ISRCTN16969130 https://doi.org/10.1186/ISRCTN16969130

The effectiveness of a cognitive behavioral treatment with virtual reality for problem gambling

Submission date
27/06/2022

Recruitment status
No longer recruiting

Registration date
19/07/2022

Overall study status
Completed

Last Edited
10/09/2025

Condition category
Mental and Behavioural Disorders

[X] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] Record updated in last year

Plain English summary of protocol

Background and study aims
Pathological gambling is characterized by a loss of control over gambling, deception about the extent of one's involvement with gambling, family and job disruption, theft, and chasing losses, or the effort to win back money lost while gambling. About 1% of the adult population is said to be a pathological gambler.
Cognitive-behavioral treatment of gambling-related disorder, although effective, is associated with a high dropout rate. Some players consider that it does not answer adequately to their needs. Few alternatives have been rigorously evaluated, but the exposure treatments offer beneficial clinical opportunities while demonstrating, in some studies, comparable efficacy to cognitive processing.
This research aims to assess whether a behavioral treatment with virtual reality exposure would increase the feeling of self-efficacy of people with an addiction to video lottery machines not to play despite the presence of a desire to play in order to ultimately reduce their gambling behavior.

Who can participate?
Persons over 18 years of age who have a diagnosed pathological gambling problem, and speak French.

What does the study involve?
Interested individuals will have to participate in an initial selection interview. Then, individuals will be invited to participate in a face-to-face diagnostic evaluation interview on pathological gambling at the Université du Québec en Outaouais (UQO). Participants (7 participants) will be randomly assigned to baselines of different lengths before the treatment begins. The study follows the design for single-case studies with multiple baselines across subjects. The effectiveness of the treatment will also be assessed at a 6-month follow-up.

What are the possible benefits and risks of participating?
The potential benefit is to receive a free treatment for pathological gambling which is likely to lead to clinical improvements. The potential risks are the psychological discomfort associated

with being in psychotherapy (e.g., engaging in personal and emotionally challenging issues) and cybersickness (unwanted negative side effects of immersion in virtual reality, such as nausea or dizziness).

Where is the study run from?
Université du Québec en Outaouais (Canada)

When is the study starting and how long is it expected to run for?
December 2019 to September 2025

Who is funding the study?
Fonds de Recherche du Québec-Société et Culture (Canada)

Who is the main contact?
Professor Stephane Bouchard, stephane.bouchard@uqo.ca

Contact information

Type(s)
Principal investigator

Contact name
Prof Stéphane Bouchard

ORCID ID
https://orcid.org/0000-0002-5995-340X

Contact details
UQO - Dept. psychologie
C.P.1250 Succ Hull
Gatineau
Canada
J8X3X7
+18195953900, ext. 2360
stephane.bouchard@uqo.ca

Additional identifiers

Protocol serial number
FRQSC (Funding): 2020-0JUR-293539 and UQO Ethic committee no: 2022-1121

Study information

Scientific Title
Pathological gambling: effectiveness of a cognitive behavioral treatment with virtual reality based exposure

Acronym
JeuPathoTCC-RV

Study objectives
It is expected that the treatment will lead to a reduction in gambling behaviors, in the number of cases meeting the diagnosis of pathological gambling, in the desire to gamble, in cognitive distortions, as well as an increase in the perception of self-efficacy compared to the waiting group. Finally, these therapeutic gains are expected to be maintained at 6 and 12 month follow-ups.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 10/01/2022, Comité d'Éthique à la Recherche de l'Université du Québec en Outaouais (Pavillon Alexandre-Taché, bureau F-2013, Quebec, Canada; +1 819 595-3900; comite.ethique@uqo.ca), ref: 2022-1121

Primary study design
Interventional

Study design
Single-case studies

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Treatment and relapse prevention for adults suffering from pathological gambling

Interventions
After receiving an appropriate diagnosis and completing the ethics procedures, participants will be randomly assigned to one of the following two conditions:
1. Experimental condition: Cognitive Behavioral Treatment with Virtual Reality Based Exposure (6 sessions):
1.1 Session 1: psychoeducation about pathological gambling, introduction to the cognitive behavioral approach and virtual reality.
1.2 Session 2-4: application of cognitive behavioral strategies with exposure (imaginal and in virtuo exposure).
1.3 Session 5-6: Exposure and relapse prevention.

2. Control condition: Waiting list

Follow up at 6 and 12 months

Randomization
Prior to the start of the study, randomization is done with an app that generates random numbers between 0 and 1 corresponding to the Control or Experimental condition. A table is then created and handled by the research coordinator. The rest of the research team and the psychotherapist do not have access to this list. The moment they are accepted in the study, participants are automatically assigned to the next available slot in the table.

Intervention Type
Behavioural

Primary outcome(s)
Current primary outcome measure as of 11/03/2024:
Gambling Self Efficacy Questionnaire completed on a daily basis during the baseline and treatment phases.

Previous primary outcome measure:
Gambling Self Efficacy Questionnaire (GSEQ; May, Whelan Steenbergh & Meyers, 2003) at pre- and post-test as well as at 6- and 12-month follow-ups.

Key secondary outcome(s)
1. Entrevue diagnostique sur le jeu pathologique-5 (EDJP-5): diagnostic interview at pre- and post-test as well as at 6- and 12-months follow-ups.
2. Gambling Craving Scale (GACS; Young & Wohl, 2009): at pre- and pos-test as well as at 6- and 12-months follow-ups.
3. Information Biases Scale (IBS; Jefferson & Nicki, 2003): at pre- and pos-test as well as at 6- and 12-months follow-ups.
4. Experience lived during the exposure measured using Questionnaire d'attentes envers l' exposition (QAE; Bergeron, Giroux et Bouchard, 2019): before and after each exposure.
5. Cybersickness symptoms measured using Simulator Sickness Questionnaire (QC; Kennedy, Lane, Berbaum, & Lilienthal, 1993; Bouchard et al., 2011): before and after each exposure in virtual reality.

Completion date
30/09/2025

Eligibility

Key inclusion criteria
1. French speaking
2. At least 18 years old
3. Receiving a principal diagnosis of Pathological gambling based on DSM-5 diagnostic criteria. Assessed with a semi-structured diagnostic interview (EDJP-5)
4. Mainly play VLT
5. Having a goal of abstinence from gambling
6. Do not suffer from health problems that may be exacerbated by the VR treatment (e.g., intense and frequent discomfort during car trips, vestibular or inner ear disorders, recurrent migraines, epilepsy, partial or total blindness).
7. Do not suffer from a untreated mental health problem that may be contraindicated in VR (e. g., psychotic disorders, intellectual disability, bipolar affective illness).
8. Being able to travel to the Université du Québec en Outaouais

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 Years

Sex
All

Total final enrolment
5

Key exclusion criteria
1. Do not speak French
2. Less than 18 years old
3. Do not have received a principal diagnosis of Pathological gambling based on DSM-5 diagnostic criteria. Assessed with a semi-structured diagnostic interview (EDJP-5)
4. Do not mainly play VLT
5. Do not have a goal of abstinence from gambling
6. Suffer from health problems that may be exacerbated by the VR treatment (e.g., intense and frequent discomfort during car trips, vestibular or inner ear disorders, recurrent migraines, epilepsy, partial or total blindness).
7. Suffer from a untreated mental health problem that may be contraindicated in VR (e.g., psychotic disorders, intellectual disability, bipolar affective illness).
8. Do not be able to travel to the Université du Québec en Outaouais

Date of first enrolment
01/09/2022

Date of final enrolment
31/03/2024

Locations

Countries of recruitment
Canada

Study participating centre
University of Quebec at Outaouais (Université du Québec en Outaouais (UQO))
Department of Psychology (Dept. psychologie)
C.P.1250 succ. Hull
Gatineau
Canada
J8X3X7

Study participating centre
Laval University - School of Psychology (Université Laval - École de psychologie)
Pavillon Félix-Antoine-Savard
2325 rue des Bibliothèques
Québec

Canada
G1V0A6

Sponsor information

Organisation
Fonds de Recherche du Québec - Société et culture

ROR
https://ror.org/00shpc021

Funder(s)

Funder type
Government

Funder Name
Fonds de Recherche du Québec-Société et Culture

Alternative Name(s)
Quebec Research Fund-Society and Culture, The FRQSC, Fonds de Recherche-Société et Culture, Le FRQSC, Fonds de Recherche du Québec-Société et Culture, Society and culture, FRQSC

Funding Body Type
Government organisation

Funding Body Subtype
Local government

Location
Canada

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request
stephane.bouchard@uqo.ca

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes