaling to assess preferences for online psychological interventions to decrease cannabis use in young adults with psychosis

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Introduction: In individuals with first episode psychosis (FEP) and cannabis use disorder (CUD), reducing cannabis use is associated with improved clinical outcomes. Access to evidence-based psychological interventions to decrease cannabis use in FEP clinics is highly variable; E-mental health interventions may help to address this gap. Development of E-interventions for CUD in individuals with FEP is in its incipient phases.
Objectives: To assess preferences for online psychological interventions aiming at decreasing or stopping cannabis use in young adults with psychosis and CUD.
Methods: Individuals aged 18 to 35 years old with psychosis and CUD were recruited from seven FEP intervention programs in Canada and responded to an electronic survey between January 2020-July 2022. We used the Case 2 Best Worst Scaling methodology that is grounded in the trade-off utility concept to collect and analyse data. Participants selected the best or worst option for each of the nine questions corresponding to three distinct domains. For each domain we used conditional logistic regression and marginal models (i.e., three models in total) to estimate preferences for attributes (e.g., duration, frequency of online intervention sessions) and attribute levels (e.g., 15 minutes, every day).
Results: Participants (N=104) showed higher preferences for the following attributes: duration of online sessions; mode of receiving the intervention; method of feedback delivery and the frequency of feedback from clinicians (Table 1). Attribute-level analyses showed higher preferences for participating once a week in short (15 minutes) online interventions (Figure 1). Participants valued the autonomy offered by online interventions which aligns with their preference for completing the intervention outside the clinic and only require assistance once a week (Figure 2). Participants' preferences were higher for receiving feedback related to cannabis consumption both from the application and clinicians at a frequency of once a week from clinicians (Figure 3).

Table 1. Preferences for Attributes. Results of conditional logistic regression

Attributes	Domains	OR	95% CI for OR
Duration session	A	**1.62**	**1.45; 1.82**
Frequency sessions		0.98	0.87; 1.09
Duration intervention			ref
Preferred mode of receiving the intervention	B	**1.63**	**1.46; 1.83**
Preferred location for participating		1.07	0.96; 1.20
Frequency of assistance from the clinician			ref
Preference for the feedback delivery method	C	**1.21**	**1.08; 1.36**
Frequency of feedback from the treating clinician		**1.14**	**1.02; 1.28**
Frequency of feedback from the application			ref

Note: In boldface significant odds ratios (OR) and confidence intervals (CI)

Image:

Figure 1. Preferences for attribute-levels corresponding to Domain A. Results of conditional logistic regression

Attribute-level	Attribute	OR	95% CI for OR
Fifteen min	Duration session	1.19	1.03; 1.37
Thirty min		0.91	0.79; 1.05
Five min		ref	
Three times a week	Frequency sessions	0.91	0.79; 1.05
Once a week		2.06	1.79; 2.37
Every day		ref	
Three months	Duration intervention	1.07	0.93; 1.23
Six weeks		1.04	0.91; 1.20
Six months		ref	

Note: In yellow are presented significant odds ratios (OR) and confidence intervals (CI)

Image 2:

Figure 2. Preferences for attribute-levels corresponding to Domain B. Results of conditional logistic regression

Attribute-level	Attribute	OR	95% CI for OR
At the beginning of treatment	Frequency of assistance from the clinician	0.78	0.68; 0.89
One time per week		1.16	1.01; 1.33
Every session		ref	
Outside the clinic	Preferred location for participating	1.24	1.08; 1.42
At my clinic AND outside the clinic		1.15	1.00; 1.32
At my clinic		ref	
In person	Preferred mode of receiving the intervention	0.86	0.75; 0.98
In person AND technology based		1.09	0.95; 1.25
Technology based		ref	

Note: In yellow are presented significant odds ratios (OR) and confidence intervals (CI)

Image 3:

Figure 3. Preferences for attribute-levels corresponding to Domain C. Results of conditional logistic regression

Attribute-level	Attribute	OR	95% CI for OR
Clinician once a month	Frequency of feedback from the treating clinician	0.92	0.80; 1.06
Clinician once a week		1.29	1.13; 1.48
Clinician twice a week		ref	
Application twice a week	Frequency of feedback from the application	1.01	0.88; 1.16
Application once a week		1.08	0.94; 1.24
Application every day		ref	
From case worker (clinician) only	Preference for feedback delivery method	0.85	0.74; 0.98
From application AND case worker (clinician)		1.74	1.51; 2.00
From application only		ref	

Note: In yellow are presented significant odds ratios (OR) and confidence intervals (CI)

Conclusions: Using advanced methodologies to assess preferences, our results can inform the development of highly acceptable E-Mental health interventions for decreasing cannabis use in individuals with CUD and FEP.

Disclosure of Interest: None Declared

EPP0836

Psychiatryai.com: An exploratory online Artificial Intelligence and Data Science platform to enable near real-time psychiatry and mental health evidence-based medical research and data dissemination

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Introduction: Psychiatryai.com is a prototype Artificial Intelligence (AI) and Data Science (DS) platform and research project developed for my Evidence-Based Healthcare (EBHC) course at University of Oxford in MSc studies (Kellogg College). This is a singular, multi-disciplinary, and beta-testing project in Computing Science, Psychiatry, and Mental Health for oral presentation at EPA 2023.

Objectives: AI and DS in Psychiatry and Mental Health have emerged as important research areas in the post Covid-19 pandemic era. This prototype University project (Psychiatryai.com) was launched on 22nd November 2021. It aims to develop a free, secure, and open access platform in *near* real-time about psychiatry and mental health evidence-based research - for healthcare professionals, doctors, and researchers in psychiatry. The project also aims to integrate findings from the Goldacre Review (2022) into practice and develop novel computing solutions utilising AI and DS, and present findings.

Methods: A WordPress site (Psychiatryai.com) was developed with syndicated RSS feeds across 330 psychiatry topics and refreshed by data servers hourly, 24 hours a day, 7 days a week. A total of 43 WordPress plugins were utilised to develop this secure platform. The site is powered by intuitive data modelling and analytics in near real-time and available in open access coding format for peer-review, future development, and research. The primary sources of live evidence for the project are PubMed and University of Helsinki, Finland. The server performance data analytics will be available for poster presentation at EPA 2023. This includes full statistical results and discussion since its inception and launch (including traffic, MESH tags, and PubMed ID), and robust technical analysis and performance outcomes - available freely online to promote research in psychiatry and mental health.

Results: Knowledge Synthesis and Dissemination:
Total Words: 4356886 *
Live Psychiatry and Mental Health Citations from PubMed: Exceeds 325000
Total Evidence Alerts Published: 54391 *
Total Algorithms/Topics: 330
Total site visitors: 8023 *
* Since launch of Psychiatryai.com on 22 November 2021 inclusive to 31 October 2022

Conclusions: Psychiatryai.com was able to demonstrate succesful development of an effective and viable platform to study AI and DS in Psychiatry and Mental Health, as evidenced by results table. The platform has also incorporated findings from the Goldacre Review (2022) and aims to continue to collect valuable insights towards *full* real-time data analytics and dissemination of peer-reviewed current evidence in the future. The emergence of these technologies will be useful in settings such as disaster psychiatry, psychiatry e-training and research, and e-mental health awareness/promotion ahead.

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