




# BMJ Open Experience of LGBTQIA2S+ populations with gambling during the COVID-19 pandemic: protocol for a mixed-methods study

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## ABSTRACT

**Introduction** Research undertaken since the beginning of the COVID-19 pandemic has provided us information about the impact of the pandemic on the gambling habits of the general population. However, very little is known about certain subgroups at increased risk of developing gambling disorder, such as the LGBTQIA2S+ population. The purpose of this study is to describe the impact of the COVID-19 pandemic on gambling behaviours among LGBTQIA2S+ individuals. In addition, we want to understand the experiences of the LGBTQIA2S+ population with gambling disorder and identify interventions that LGBTQIA2S+ people have found to be effective in addressing problem gambling during the COVID-19 pandemic.

**Methods and analysis** This study has a sequential explanatory mixed-method design in two phases over 2 years. The first phase is a correlational study. We will conduct a cross-sectional survey using a stratified random sampling among Canadian residents who are 18 years of age or older, self-identify as sexually and gender-diverse (ie, LGBTQIA2S+) and have gambled at least once in the previous 12 months. This survey will be administered online via a web panel (n=1500). The second phase is a qualitative study. Semistructured interviews will be conducted with LGBTQIA2S+ people with problematic gambling (n=30).

**Ethics and dissemination** This research project has been ethically and scientifically approved by the Research Ethics Committee and by the CIUSSS de l'Estrie—CHUS scientific evaluation committee on 3 March 2022 (reference number: 2022-4633—LGBTQ-JHA). Electronic and/or written informed consent, depending on the data collection format (online survey and online or in-person interviews), will be obtained from each participant. A copy of the consent form and contact information will be delivered to each participant.

## INTRODUCTION

Gambling is a major item in population's consumption habits, both in Canada and abroad.<sup>1</sup> In 2018, approximately two-thirds

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ This mixed-methods study will be conducted in two phases: phase 1 will be a cross-sectional correlational study, and phase 2 will be a descriptive qualitative study.
- ⇒ Phase 1 data will be collected through an online questionnaire via a stratified random sampling method using a web panel, and phase 2 will use maximum variation sampling.
- ⇒ This will be a retrospective study based on self-report data.
- ⇒ Participants must self-identify as sexually and gender-diverse (ie, LGBTQIA2S+), have engaged in at least one gambling activity in the past 12 months, be 18 years of age or older, speak English or French and reside in Canada.
- ⇒ An advisory committee will ensure that the project is relevant to the needs of the LGBTQIA2S+ population and stakeholders in the field and will ensure integrated knowledge mobilisation.

of Canadian adults (66%) had engaged in at least one form of gambling in the previous year.<sup>1–3</sup> The most recent Canadian nationally representative survey identified 3.3% of the Canadian population as individuals with at-risk and problem gambling.<sup>1</sup> Whereas the majority of people who gamble have low-risk gambling behaviours and do not experience adverse consequences associated with their gambling, others have problematic gambling, that is, that they are at risk of developing gambling disorder (GD) or have a probable GD.<sup>2–3</sup> The DSM-5 defines GD as persistent and recurrent gambling behaviour that may result in impaired functioning or significant suffering.<sup>4</sup> GD is recognised as a major public health problem in many countries, including Canada.<sup>5–6</sup>

The COVID-19 pandemic has had a major impact on the population's gambling habits. Health measures have resulted in the closure and/or suspension of many gambling facilities (eg, casinos, horse racing), and a shift towards online gambling has been observed.<sup>7</sup> Since the beginning of the pandemic, many researchers have expressed concerns about its impact on GD.<sup>8</sup> Knowing that GD tends to increase in crisis situations,<sup>9–11</sup> they feared an increase in gambling and a shift to online gambling, which present more risk due to its accessibility, speed and anonymity, among other reasons.<sup>12–16</sup> During the pandemic, online gambling revenues grew intensively in Canada.<sup>17</sup> Online gambling revenue growth increased by 214% in Quebec and 156% in Ontario in 2020–2021.<sup>18 19</sup>

Research undertaken since the beginning of the COVID-19 pandemic has provided information about the impact of the pandemic on the general population's gambling habits.<sup>8 14 20–30</sup> However, very little is known about certain subgroups at increased risk of developing GD, such as the lesbian, gay, bisexual, transgender, questioning/queer, intersex, asexual, and Two-Spirit plus (LGBTQIA2S+) population.<sup>31</sup> In Canada, it is estimated that the LGBTQIA2S+ population represents approximately 13% of the population, not including a significant proportion of individuals who will, at some point, question their sexual orientation or gender identity.<sup>32 33</sup> LGBTQIA2S+ populations are often stigmatised and experience discrimination, leading to poorer mental health outcomes and unmet needs in the healthcare system compared with heterosexual and cisgendered populations.<sup>34 35</sup> Mental disorders, including substance use disorders, are two to four times higher in this population.<sup>36 37</sup> This population is also at a higher risk of developing GD.<sup>37 38</sup> However, our knowledge of the LGBTQIA2S+ population tends to remain limited, particularly due to the often restrictive nature of sociodemographic questionnaires that request sex information in a binary manner—that is, female or male—and where sexual orientation and gender are often omitted.<sup>31</sup> In such a context, the analysis of secondary data from the majority of gambling studies in the general population is difficult, if not impossible.<sup>39</sup> This is particularly true for studies on the impact of the COVID-19 pandemic on gambling.<sup>8</sup>

To date, there have been no studies on the gambling habits of the LGBTQIA2S+ population during the COVID-19 pandemic.<sup>8</sup> In fact, in the gambling field, very few studies have been conducted specifically on this population.<sup>38 40–43</sup> In Canada, there have been no studies investigating the gambling behaviours or healthcare and social service experiences of the LGBTQIA2S+ population with GD in any setting. Knowledge of gambling patterns and risk factors associated with problem gambling is essential to prevent GD among the LGBTQIA2S+ population who gamble. Such insights aim to improve group and individual interventions for this marginalised population, which is known to have a higher proportion of unmet

health needs and more limited access to healthcare and social services.<sup>44</sup> Furthermore, the findings from a comprehensive study will help formulate courses of action based on LGBTQIA2S+ population's experiential knowledge and evidence.<sup>45 46</sup>

## OBJECTIVES

This research project has two main objectives. The first objective is to describe the impact of the COVID-19 pandemic, that is, since March 2020, on gambling behaviours among LGBTQIA2S+ individuals. We aim to describe the gambling patterns of the LGBTQIA2S+ population during the pandemic, and then identify factors associated with GD among LGBTQIA2S+ individuals during the same period. The second objective is to understand the experiences of the LGBTQIA2S+ population with GD and to identify interventions that LGBTQIA2S+ people have found to be effective in addressing problem gambling during the COVID-19 pandemic. With this objective, we want to understand the experiences of LGBTQIA2S+ people with GD and their healthcare and social service experiences during the pandemic and identify individual and population-based interventions that LGBTQIA2S+ people have found to be effective in preventing and treating problem gambling during the pandemic.

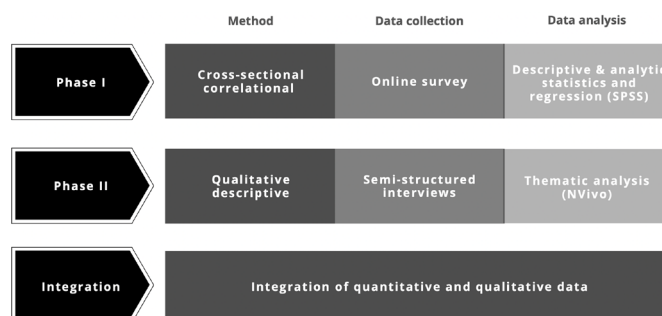
## METHODS

### Design

This project is a mixed explanatory and sequential study<sup>47</sup> in two phases over 2 years.<sup>48</sup> The use of a mixed-methods design combines the strengths of quantitative and qualitative methods.<sup>45</sup> These methods are frequently used in research on complex issues, such as mental disorders and gambling.<sup>49–51</sup> Phase 1 is a cross-sectional correlational study.<sup>52</sup> Phase 2 is a descriptive qualitative study.<sup>53</sup> The results of phase 1 will inform the development of phase 2. Phase 1 data collection will begin in the spring of 2023. Phase 2 will take place in the fall of 2023. The study design is presented in figure 1.

### Phase I: quantitative study

Phase 1 involves an online questionnaire using a stratified random sampling from a web panel that will provide a



**Figure 1** Study design scheme.

picture of the impact of the COVID-19 pandemic on the gambling habits of LGBTQIA2S+ people in Canada.

#### Eligibility criteria

Participants must self-identify as sexually and gender-diverse (ie, LGBTQIA2S+), have engaged in at least one gambling activity in the past 12 months, be 18 years of age or older, speak English or French and reside in Canada. This information will be collected through self-reported questions at the beginning of the questionnaire.

#### Sample size and sampling method

The target sample size is 1500. The sample will be recruited using stratified random sampling via a web panel containing a database of LGBTQIA2S+ respondents. The size of the sample was determined to obtain the minimum number of people with problem gambling ( $n=30$ ) needed to conduct phase 2 of the study. This selection is based on the Problem Gambling Severity Index (PGSI) score,<sup>54</sup> the prevalence of problem gambling in Canada,<sup>1</sup> and the number of participants needed to develop a 10-variable regression model, that is, 10 participants per variable (min. 100).<sup>55</sup>

#### Data collection

Data will be collected through an online questionnaire on a secure platform using a stratified random sampling. The questionnaire, composed of validated tools and inspired by our ongoing study on the impacts of the COVID-19 pandemic on the general population in Quebec,<sup>21</sup> will be divided into four sections: (1) sociodemographic profile (including sex, gender, sexual orientation, behaviour and attraction); (2) impacts of the COVID-19 pandemic; (3) impacts of COVID-19 on gambling practice and (4) health profile and experience with healthcare and services.

At the end of the questionnaire, individuals will be asked to indicate their interest in participating in phase 2 of the study. The severity of problem gambling, which is the dependent variable in this study, will be assessed using the PGSI.<sup>54</sup> The PGSI consists of nine questions with a Likert scale. A score between 0 and 3 is established for each answer and added up to give a score between 0 and 27. The results are used to determine the severity of gambling: non-problematic gambling (0), low-risk gambling (1–2), moderate-risk gambling (3–7) and probable GD (>8). Problem gambling is defined by a score greater than 3 and includes those at moderate risk and with probable GD.<sup>56</sup> This validated tool<sup>57</sup> has been used in recent gambling prevalence studies in Canada, as well as in our current study of the impacts of the COVID-19 pandemic on the general population who gamble.<sup>21 58</sup>

#### Data analysis

Descriptive analyses (eg, proportions, means, SD, medians, etc.) will be used to describe the characteristics of those who participated in the study and to provide a picture of the impact of the pandemic on LGBTQIA2S+ people who gamble. Multivariate logistic regression models will be used to identify variables that predispose

LGBTQIA2S+ individuals to problem gambling during the pandemic: for example, age, sex, gender, marital status, employment, alcohol, drug and tobacco uses, Patient Health Questionnaire 2-item (PHQ-2) score (depressive symptoms) and Generalized Anxiety Disorder 2-item (GAD-2) score (anxiety symptoms) as a function of PGSI score.<sup>59 60</sup> Descriptive analyses and regression models will be performed using SPSS software. As expected in a mixed explanatory and sequential design, the results of phase 1 will guide the development of phase 2.<sup>61</sup>

#### Phase II: qualitative study

Phase 2 will provide an in-depth description of the experiences of LGBTQIA2S+ people with problem gambling, including their healthcare and social service experiences, and will identify individual and population-based interventions they consider effective in prevention and treatment received or desired during the pandemic through semistructured interviews ( $n=30$ ).<sup>53 62</sup>

#### Eligibility criteria

To participate in the semistructured interviews, individuals must have participated in phase 1 of the study, have agreed to be contacted for phase 2 of the study at the end of the online questionnaire and have a PGSI score greater than 3.

#### Sampling size and sampling method

The sample will consist of LGBTQIA2S+ individuals ( $n=30$ ). The sampling method will be targeted and use maximum variation in order to include various profiles (gender, sexual orientation, age, etc.). In descriptive qualitative research, a sample size of 30 generally allows for rich and meaningful data as well as data saturation<sup>63</sup> and is consistent with standards observed in the gambling literature.<sup>64–66</sup> However, the sample size could be modified during data collection according to the observed saturation.

#### Data collection

Semistructured interviews (60–90 min) will be conducted in French or English, virtually (or if not possible by telephone), depending on the preferences of the participants. Interviews will be conducted by a team member with advanced expertise in qualitative methods and experience in semistructured interviews.

The interview guides will be structured to better understand the experiences of LGBTQIA2S+ people with problem gambling, including their healthcare and social service experiences, as well as to identify individual-based and population-based interventions deemed effective during the pandemic.<sup>67 68</sup> Open-ended questions will explore their problem gambling trajectory (changes in gambling practices and impact of the pandemic), their mental health in general (personal history, current mental health, lifestyle habits, variation and changes over time), their healthcare and social service pathways (eg, types of healthcare and services, frequency of use, variation and changes over time), their healthcare experiences

before and during the pandemic (eg, healthcare and social service use, positive and negative experiences in terms of accessibility, coordination, continuity of care, respect for values and needs, experiences as a member of a minority and often marginalised subgroup) and their views on individual and population-based interventions or programmes for the prevention and treatment of problem gambling during the pandemic. If needed, various interventions and programmes will be presented to them, and they will be asked to give their opinion on them. The interviews will be recorded in video format and then transcribed as anonymised verbatim.

### Data analysis

A thematic analysis will be performed.<sup>68</sup> The interview verbatims will first be coded and classified by themes independently by two members of the research team. Similar themes will be grouped together in a thematic tree structure. Iterative phases of analysis will be carried out so that the research team members can appropriate the content of the analysis and the coding process, as well as develop a common understanding of the context and the data studied.<sup>47</sup> This iterative process will allow for the triangulation of research team members' expertise and knowledge (medical, psychological, social work, nursing, etc.). NVivo software will be used to manage the qualitative data.

### Integration phase

An integration phase will follow the two phases of the study. Matrices, diagrams, graphs and tables will be produced to integrate the quantitative and qualitative data.<sup>61</sup> The project will end with a coconstruction workshop using the *TRIAGE Method* (Technique of Information Retrieval by Facilitating a Group of Experts), which is an inductive and structured information gathering method aimed at obtaining a consensus within a group.<sup>69</sup> This workshop will be conducted with the members of the Advisory Committee (see below) and will provide an opportunity to formulate courses of action to improve interventions and health and social care for LGTBQIA2S+ individuals with problematic gambling in a future pandemic or health crisis and to reduce the negative consequences associated with GD in the LGBTQIA2S+ population. This workshop will also identify key messages for all groups that will benefit from the project (LGBTQIA2S+ individuals, regulators, practice settings, general public, scientific community, etc.).

### Public involvement statement

To ensure that the project is relevant to the needs of the LGBTQIA2S+ population and stakeholders in the field, and to ensure integrated knowledge mobilisation, we will form an advisory committee that will meet three times a year. The eight-member committee will be composed of patient partners with lived experiences and organisations representing practice settings.

## DISCUSSION

To the best of our knowledge, this is the first study to specifically examine the impact of the COVID-19 pandemic on LGBTQIA2S+ gambling.<sup>8</sup> It is also the first Canadian study to investigate LGBTQIA2S+ gambling and is one of the first internationally.<sup>38 40 41 43 70 71</sup> This study will generate new knowledge about an understudied population at higher risk for GD in an inclusive, stakeholder-driven manner. This project will also allow the identification of interventions deemed effective by LGBTQIA2S+ individuals. These data are of major importance for improving interventions in future pandemic or crisis situations. Indeed, the experiential knowledge of those affected is critical to the development of effective public policy and population-based interventions that meet the needs of LGBTQIA2S+ people in order to reduce the harms associated with problem gambling in this population.<sup>72</sup>

Ultimately, we hope that this project will have a major impact on the area of health and social services for LGBTQIA2S+ people with GD. It is important to identify interventions that are effective and appropriate for each individual, based on their sex, gender and sexual orientation, to ensure appropriate care and to develop harm-reduction strategies and interventions for this marginalised population.

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**Competing interests** None declared.

**Patient and public involvement** Patients and/or the public were involved in the design, or conduct, or reporting or dissemination plans of this research. Refer to the Methods section for further details.

**Patient consent for publication** Not required.

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