LGBTQ+ People and Gambling Harms: A Scoping Review

Dr Louis Bailey[1,2], Dr Laetitia Zeeman[1,2], Dr Alexandra Sawyer[1,2], Professor Nigel Sherriff[1,2]

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[1]School of Sport and Health Sciences, University of Brighton
[2]Centre for Transforming Gender and Sexuality, University of Brighton

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Prepared by University of Brighton

University of Brighton

GambleAware

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EXECUTIVE SUMMARY

Overview

This scoping review draws on the latest available evidence (peer-review and grey literature) to explore gambling harms within the LGBTQ+ population. The resulting paper presents findings from across existing research around prevalence of gambling amongst LGBTQ+ communities, the impact of gambling harm, and associated risk factors. The review also considers questions about help-seeking, the barriers LGBTQ+ people may experience to accessing healthcare services, protective factors, and possible interventions for these communities. An intersectional approach is taken to exploring gender identity and sexual orientation (considering age, ethnicity, and migrant status), and the unique needs and experiences of these communities as reflected across gambling and health behaviour research.

Research to date on the topic of gambling harm amongst LGBTQ+ communities has focused only on peer reviewed literature. This research synthesis brings together the latest known evidence from across published and grey literature, the latter being of particular importance when considering minority populations. The review was commissioned by GambleAware with the aim of providing evidence to inform practice, and to highlight any gaps in existing evidence with a view to shape the focus and priorities of future primary research.

Key questions

Guided by the following question - **'What is known about gambling in LGBTQ+ communities?'** the review considers these linked areas of focus:

i. the prevalence of gambling harm amongst LGBTQ+ communities;
ii. the lived experience of LGBTQ+ people, reflecting the impacts of gambling harm;
iii. interventions for LGBTQ+ people to reduce gambling harm;
iv. the barriers LGBTQ+ people may experience in accessing services and healthcare provision to address gambling harm; and,
v. protective factors that mitigate harm in these communities.

Results

The results follow in relation to the key questions where relevant information was available.

Prevalence: The results yielded mixed evidence regarding the prevalence of gambling and gambling harms amongst sexual minority populations. There was evidence of higher burdens of gambling harms amongst sexual minority individuals, particularly in relation to sexual minority men and LGBTQ+ youth. However, other studies reported that sexual minority individuals reported lower prevalence (Bush et al., 2020; Bush et al., 2021). There is, however, consistent evidence that trans and gender diverse people might experience higher levels of gambling harms compared to cisgender people. One study found that trans and gender diverse youth were

more likely to experience gambling harms compared to their cisgender peers, with trans youth assigned 'male' at birth being at particular risk (Rider et al., 2019). A further study (Mattelin et al., 2022) found that trans people with refugee status were at highest risk of gambling harm compared to other sub-groups.

Gambling harms: There is limited research focussing on the lived experience of gambling harm amongst LGBTQ+ communities in GB. In addition, few studies have examined the wider impact of gambling (e.g., financial harm, negative impact on relationships and work) amongst LGBTQ+ people. The studies which did examine gambling associated harms found that sexual minority men reported high rates of participation in gambling activities associated with greater gambling harms, such as electronic gambling machines, horse/greyhound racing, and sports betting (Bush et al., 2021).

Risk and protective factors: The literature highlighted risk factors including minority stress, societal stigma and/or discrimination, isolation, and victimisation that was framed in some instances as a hate crime. Emerging evidence suggests that perceived stigma may play a role both in terms of the severity of gambling harms experienced and the related impact amongst sexual minority men (Bush et al., 2021). There is some evidence to suggest that general anxiety around everyday disclosures of gender identity or sexual orientation, and anticipated stigma, may be a risk factor for gambling harms where gambling offers a form of escapism. There is also some evidence linking higher levels of drug and alcohol use to gambling harms (Birch et al., 2015; Mattelin et al., 2022). In terms of protective factors higher levels of support, positive social interaction, and mainstream community connectedness predicted lower levels of gambling harm for sexual minority men, but not for heterosexual cisgender men (Bush et al., 2021). Accordingly, social support emerged as a protective factor unique to the LGBTQ+ population (Bush et al., 2020; Bush et al., 2021).

Gambling-related help-seeking, service barriers, and interventions: No studies were identified in the current review which looked at services or interventions for LGBTQ+ people experiencing gambling harms. The limited research that was available focused instead on accessing mental health and social care services (Bush et al., 2020). General health service barriers included professionals' heteronormative attitudes that became apparent in the use of pathologising language, and/or a lack of cultural competency and education around LGBTQ+ issues (Bush et al., 2020; Mattelin et al., 2022). Elsewhere, there is some evidence suggesting that LGBTQ+ people who gamble may experience shame both based on their LGBTQ+ status as well as their gambling habits, which can, in turn, act as a barrier to help-seeking.

Conclusions and Recommendations

There is evidence of an additional burden and compounding gambling harms for some groups within the LGBTQ+ community. However, research on LGBTQ+ gambling harm remains distinctly limited, and is barely established in the UK. Even less is known about gambling harm for LGBTQ+ people where gender, sexuality, ethnicity, disability and other factors intersect. Research demonstrating underlying drivers of gambling harm, the risk factors, the lived experience of gambling harm, as well as the needs of LGBTQ+ people who access support services, are all limited in the UK and further afield.

The mixed findings over prevalence highlight the need for large-scale, population-based surveys, and more cross-sectional work around gambling harms, risk, help-seeking, and protective factors across minority LGBTQ+ populations. Longitudinal research is urgently needed to examine gambling over the life course, and to identify any emerging trends for population subsets with

associated demographic indicators. In addition, qualitative research is required to enable a better understanding of the lived experiences of gambling harm, and to establish the drivers of burdens for gambling harm amongst LGBTQ+ communities. The results of this review highlight the requirement to consider the unique support needs and perspectives of minority groups within the LGBTQ+ umbrella. Future research should be undertaken with greater community involvement and in collaboration with LGBTQ+ peers. Better understanding of gambling could inform a whole systems approach including health promotion initiatives and the development of targeted interventions to protect against gambling harm in LGBTQ+ people and, ultimately, work towards greater health equity.

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Glossary of key terms

Gambling harms	The preferred term within gambling research, 'gambling harms' refers to any adverse impacts that may arise from gambling causing problems or distress to the person and/or those around them.
PGSI	An abbreviation of the Problem Gambling Severity Index, the scoring for which is as follows: • *PGSI 1-2: Those experiencing a low level of problems with their gambling* • *PGSI 3-7: Those experiencing a moderate level of problems with their gambling PGSI 8+: Those experiencing 'problem gambling'* • *PGSI 1+: Those experiencing any level of problems with their gambling / those experiencing gambling problems*
'Problem gambling'	Refers to a PGSI score of 8 or over, indicating that those who gamble will likely experience 'negative consequences' and 'a possible loss of control'. The term is considered stigmatising and is only used here in reference to the PGSI.

Most of the following terms are based on ILGA-Europe's commonly used phrases and acronyms, which can be found here: **www.ilga-europe.org/resources/glossary**.

Cisgender	Sometimes abbreviated to 'cis', this term refers to those whose gender identity matches the sex they were assigned at birth, i.e. encapsulating those who do not identify as trans, gender variant, or non-binary.
Gender	Refers to people's perception and experience of maleness and femaleness, and the social construction that allocates certain behaviours into male and female roles. Also may include non binary gender for those who fall outside of a male/female binary.
Gender expression	Refers to people's manifestation of their gender identity, for example the choices people make around presentation and style of clothing. Typically, people seek to make their gender expression or presentation match their gender identity/identities, irrespective of the sex that they were assigned at birth.
Gender identity	Refers to each person's internal and individual experience of gender, which may or may not correspond with the sex they were assigned at birth.
Gender reassignment	Also known as gender confirmation, this refers to the ways in which trans people align their physical bodies with their internal sense of self. This process may, but does not have to, involve medical assistance including hormone therapies and any surgical procedures that trans people undergo to align their body with their gender.
Heteronormativity	Refers to the set of beliefs and practices that maintain opposite sex attraction as a norm. It implies that heterosexuality is the only conceivable sexual orientation and the only way of being 'normal'.
LGBTQ+	An umbrella term referring to people who identify as lesbian, gay, bisexual, trans, queer, non binary and other communities including those who are intersex and asexual.
Sexual orientation	Refers to each person's capacity for profound affection, emotional and sexual attraction to, and intimate and sexual relations with, individuals of a different gender or the same gender or more than one gender.
Trans	Is an inclusive umbrella term referring to those whose gender identity and/or a gender expression differs from the sex they were assigned at birth. It includes but is not limited to: Trans women (women assigned 'male' at birth); trans men (men assigned 'female' at birth); non binary (who identify outside of the male/female binary); those who cross-dress; and a range of identities including androgyne, polygender, genderqueer, agender, transgender, or gender variant.

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Conflicts of Interest statement

The authors of this report hold no 'financial interest' or other relationships with the gambling industry for any commercial products or providers of commercial and/or clinical services referred to in the text. Although the report was commissioned and funded by GambleAware, the information and views set out in this report are those of the authors and do not necessarily reflect the opinion of GambleAware.

1.0 INTRODUCTION

General introduction and overview

Gambling is of increasing importance in discussions of public health, as well as in popular discourse, arguably gaining attention due to accessibility of gambling, technological developments, and the ubiquity of gambling and gambling advertising in the UK. As a recreational activity, gambling can be undertaken without any adverse effects; however, gambling and the associated harm is perceived as an emergent public health concern in many parts of the world (Petry et al., 2017). Gambling harm prevalence varies across different countries in the world with prevalence rates for the general adult population estimated between 0.12% to 5.8% during 2000 - 2015 (Calado and Griffiths, 2016). Locally in the UK, an estimated 60% of adults reported that they had participated in gambling activity during the past 12 months with estimates of up to 31.2 million adults (Gosschalk et al., 2022). An earlier GB survey found overall 5.9% of adults scored 3+ on the Problem Gambling Severity Index (PGSI) - indicating 'moderate levels of problems associated with gambling' - according to YouGov (Gunstone et al., 2021). More recent figures showed for the adults surveyed 2.9% scored 8+ on the PGSI, accounting for approximately 1.5 million GB adults experiencing 'problem gambling' (Gosschalk et al., 2022). Harms associated with gambling may involve mental health issues, as well as relationship difficulties and/or financial hardship for the person or those around them (Bowden-Jones et al., 2022).

Health inequalities

This study will review gambling as a health inequality in a specific minority population. The health inequalities of lesbian, gay and bisexual (LGB) along with trans and non-binary people are well documented in systematic reviews of research (McDermott et al., 2021; Meads & Carmona, 2021; Reisner et al., 2016; Zeeman et al., 2019). Analysis of a recent GP patient survey in England found considerable mental health inequalities for LGB people compared to heterosexual peers (Saunders et al., 2021). Addictions research more broadly indicate that inequalities in harmful alcohol use exist for LGBTQ+ people compared to the general population, and a review undertaken in the UK indicates that LGBTQ+ people had higher rates of alcohol use compared to their heterosexual, cisgender peers (Zeeman et al., 2022; Meads et al., 2023).

Prevalence of gambling harm in LGBTQ+ people

With growing awareness of gambling harms and the range of social determinants that underpin gambling, a recent international review of gambling in LGBTQ+ people found little research exists in the field (Devault Tousignant et al., 2022). The review yielded mixed results. A higher prevalence of gambling harms in LGBTQ+ populations was found in some studies (Grant and Potenza 2006; Richard et al., 2019; Rider et al., 2019), with a further study showing no association (Broman and Hakansson 2018). Conversely, two studies in the review indicated a lower prevalence of gambling harms (Bush et al., 2021) and gambling frequency (Hershberger and Bogaert 2005) in LGBTQ+ groups as compared to heterosexual groups. Some may argue

although LGBTQ+ people took part in gambling less frequently, they are nonetheless more susceptible to the adverse impacts of gambling.

More locally, UK-based survey results for lesbian, gay, bisexual people, trans and non-binary people in Scotland indicated that among 446 respondents who gambled, 3% experienced 'problem gambling' - scoring 8+ on the Problem Gambling Severity Index (Leven, 2022). No comparisons were available in this study for heterosexual and cisgendered peers, however another recent study with approximately 6.9 million UK adults found that 2.9% were at high risk by scoring 8+ via the PGSI (Gosschalk et al., 2022). Thus 3% of LGBT+ adults in Scotland vs 2.9% of UK adults in the overall population were at high risk. Preliminary results of the GambleAware Annual GB Treatment & Support survey suggest burdens may be greater among the LGBTQ+ community. Among the "survey respondents who gambled, those identifying as lesbian, gay, or bisexual a greater proportion of LGB respondents reported experiencing problems with their gambling than those in the total population as defined by a PGSI score of 1+ (29% vs 21%). LGB people were also more likely to report 'problem gambling' as defined by a PGSI score of 8+ (9% vs 4%)" (GambleAware, 2022:p3).

Prevalence rates of gambling harms for different LGBTQ+ groups, including gender diverse youth, is important to inform development of culturally sensitive and inclusive prevention, intervention, and outreach programmes (Rider et al., 2019).

Due to the limited research and knowledge of gambling in LGBTQ+ communities, we undertook a further in depth scoping review of more recent literature to assess the prevalence of gambling in LGBTQ+ people in the UK as well as its impact on those from gender and sexual minority groups. Comparative legislative, policy, and cultural contexts in the global north were considered where there was a dearth of evidence in the UK.

Causes of inequalities

When aiming to understand the causes of inequalities experienced by LGBTQ+ people, a recent review of research indicated that health inequalities for gender and sexual minority groups occur due to the consequences of a range of factors including: cultural and social norms that preference and prioritise heterosexuality and binary gender; minority stress associated with sexual orientation and gender identity; and LGBTQ+-based victimisation, discrimination, and stigma (Zeeman et al., 2017). A large UK national survey found at least two in five (40%) LGBTQ+ people had experienced verbal harassment or physical violence in the twelve months preceding the survey (GEO, 2018). Thus, efforts to address inequalities for those with intersecting markers (such as gender, sexuality, ethnicity, age, disability etc.) must tackle the social determinants of inequalities at an individual level, as well as addressing broader structural factors as part of a whole systems approach. The UK government LGBT Action Plan made a clear commitment to addressing the injustices that LGBT people may experience (Ibid). Unfortunately, it seems this Action Plan is no longer operational (Swerling, 2021). Therefore, investing to promote the health of these communities whilst focussing attention on their needs and rights, is more pertinent now than ever before.

Minority stress theory (Meyer, 2003) suggests populations such as LGBTQ+ people experience stress where their non-normative gender identity or sexual orientation is not affirmed, which may contribute to behaviour associated with risks and harms, including gambling. Here gambling offers avenues to gain acceptance whilst escaping emotional pain (Hamilton-Wright et al., 2016). The impact of minority stress on health has increasingly become evidenced. For example, Hatzenbuehler et al. (2010) found that in American States where same-sex marriage

was banned, the incidence of mental health issues amongst LGB people increased over time. Here, mood disorders increased from 23% to 31% amongst LGB participants, anxiety disorders increased from 3% to 9%, and alcohol misuse changed from 22% to 31% (ibid). Thus, in American States where LGB people experienced institutional discrimination due to lack of protection and respect of their fundamental rights, higher rates of mood disorders, anxiety disorders, and alcohol use were evident (Hatzenbuehler et al., 2010). As little is known about gambling in LGBTQ+ people, these research findings raise several questions around the impact of minority stress on the prevalence of gambling and gambling harm amongst LGBTQ+ groups in other settings. Do LGBTQ+ people experience a greater burden of gambling harm due to their minority status, and what are the drivers of gambling harms for these communities?

Terminology

In this review the term 'gambling harms' is used to reflect the adverse impacts of gambling that causes problems or distress to the person who gambles and/or those around them. LGBTQ+ people who experience gambling harms are the thematic focus of our paper. Terms such as 'gambling disorder', 'problem gambling' or 'pathological gambling' will be utilised sparingly due to the related associations with stigma. The review will only use clinical (medicalised) terminology as we report on research where these terms were present. For example, the term 'problem gambling' is only used in reference to the PGSI (Problem Gambling Severity Index).

Critical lens

This review will present primary gambling research and grey literature for LGBTQ+ people through a critical lens, both in terms of resisting the pathologising language of dominant theoretical frameworks such as biomedicine, by appraising the research undertaken, and by acknowledging that unconscious bias may be inherent in research with minority sexual orientation and gender identity (SOGI) populations or other marginal groups. Commercial gambling reflects the challenge associated with 'governing complex capitalist societies' where gambling can be explored as an assemblage of various components. Within such an assemblage, structural relations of power expand and restrict the abilities of people, as well as organisations and technology in the field (Nicoll et al., 2022:iii). As researchers working in LGBTQ+ health promotion, whilst we avoid unnecessary medicalisation of gambling harms as well as the pathologisation of the LGBTQ+ community due to heteronormative and gender normative assumptions, we aim to understand the impacts of gambling in a broader political context of gambling liberalisation to inform future practice, research, and policy.

Previous reviews

With growing awareness of gambling harms and the range of social determinants that underpin gambling, several gambling reviews related to sexual orientation and gender identity exist. However, these reviews of gambling in LGBTQ+ people found little high-quality research in the field. For instance, one review was limited to six studies with findings showing conflicting results on the prevalence of gambling for LGBTQ+ populations (Devault-Tousignant et al., 2022), as noted above. Another review on gambling harms within sexual and gender minority groups, again found conflicting results across studies (Lee & Grubbs, 2023). Neither review included grey literature, which is particularly useful and important to identify current knowledge in under-researched areas and communities, and to complement a review of peer-reviewed literature (Braithwaite et al., 2018). Grey literature often presents a rich source of up-to-date information or relevant expert knowledge, and is frequently produced by and for communities themselves, which is especially beneficial when considering minoritised populations.

1.1 Aims of the review

The review will address the following question: **What is known about gambling in the LGBTQ+ communities?** The overall aim of this review is to summarise available research regarding gambling in LGBTQ+ people including:

i. the prevalence of gambling harm amongst LGBTQ+ communities;
ii. the lived experience of LGBTQ+ people, reflecting the impacts of gambling harm (for example, financial harm, negative impact on relationships/work/health, cultural harm, and emotional/psychological distress);
iii. interventions for LGBTQ+ people to reduce gambling harm;
iv. the barriers LGBTQ+ people may experience in accessing services and healthcare provision for gambling harm; and,
v. protective factors that mitigate harm in these communities.

2.0 METHODS

The review systematically identified and described all available research on the topic of gambling and associated harms in LGBTQ+ communities. Due to the heterogeneity of the study focus area involving a range of groups (lesbian, gay, bisexual, trans, queer+), and available evidence, a full systematic review or meta-analysis was not conducted. Instead, a systematic scoping review methodology was selected to capture the breadth of information available on the topic. The review was underpinned by an interpretivist perspective to synthesise knowledge of gambling amongst LGBTQ+ people in which the authors made meaning of, and represented, available research findings. The review was informed by a systematic process with community involvement and an LGBTQ+ peer that was recruited via a voluntary sector organisation due to his lived experience of tackling gambling harm. The role of the peer included contributing to the stakeholder group meetings as well as providing feedback on the lay summary. The scoping study protocol is available from the authors on request with a more concise version of the protocol registered here: **https://osf.io/jf58y/**

2.1 Inclusion and exclusion criteria

The following inclusion and exclusion criteria were utilised for both peer reviewed research and grey literature.

Inclusion Criteria	Exclusion Criteria
Written in the English language	Not written in English
Published between 2000 – 2023	Published prior to 2000
Sufficient focus on gambling/harms	Insufficient focus on gambling/harms
Sufficient focus on LGBTQ+ Communities (& MSM*)	Insufficient focus on LGBTQ+ communities (& MSM)

**Men who have sex with men*

2.2 Literature search

Peer-review searches were conducted on June 5th, 2023. Grey literature searches followed an iterative process which was initiated on July 3rd, 2023 and concluded on October 16th, 2023. The searches were conducted by the main author (LB) with the support of a university librarian and results were verified by the second author (LZ). Search terms and appropriate synonyms (MeSH terms) for both searches (i.e. peer review and grey) included: ("LGB*" OR "lesbian" OR "gay" OR "bisexual" OR "transgender" OR "transsexual" OR "queer" OR "non-binary" OR "MSM" OR "intersex" OR "gender identity" OR "sexual orientation" OR "gender minorit*" OR "sexual

minorit*") AND ("gambl*" OR "betting" OR "lotter*" OR "lotto*" OR "casino*" OR "loot box* OR "procur*").

Peer reviewed literature

Database searches of international data were made in PubMed, Web of Science, ProQuest, and Cochrane. In addition, searches were undertaken in Google Scholar (first ten pages). Reference trails of systematic reviews and other relevant studies were followed to ensure optimal coverage of relevant papers for inclusion. A total of 16 papers were identified for inclusion.

Grey literature

In addition to database searches of peer-review articles, detailed searches were undertaken to identify grey literature. This included government reports, third sector research, conference papers, dissertations/theses, and unpublished works. Whilst the peer-review literature searches were worldwide in scale, the grey literature synthesis was confined to the UK and other countries within the Organisation for Economic Development (OECD) to ensure a comparable legal and policy framework for interpretation. Literature was identified through

i. Google Advanced Search (first 10 pages);
ii. Google searches of relevant LGBTQ+/gambling charity websites;
iii. reference trail searches; and
iv. expert recommendations. A total of three grey literature articles were included.

Figures 1 and 2 display the PRISMA flow diagrams of the screening results for the final articles included from across the peer-review and grey data.

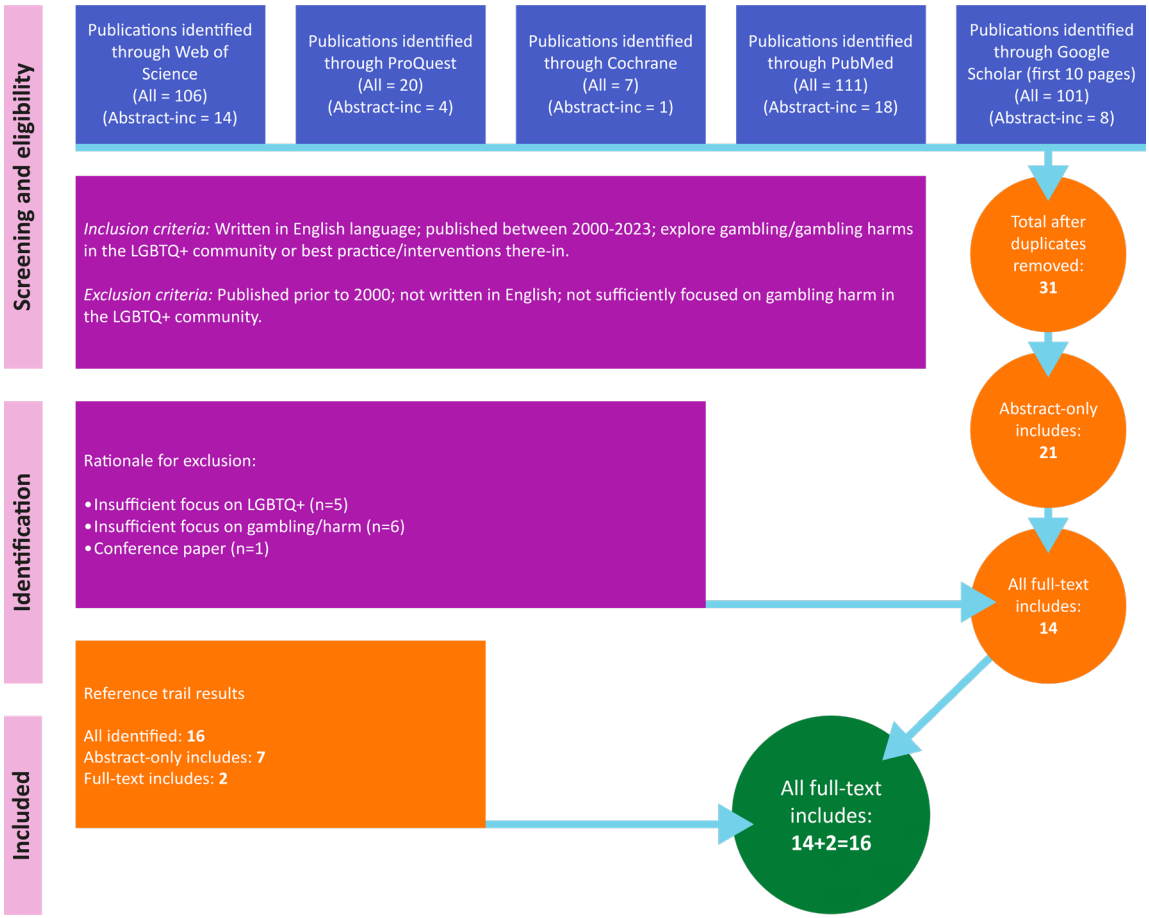

Figure 1 PRISMA diagram for peer-review literature

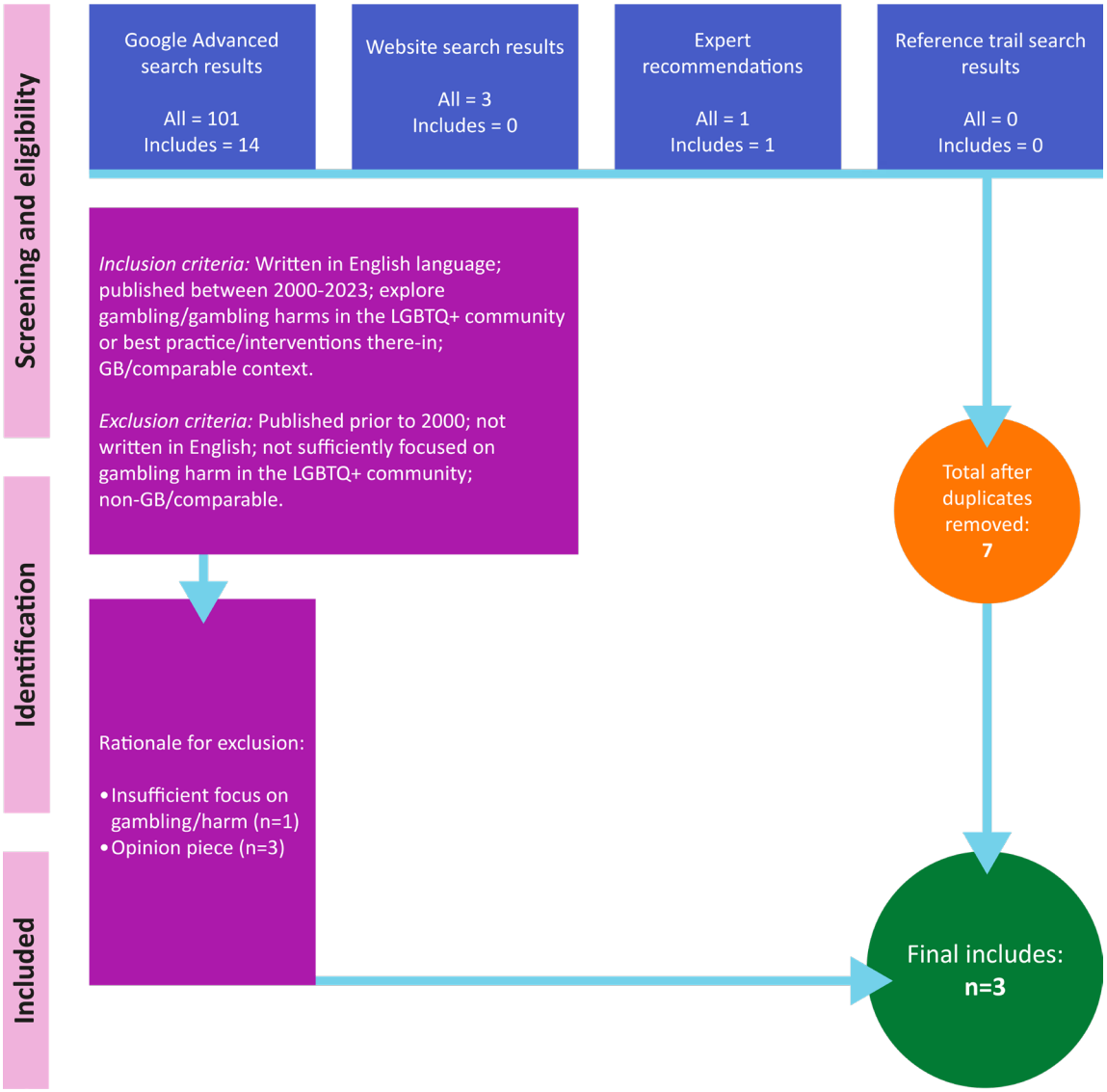

Figure 2 PRISMA diagram for grey literature[1]

2.3 Data extraction

Once studies were identified via the searches, database management software (EndNote) was used to allow storage of the primary research citations, to keep track of them, to identify included and excluded studies, and to detect duplicates. A master table was created in Word containing key information from each of the selected studies including health topic, time range of year published, geographical scope, the LGBTQ+ sub-population, methods employed, scientific journal or grey literature etc. Whilst there is ongoing deliberation in the literature regarding the need for quality assessment of included studies in the scoping review process (Booth 2007; Crowe & Sheppard, 2011; Carroll & Booth, 2015), critical appraisal of the literature is important to enable identification of strengths and limitations of the evidence base. As we have included two types of evidence (peer-review and grey literature), two methods of critical appraisal were applied.

[1] The authors acknowledge that this list of grey literature may not be exhaustive and additional reports may come to light. For example, Leven (2022) presents research findings on the 'Health needs assessment of lesbian, gay, bisexual, transgender and non-binary people' for Public Health Scotland with brief data on gambling, which was identified after the search concluded

Quality assessment of peer-reviewed literature

The quality of the peer-reviewed papers was assessed using an adapted version of a CASP (Critical Appraisal Skills Programme) questionnaire, with a visual representation of the appraisals presented in Table 1.

Table 1 CASP quality assessment of quantitative (peer-reviewed) studies

No	Study	1	2	3	4	5	6	7	8	9	10
1	Birch (2015)	Y	Y	Y	Y	Y	N/A	N/A	Y	Y	Y
2	Broman (2018)	Y	Y	Y	Y	Y	N/A	N/A	Y	Y	Y
3	Broman (2021)	Y	Y	Y	Y	Y	N/A	N/A	Y	Y	Y
4	Bush (2021)	Y	Y	Y	Y	Y	N/A	N/A	Y	Y	Y
5	Grant (2023)	Y	Y	Y	Y	Y	N/A	N/A	Y	Y	Y
6	Grant (2006)	Y	Y	Y	Y	Y	CT	CT	N	N	N
7	Hershberger (2005)	Y	CT	CT	Y	Y	Y	Y	Y	Y	CT
8	Honrado (2023)	Y	Y	CT	Y	Y	N/A	N/A	Y	Y	CT
9	Klein (2014)	Y	Y	CT	Y	Y	N/A	N/A	Y	Y	Y
10	Mathy (2002)	Y	Y	CT	Y	Y	N/A	N/A	Y	Y	Y
11	Mattelin (2022)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
12	Noel (2022a) 'Correlates…'	Y	Y	Y	Y	Y	N/A	N/A	Y	Y	Y
13	Noel (2022b) 'Gambling…'	Y	Y	Y	Y	Y	N/A	N/A	Y	Y	Y
14	Richard (2019)	Y	Y	Y	Y	Y	N/A	N/A	Y	Y	Y
15	Rider (2019)	Y	Y	Y	N	N	N/A	N/A	Y	Y	Y
16	Wicki (2021)	Y	Y	Y	Y	Y	N/A	N/A	Y	Y	Y

*Checklist questions adapted (*as most of the included studies were observational studies without a specific exposure and outcome, we combined the following two CASP items "was the exposure accurately measured to minimise bias" and was the outcome accurately measured to minimise bias" to include an item was "gambling accurately measured to minimise bias") from CASP quality assessment of cohort studies were: 1. Did the study address a clearly focused issue? 2. Was the cohort recruited in an acceptable way? 3. Was gambling accurately measured to minimise bias? 4. Have the authors identified all important confounding factors? 5. Have they taken account of the confounding factors in the design and/or analysis? 6. Was the follow up of subjects complete enough? 7. Was the follow up of subjects long enough? 8. Do you believe the results? 9. Can the results be applied to the local population? 10. Do the results of this study fit with other available evidence? Abbreviations: y—yes; ct—cannot tell; n—no; n/a—not applicable. A full appraisal is available from the authors on request.*

Quality assessment of grey literature

A weight of evidence (WoE) approach was utilised, drawing on the work of Gough (2007). The WoE approach is a particularly useful means of ensuring methodological and thematic fairness in relation to grey literature and other evidence with an applied outcome. This is particularly important given the nature of the review – on an "under-the-radar" issue and a marginalised population group – and its commitment to improving policy and practice. Articles were assessed using the following questions: *1) Do the study findings answer the study question(s)?; 2) Is the research design and analysis appropriate to the aims and objectives of the research?; and 3) Is the study relevant to this review? Does it assist us in addressing the research question(s)?* The answers were then combined to provide an overall rating – low, medium, high. WoE for the included grey literature is displayed in Table 2.

Table 2 Weight of Evidence assessment of grey literature

Author	1	2	3	Overall rating
Bush et al. (2020)	Y	Y	Y	High
Rotermann & Gilmour (2022)	Y	Y	Y	High
Bush-Evans (2023)	Y	CT	Y	Medium[2]

As part of the appraisal process, peer-reviewed and grey literature was subject to additional scrutiny around language and the framing of LGBTQ+ identities, lives and experiences, as well as around gambling and the associated harms. Articles or reports that were found to use problematic or stigmatising language were subject to additional critique to ensure these framings are not replicated in the review.

Synthesis

The included articles were combined to form a thematic construction based on the review questions. Themes formed an analytic framework to provide an overview of the breadth of the literature. The thematic analysis that follows is presented as a narrative synthesis.

[2] As research by Bush-Evans (2023) has yet to be published in full, it is not possible to deduce the research design and methodology and, as such, the overall rating has been reduced to reflect this point.

3.0 RESULTS

Overall, 19 papers were included from across the peer reviewed (n=16) and grey literature (n=3). Key characteristics and summaries of these studies are presented in Tables 3 and 4.

Whilst there is limited research on gambling harms in LGBTQ+ populations, interest in this topic has grown in recent years. Just over half of the final included papers (10 out of 19) were published in the last three years, five of which were published in 2022.

Around half of the studies included in the review drew on data from the U.S (n=9), followed jointly by Australia (n=3) and Sweden (n=3). Other countries included Canada, Switzerland, England (UK), Denmark, Spain, Italy, and Poland (one study focused on several countries). As such, the data as it is presented here is heavily weighted towards the U.S., followed by Australia and Western Europe. Therefore, the findings should be considered only within comparable cultural frameworks and are not generalisable to other world contexts.

All papers drew on cross-sectional surveys (n=19). In addition, only two articles (grey literature) drew on qualitative research via in-depth interviews (Bush et al., 2020; Bush-Evans, 2023). Where validated measures were utilised, this included use of the following: Gambling Disorder Measure (GAM-DS); Problem Gambling Severity Index (PGSI); NODS-CLiP 'problem gambling'; Gambling Activities Questionnaire (GAQ); DSM-4 and DSM-5 (Gambling Disorder Symptomatology); Yale-Brown Obsessive Compulsive scale for pathological gambling (PG-YBOCS); Canadian Problem Gambling Index (CPGI); Brief Adolescent Gambling Screen; and the Short Gambling Harms Screen. Six studies utilised unvalidated measures of gambling.

The topics covered in the papers include prevalence, gambling type, gambling behaviour, gambling severity, and factors associated with gambling such as harms. Only one study examined intersecting markers by considering gambling behaviour of sexual orientation and gender identity minority people alongside their migrant or refugee status (Mattelin et al., 2022). A range of different gambling activities were explored including lottery or raffle tickets, card or dice games, instant online games, electronic gambling machines either in person or online, casino table games (online or in person), sports or animal betting, bingo, stocks and other forms of speculative financial market activities.

Except for Birch et al. (2015) and Bush-Evans (2023), which focused only on the experiences of the LGBTQ+ population, most of the remaining studies compared gambling prevalence in the LGBTQ+ population to a cisgender, heterosexual sample. Where studies focused only on sub-groups within the LGBTQ+ population, this included findings on prevalence amongst sexual minority men (n=3), and the trans and non-binary population (n=2).

At the time of writing, findings from two mixed-methods research studies are about to be published – by Brodeur et al. 2023 (Canada) and by Bush-Evans, 2023 (UK). A policy briefing summarising some of the key findings from Bush-Evans (2023) has been included in the

synthesis of grey literature presented here. Whilst attempts were made to share a synthesis of interim findings from Brodeur et al. (2023) this was not possible, and only a study protocol is currently available.

Table 3 Summary of included peer reviewed papers[3]

Author	Date	Country	Title	Methods	Sample (n)	Aims	Findings
1. Birch et al	2015	Australia	Examining gambling & mental health in LGBTI communities: A preliminary study	Cross-sectional survey. Gambling Disorder Measure (GAM-DS)	n=69 (100% LGBTQ+). Ages: 18 – 72 years	To explore 'problematic' levels of gambling in lesbian, gay, bisexual, transsexual and intersex (LGBTI) communities in NSW Australia	20% of participants met the criteria for 'problematic gambling.' Most common types of gambling were pub slot machines/games (58%) followed by scratch cards (43.5%).
2. Broman & Hakansson	2018	Sweden	Problematic Gaming and Internet Use but Not Gambling May Be Overrepresented in Sexual Minorities - A Pilot Population Web Survey Study	Cross-sectional survey. NODS-CLiP 'problem gambling'	n=605 (90% heterosexual; 10% sexual/ gender minority) Ages: 15+ years	To assess whether 'problematic gambling', gaming and internet use may be more common in individuals with a non-heterosexual orientation.	'Problematic gaming' and internet use, but not 'problematic gambling', may be more common in non-heterosexual populations.
3. Broman et al	2022	England, Poland Switzerland, Italy Spain Denmark Sweden	Gambling, Gaming, and Internet Behavior in a Sexual Minority Perspective. A Cross-Sectional Study in Seven European Countries	Cross-sectional survey. NODS-CLiP 'problem gambling'	n=10,983 (7.1% with sexual minority status; n=774) Ages: 15 – 60+ years	To investigate 'problem gambling', problem gaming and problematic internet behaviour in a European context and ascertain if it is affected by sexual orientation status.	No difference in gambling, gaming and internet behaviour among heterosexual and sexual minority men. Sexual minority women were associated with 'problematic gambling' and gaming behaviour. When also controlling for psychological distress, women defined as having another sexual minority status than lesbian and bisexual remained significant for 'problematic gaming behaviour.'

[3] Please note that quotation marks are used in reference to any words or phrases mentioned in the studies which are now considered to be problematic or out-of-date.

Author	Date	Country	Title	Methods	Sample (n)	Aims	Findings
4. Bush et al	2021	Australia	Risk and protective factors for the development of gambling-related harms and problems among Australian sexual minority men	Cross-sectional survey. Gambling-related harms as measured by the Short Gambling Harms Screen; 'Problem gambling' as measured by the Problem Gambling Severity Index; Gambling behaviours assessment modelled after the Social and Economic Impact Study of Gambling in Tasmania and Victorian Prevalence Survey 2014; Gambling cognitions as measured by the Gambling Related Cognition Scale and Gambling Expectancy Questionnaire	n=101 sexual minority men (n=207 heterosexual men) Mean ages provided – SMM (28.5 years) & Heterosexual men (26.4 years)	To compare gambling behaviour among sexual minority men (SMM) and examine potential risk factors ('erroneous gambling cognitions', 'gambling outcome expectancies', 'hazardous alcohol use', 'impulsivity', and 'psychological' distress; as well as perceived stigma and discrimination for the sexual minority participants) and potential protective factors (resilience, social support, and community connectedness) for 'problem gambling' severity and gambling-related harms among SMM living in Australia.	Sexual minority men had significantly lower levels of 'problem gambling severity' compared with heterosexual men, and report significantly lower gambling participation, frequencies and expenditure on any gambling activity. However, in the sexual minority group, 38.3% were classified in the 'problem gambling' category of the Problem Gambling Severity Index and 27.6% were classified in the 'moderate-risk' gambling category.
5. Grant & Potenza	2006	U.S.	Sexual orientation of men with pathological gambling: prevalence and psychiatric comorbidity in a treatment-seeking sample	Cross-sectional study. 'Problem gambling' measured through a clinician-administered Structured Clinical Interview for Pathologic Gambling	n=105 (22 of which were gay or bisexual men) Ages: 21 – 75 years	Examination of the sexual orientation and clinical correlates of men with 'pathological gambling' (PG). Gay and bisexual men with PG were compared with heterosexual men in terms of 'gambling symptoms, impairment, and co-occurring psychiatric disorders'.	Gay and bisexual men vs heterosexual men were more likely to have a lifetime (81.8% vs 44.6%; 9.7; P =.002) or current prevalence of 'pathological gambling' (68.2% vs 34.9%; 7.9; P =.005)
6. Grant & Chamberlain	2023	U.S.	Does gambling differ in people with a minority sexual orientation?	Cross-sectional study. Structured Clinical Interview for Pathological Gambling adapted for DSM-5; the Yale-Brown Obsessive-Compulsive Scale Modified for Pathological Gambling (PG-YBOCS)	n=534 (51 of participants were LGB; 9.6%) Ages: 18 – 29 years	To compare LGB individuals with non-LGB individuals in terms of gambling and associated characteristics.	Clinical and neurocognitive evaluations with n=534 participants who gambled at least 5 times in the preceding year. LGB participants showed significantly higher levels of 'problem gambling'.

Author	Date	Country	Title	Methods	Sample (n)	Aims	Findings
7. Hershberger & Bogaert	2005	U.S.	Male and female sexual orientation differences in gambling	Secondary analysis of cross-sectional survey interviews. Gambling frequency as measured by a 2-item unvalidated measure	n=10,598 (n=1,210 'homosexual' men and women) Ages: Mean ages provided - 'Homosexual' men (30.2 years); Heterosexual men (29.23 years); 'Homosexual' women (33.74 years); Heterosexual women (28.77 years)	To explore whether sexual orientation differences in gambling exist	Results showed that (a) 'homosexual' men gambled less than heterosexual men, the greatest difference occurring at low levels of gambling frequency, and (b) 'homosexual' women gambled more than heterosexual women, the greatest difference occurring at high levels of gambling frequency.
8. Honrado t	2023	U.S.	Comparing Harmful Behaviors Among Dancers According to Sexual Orientation and Gender Identity Utilizing the RISQ	Cross-sectional survey. Risky, Impulsive & Self-destructive behavior questionnaire (RISQ)	n=66 (n=39 LGBT+) Ages: 18+ years	To examine the harmful behaviours dancers engage in according to their self-reported sexual orientation and gender identity (SOGI)	Chi-square comparing SOGI group frequency of participation within each of the RISQ behaviours revealed statistically significant difference with regards to: gambling illegally; betting on sports, horses, or other animals; and buying expensive items that cannot be afforded at the spur of the moment.
9. Klein & Dudley	2014	U.S.	Impediments to academic performance of bisexual college students.	Cross-sectional survey. Gambling outcomes as measured by a single-item, unvalidated measure	(n = 27,774; 66.1% female) of heterosexual (n = 21,835), bisexual (n = 792), and gay/lesbian (n = 572) adults Mean age provided = 22.25 years	To investigate health-related impediments to academic success for bisexual college students.	On all measures, with the exception of discrimination, bisexual college students reported the strongest threats to academic success of all sexual orientations. Threats included consideration of gambling impact.
10. Mathy	2003	U.S.	Transgender identity and suicidality in a nonclinical sample: Sexual orientation, psychiatric history, and compulsive behaviors	Cross-sectional survey. 'Problem gambling' as measured by a 2-item, unvalidated measure	n=73 Trans compare to heterosexual females (n=1,083) and males (n=1,077); and 'homosexual' females (n=256) and males (n=356). Ages: 19 – 58 years	To examine the relation between sexual orientation and suicidality among 73 transgender respondents, who were compared to heterosexual females and males, and 'homosexual' females and males.	No transgender respondent reported that alcohol, drugs, or gambling was a primary difficulty at the time.

Author	Date	Country	Title	Methods	Sample (n)	Aims	Findings
11. Mattelin et al	2022	Sweden	Health and health-related behaviours in refugees and migrants who self-identify as sexual or gender minority. National population-based study in Sweden	Population survey. Risk gambling defined by using the short version of the Problem Gambling Severity Index (PGSI)	n=168,952 individuals (aged 16-84 years, males: 45·9%, sexual or gender minorities: 3·1%) Ages: 16 – 84 years	To examine health and health-related behaviours in migrant and refugee individuals who identify as sexual or gender minority, and in comparison to their heterosexual peers.	Includes three hierarchical regression analyses adjusting for age, gender, sexual orientation, impulsivity, drug use, alcohol use, and gambling. Study found that transgender participants had high odds for 'risk gambling' (8.62, 1.94–38.40)
12. Noel et al (a)	2022	U.S.	Gambling: A Ubiquitous Behavior Among Rhode Island's Young Adults	Cross-sectional survey. 'Problem gambling' as measured by a 3-item unvalidated measure; Gambling behavior as measured by a 4-item, untested measure of gambling frequency	n=546 total respondents (% of LGBT participants not clear) Ages: 18 – 25 years	To assess the prevalence of gambling and 'problem gambling' in Rhode Island young adults and to identify socio-demographic correlates of gambling.	Transgender respondents had significantly higher odds of 'gambling problem symptoms' [95% CI] = 3.61 [1.32, 9.86].
13. Noel et al (b)	2022	U.S.	Correlates of gambling & gambling problems among Rhode Island young adults: A cross-sectional study	Cross-sectional survey. 'Problem gambling' as measured by a 3-item unvalidated measure; Gambling behavior as measured by a 4-item, untested measure of gambling frequency	n=540 (LGB = n=141; Trans = n=21) Ages: 18 – 25 years	To assess four types of gambling activities - sports betting; betting on races; gaming tables at a casino; and poker machines at a casino	11.5% of participants had 'gambling problems'. Odds of gambling activities were higher among men; Black, Indigenous, People of Colour; older young adults; and essential workers. Odds of 'gambling problems' were 2.4 times higher among participants who engaged with sports betting.
14. Richard et al	2019	Canada	Variations in Gambling Disorder Symptomatology Across Sexual Identity Among College Student-Athletes	Cross-sectional survey. 'Problem gambling' as measured using DSM-5 criteria to assess symptomology; Gambling behaviors as measured by the Gambling Activities Questionnaire	n=19,299 (LGBTQ+ = 4.25%) College students (ages not provided)	To explore 'gambling disorder symptomatology' by sexual identity status – comparing differences in the severity of 'gambling disorder symptomatology' between sexual minority and heterosexual student-athletes.	Gay and bisexual men had 'disordered gambling' scores 3.42 times higher than heterosexual men ($p < .01$), when adjusting for race/ethnicity, and years in college. Gay/lesbian and bisexual women reported 'disordered gambling' scores 2.57 higher than heterosexual women ($p < .01$) when adjusting for race/ethnicity and years in college.
15. Rider et al	2019	U.S.	Gambling Behaviors and 'Problem Gambling': A Population-Based Comparison of Transgender/ Gender Diverse and Cisgender Adolescents	Cross-sectional survey. Gambling behavior as measured by the 3-item Brief Adolescent Gambling Screen and a 4-item, unvalidated measure	n=80,929 (n = 2168; 2.7% trans/gender diverse) Ages: 14 – 17 years	To examine and compare gambling behaviours between transgender and gender diverse (TGD) youth and their cisgender peers.	TGD youth reported greater involvement in most gambling behaviours and 'problem gambling' compared to cisgender youth. In comparisons by birth-assigned sex, TGD youth assigned male at birth were particularly at risk for gambling involvement and 'problem gambling'. TGD youth assigned female at birth also reported higher rates of 'problem gambling' than both cisgender youth assigned male and female at birth.
16. Wicki et al	2021	Switzerland	Curvilinear associations between sexual orientation and problematic substance use, behavioural addictions and mental health among young Swiss men	Cross-sectional survey. Gambling disorder as measured by DSM-5 criteria	n=5294 (LGB = 4.2%; n=217) Mean age provided: 25.5 years	To explore 'behavioural addictions' among people with a minority sexual orientation.	Although there were differences across criterion variables, in general, the 'highest risks of problematic substance use, behavioural addictions and mental health problems' were estimated for mostly-heterosexual, bisexual or 'mostly-homosexual' men, followed by 'homosexual' men, and with heterosexual men facing the lowest risk.

Table 4 Summary of grey literature included in the review

Author	Date	Country	Title	Methods	Sample (n)	Aims	Findings
17. Bush et al	2020	Australia	Examining risk and protective factors for the development of gambling-related harms and problems in Victorian LGBTIQ+ communities	Survey & Interviews. Use of the Problem Gambling Severity Index (PGSI), the Short Gambling Harms Screen (SGHS), the Gambling Related Cognition Scale (GRCS), and the Gambling Expectancy Questionnaire (GEQ)	Survey: n=385 (n=213 cishet; n=172 LGBTIQ+) Interviews: n=11 LGBTIQ+ Ages: 18+ years	To examine gambling in the LGBTQ+ population, psychological factors and minority stress	LGBTQ+ participants showed lower levels of 'problem gambling' compared to cishet participants, fewer gambling related harms, fewer friends who gambled, lower levels of 'hazardous drinking', higher levels of psychological distress, higher levels of impulsivity and lower levels of social support.
18. Bush-Evans	2023	UK	Reducing gambling harms in LGBTQ+ communities	Survey & interviews. Gambling measures not reported via policy briefing	Survey: n=321 LGBTQ+ adults Interviews: n=20 LGBTQ+ adults Ages: N/A	To explore the influences on gambling and gambling harms within UK-based LGBTQ+ communities.	Over two thirds (67.3%) of those who gamble experienced some level of harm (PGSI.1+), with 14.3% indicative of 'problem gambling'. Here 71% of LGBTQ+ people reported experiences of discrimination or harassment in their life, with 89% reporting experiences of isolation. The paper argues that links can be made with gambling used as a means of coping with adverse life events.
19. Rotermann & Gilmour	2022	Canada	Who gambles and who experiences gambling problems in Canada	Cross-sectional (population) survey. Utilised the Canadian Problem Gambling Index	n=24,983,000 Ages: 15+ years	A health population study of gambling and 'gambling problems' in those aged 15 and older	A multivariable analysis of males found higher odds that sexual minority men would have 'gambling problems' as compared to heterosexual men via an adjusted odds ratio (3.0 vs 1.0; 95% CI). However, the study found no bivariate differences in the rates of moderate-to-severe 'gambling problems' by sexual orientation, and no differences in rates of past-year gambling.

The prevalence of gambling harm amongst LGBTQ+ communities

Sexual orientation and gender identity are complex multifaceted concepts that have posed challenges for public health researchers engaged in examining the health inequalities of LGBTQ+ people. Ideal prevalence evidence for gambling harm in gender and sexual minority communities would be from an adult national sample selected randomly that measured sexual orientation and gender identity, and presented results for gay men, lesbian women, bisexual men and women, and other minority sexual orientations as distinct groups compared to the heterosexual majority, and also presented results for trans men, trans women, non-binary people and other gender identities compared to the cisgender majority. There would be calculations presented as to whether any difference in prevalence is statistically significant between various groups. This evidence does not yet exist. As a further consideration in studies utilising quantitative methods, subdivision of a sample by sexual orientation and gender identity may yield such small group sizes that parametric tests would not have adequate power to achieve statistically significant results. As literature reporting on LGBTQ+ gambling prevalence in the UK is sparse, the review drew on prevalence data for research undertaken in the UK and in comparative legislative, policy, and sociocultural contexts, notably in the Global North.[4]

A range of papers explored gambling prevalence for LGBTQ+ people (Birch et al., 2015; Broman & Hakansson, 2018.; Broman et al., 2022; Bush et al., 2020; Bush et al., 2021; Grant & Chamberlain, 2023; Grant & Potenza, 2006; Hershberger & Bogaert, 2004; Honrado et al., 2023; Mattelin et al., 2022; Noel et al., 2022a; Noel et al., 2022b; Richard et al., 2019; Rider et al., 2019; Rotermann & Gilmour, 2022; Wicki et al., 2021).

The results of the review yielded mixed evidence regarding prevalence of gambling and the associated harms amongst sexual and gender minority populations. However, as not all studies included comparator groups in their data,[5] only studies with relevant comparisons between LGBTQ+ groups and heterosexual or cisgender groups were included in the summary. The key findings follow:

Sexual minority groups

- Broman et al. (2022) found sexual minority status was a statistically significant predictor of gambling harms (as measured by the NODS-CLiP screening instrument) among sexual minority women (OR 1.3; p=0.001), but not among sexual minority men (OR 0.75; p=0.164) compared to the general population (n=10,983).
- Results were mixed when comparing gambling severity according to the Problem Gambling Severity Index (PGSI) between sexual minority and heterosexual groups. For example, Bush et al. (2020) found that, compared to cis- heterosexual participants, LGBTIQ+ participants were significantly more likely to be classified in the 'non-problem' gambling category (28.5% vs 13.2%); and significantly less likely to be classified in the 'problem gambling' category (27.9% vs 39.4%); n=385. In addition, Bush et al. (2021) reported a slightly higher (non-significant) level of 'problem gambling severity' (8+ on the Problem Gambling Severity Index) in heterosexual men (n=207) when compared to sexual minority men (n=101) - 39.7%

[4] The original aim was to report on prevalence of gambling harm amongst LGBTQ+ communities in the UK, however as limited data is available the scope of prevalence data was broadened to comparable countries with similar legal protections for LGBTQ+ people.

[5] Comparisons between LGBTQ+ groups and heterosexual or cisgender groups were not possible in representation of all the included studies. Hence only studies with specific and relevant comparator groups were included in the tables.

compared to 34%. Although heterosexual men reported higher levels of 'problem gambling severity' compared to sexual minority men, the gambling-related harms did not differ between groups.[6]

- However, the findings of Richard et al. (2019) and Rotermann and Gilmour (2022) complicates this picture. In the former (sample with college student athletes), gay and bisexual men had 'problem gambling' symptomatology that was 3.42 times higher than heterosexual men ($p<.01$), whilst gay/lesbian women (n=274) and bisexual women (n=303) had 'problem gambling' symptomatology that was 2.57 higher than heterosexual women (n=8,215), $p< .01$. (Richard et al., 2019). Here, 'problem gambling' was measured by the DSM-5 diagnostic criteria for 'gambling disorder' symptomatology.
- A Canadian health survey found sexual minority men (n=308,600) were revealed to have higher rates of 'problem gambling' scoring >3 on the Canadian Problem Gambling Index (CPGI) compared to heterosexual men (n=9,353,000) via an adjusted odds ratio of 3.0 vs 1.0; 95%CI, $p<.05$ (Rotermann & Gilmour, 2022).
- The percentage of people who gambled in the past year at moderate-to-severe risk of 'problem gambling', was higher in the sexual minority sample group as compared with the heterosexual group (2.1% vs 1.0%) (Rotermann & Gilmour, 2022). Here, 'moderate risk' was indicated by a Canadian Problem Gambling Index (CPGI) score of between 3 - 7, whilst 'severe risk' scores were >8.
- Young American LGB adults (n=51) aged 18 – 29 reported significantly ($p<.01$) more symptoms of 'problem gambling' over the preceding week (7.88% vs 4.72%) compared to non-LGB young adults (n=483) as measured via the PG-YBOCS: Yale-Brown Obsessive-Compulsive Scale Modified for Pathological Gambling (Grant & Chamberlain 2023).

[6] Although in no way definitive, the authors posit the following explanations for this unexpected finding: 1) That the LGBTQ+ sample had a higher percentage of women comparative to the cis-heterosexual sample (and the research reveals gambling is higher amongst men); 2) that the LGBTQ+ sample were more highly educated (which has been linked with lower levels of gambling); and 3) that a greater proportion of the LGBTQ+ sample were unemployed comparative to the cis-heterosexual sample and therefore may not have the same levels of financial stability. However, the wider research reveals lower socio-economic status to be linked with greater gambling harms thus potentially contradicting this last hypothesis.

Table 5 Summary of findings around prevalence and sexual identity from across the peer-review literature

Research peer reviewed	Non-LGB	LGB	Bisexual	Heterosexual women	Sexual minority women	Heterosexual men	Sexual minority men	Outcome or measure
Broman & Hakansso n (2018)	10% (n=543)	11% (n=77) (p=0.85,ns)						NODS-CLiP problem gambling
Broman et al (2021)				13,5% (n=3,948)	20,4% (n=735) p-value 0.001	23.6% (n=874)	26.2% (n=84) 23.6% (n=874) No statistical significance OR 0.75; p-value 0.164)	NODS-CLiP problem gambling
Bush et al (2021)						39.7% (n=207)	34% (n=101)	PGSI score for problem gambling 8+, but no statistically significant effect for gambling harms
Grant & Chamberlain (2023)	4.72% (n=483)	7.88% (n=51)						Yale Brown obsessive-compulsive scale for pathological gambling
Hershberger and Bogaert, (2004)				<1% (n=3,250) p<.05	<1% (n=785)	<1% (n=1,051)	<1% (n=8,115)	2 questions to assess current frequency of gambling *figures presented here relate to high levels of gambling
Richard et al (2019)			women 0.44% (n=303) men 2.07% (n=65)	0.26% (n=8215)	0.22% (n=274)	0.81% (n=10,305)	0.63% (n=137)	Gambling activities questionnaire (GAQ) + DSM-5 gambling disorder
Wicki et al (2021)		3% (n=335)	2.3% (n=56)			1.1% (n=4,722)	1.7% (n=125)	Mild gambling-use disorder based on DSM-5 criteria

Table 6 Summary of findings around prevalence and sexual identity from across the grey literature

Research grey literature	Heterosexual women	Heterosexual men	Sexual minority women	Sexual minority men	Cisgender heterosexual	LGBTQI+	Outcome or measure
Bush et al (2020)					39.4% (n=207)	27.9% (n=110)	PGSI score for problem gambling 8+
Rotermann & Gilmour (2022)	1.0%	1.0% (n=9,353,000)	0.8%	3.0% (n=308,600)			Canadian problem gambling index (CPGI) >=3

Gender Minorities

- A large-scale population study of adolescents in America (n=80,929) found that trans and gender diverse youth had higher rates of 'problem gambling' compared to their cisgender peers (5.7% vs 1.8%; p<.001; d =0.08) (Rider et al., 2019) with scores of 4+ on the Brief Adolescent Gambling Screen (BAGS).[7]
- According to birth-assigned sex, TGD youth assigned male at birth were particularly at risk of 'problem gambling'. For example, 8.9% of TGD youth assigned male at birth were experencing considerable levels of gambling harms, compared to rates of only 1.0-2.1% for both cisgender male and female youth Higher rates of trans/gender-diverse youth assigned female at birth (with a BAGS score of 2+) requiredfurther assessment for gambling harms compared to cisgender youth assigned female (7.6% vs 2.2%) (p<.001, d = 0.14) (Rider et al., 2019).
- Elsewhere, for young American people aged 18-25 (n=546) the prevalence of 'problem gambling' symptoms were 11.4% in the overall population of young people, and the only statistically significant variance was found amongst trans young people where the prevalence was 3.6 times higher as compared to other gender sub-groups - 95%CI = 1.32,
- 9.86 (Noel et al., 2022a) (n=546). Prevalence was measured according to the Rhode Island Young Adult Survey (RIYAS).
- Gender minority trans refugees in Sweden had the highest odds for risk gambling measured via the Problem Gambling Severity Index (PGSI) with scores of >1 compared to other sub-groups (White: OR1.48, 0.66−3.31, migrant: OR1.42, 0.72-2.82 and refugee OR8.62, 1.94-38.40) (Mattelin et al., 2022)[8]. Figures are presented in Table 7.

Table 7 Summary of findings around prevalence and gender identity from across the peer-review literature

Research peer reviewed	Cisgender youth	Trans/ gender diverse (TGD) youth	Migrant sexual/ gender minority	Refugee sexual/ gender minority	Refugee heterosex-ual	White sex-ual/gender minority	White het-erosexual	Outcome or measure
Mattelin et al (2022)			9.6% (n=285)	5.2% (n=253)	5.9% (n=4,194)	6.7% (n=4,300)	3% (n=143,694)	PGSI >1+
Noel et al (2022a)	1.32% (n=546)	3.61%						Rhode Island Young Adult Survey (RIYAS)
Rider et al (2019)	1.8% (n=23,081)							Brief Adolescent Gam-bling Screen (BAGS) 4+

Types of harm experienced across LGBTQ+ communities

Few studies examined the impact of gambling harms across LGBTQ+ communities – namely, getting into debt, negative impact on relationships/work, decrements to health, and cultural harm. Bush et al. (2020) measured gambling-related harms via the Short Gambling Harms

[7] BAGS ask during the last 12 months have often have you 1) felt you might have a problem with gambling? 2) hidden your gambling from others? 3) skipped hanging out with friends who do not gamble/bet to hang out with friends who do gamble/bet? 4-point response options range from never to all the time, coded as 0-3 summed to create a total score range of 0-9. A score of 4+ is recommended for prevalence estimation and 2+ at risk and needed further clinical assessment.

[8] These results reflect more accurate disaggregated findings per group. Combined results follow in the summary table.

Screen (Browne et al., 2018), which captures financial, emotional/psychological, and relationship impact due to gambling, and reported that the LGBTQ+ population appeared to experience fewer gambling harm-related impacts when compared with a cisgender, heterosexual sample. The authors suggest that greater social support among the LGBTQ+ participants was significantly associated with lower levels of gambling-related harms (Bush et al., 2020). Where comparisons were made around bisexuality and gambling harm impact in relation to academic performance (Klein & Dudley, 2014), drawing on bisexual college students, the evidence suggests that bisexual women may experience fewer impediments to academic performance due to gambling compared to bisexual men.

Risk factors for LGBTQ+ gambling

Several studies examined risk factors for gambling harms within the LGBTQ+ population (Birch et al., 2015; Bush et al., 2020; Bush et al., 2021; Grant and Chamberlain, 2023; Mathy, 2002; Mattelin et al., 2022). However, most studies were cross-sectional and therefore do not demonstrate causality.

There is emerging evidence to suggest that perceived sexual and gender identity-related stigma may play a role in terms of gambling-related harms as experienced by sexual minority men (Bush et al, 2021). Sexual minority men who experience greater perceived stigma based on sexual orientation and gender identity gambled at more 'problematic' levels and experienced increased gambling-related harms, $p<.05$ (ibid). As such, minority stress may play a key role in gambling harms experienced by sexual minority men.

A study with trans and gender diverse youth (Rider et al., 2019), described how young people experience minority stress linked to their gender identity where their gender assigned at birth and their preferred gender expression do not align. Puberty is seen as a difficult developmental period for trans and gender diverse young people due to physical and hormonal bodily changes where there may be some level of dissonance between their body and their gender identity. When their gender identity and the related gender expression is not affirmed, some young people may use risk-taking behaviour and/or gambling to escape the emotional pain, or to gain acceptance from others who engage in similar activities. For some, this may lead to gambling harm (Rider et al., 2019).

Higher levels of drug and alcohol use were linked to gambling harms in LGBTQ+ people (Birch et al., 2015), and in sexual and gender minority (SGM) migrants and refugees (Mattelin et al., 2022). Similar findings were reported from interviews with LGBTQ+ people engaged in gambling, which revealed shared pathways to gambling through themes of substance use, mental health challenges, and other life stressors (similar to cisgender heterosexual groups). Where differences were observed in relation to LGBTQ+ status, this was focused in the area of gambling beliefs. The further Australian survey with multiple hierarchical regression analyses for the cisgender heterosexual participants and for the LGBTQ+ group showed that perceived inability to stop gambling emerged as a more pronounced risk factor for 'problem gambling' severity amongst LGBTQ+ respondents compared to their cisgender, heterosexual peers (Bush et al., 2020). In addition, anticipating gambling success was more pronounced among LGBTQ+ participants, predicting both higher 'problem gambling' severity and related harms (Bush et al., 2020). Elsewhere, Grant and Chamberlain (2023) found that LGB young adults were significantly more likely to gamble for longer periods of time ($p<.01$), and for more money ($p<.01$), compared to non-LGB young adults. The authors proposed in this sample, LGB people experienced a constellation of behaviours such as nicotine use, substance use and anger which may put them at risk of gambling (Grant and Chamberlain 2023).

There were mixed results regarding the relationship between psychological distress and gambling harms within LGBTQ+ communities, with Bush et al. (2021) finding a significant association with 'problem gambling' severity and associated harms amongst sexual minority men where more severe gambling resulted in greater harm. However, Birch et al. (2015) found that mental health variables, such as depression and anxiety for adult LGBTQ+ people were not related to gambling harms across both sexual and gender minority groups. Another study of LGB youth who were at risk of gambling harms found associated risk factors such as increased suicidality and obsessive-compulsive disorder (Grant and Chamberlain 2023). Elsewhere, adult trans respondents who had experienced suicidal ideation were no more likely than other trans individuals to report difficulties with gambling (Mathy, 2002). In addition, no differences emerged in relation to the gambling habits of trans respondents who had attempted suicide and those who had not (Ibid).

One study used a clinical sample in which all participants met criteria for 'pathological gambling' (Grant & Potenza, 2006). This study reported that gay and bisexual men were more likely (compared to heterosexual participants) to be single, have a lifetime or current difficulties with 'impulse control', and have difficulties with drug and alcohol dependencies. Gay and bisexual men also were noted to have higher rates of drug and alcohol use, 'eating disorders', and 'somatoform disorders'.

Lastly, gay and bisexual participants presented with 'higher levels of functional impairment' relative to their heterosexual counterparts. The authors conclude that 'psychiatric comorbidity' and 'impairment' are high in gay men. However, the authors could only account for correlation with gambling but neither causation or impact vis-a-vis gambling and associated harms.
Protective factors against gambling harms amongst LGBTQ+ communities

Findings from included studies indicate that the social networks of the LGBTQ+ population play a significant part in mitigating against gambling harms. The role of social support emerged as a significant protective factor in the LGBTQ+ population across two different studies (Bush et al, 2020; Bush et al, 2021). Greater social support was significantly associated with lower levels of 'problem gambling' severity as measured via the Problem Gambling Severity Index; and lower levels of gambling-related harms as indicated via Short Gambling Harm Screen scores (Bush et al, 2020). The results of bivariate analyses found that higher levels of emotional informational support, positive social interaction, and mainstream community connectedness significantly predicted lower levels of gambling harms for sexual minority men, but not heterosexual cisgender men (Bush et al, 2021).[9]

LGBTQ+ gambling lived experience

Qualitative data on the lived experience of gambling in LGBTQ+ groups is sparse with only two of the included studies (both grey literature articles) utilising a qualitative approach to understanding gambling in LGBTQ+ communities. This is particularly surprising given how important qualitative research is for understanding the realities and specific needs of marginalised, stigmatised, and socially-excluded communities. The included studies by Bush et al (2020) in Australia, and Bush-Evans (2023) in the UK, both drew on survey and interview data. There was evidence from both studies showing that for some LGBTQ+ participants, gambling acted as a form of escapism, especially associated with the stress and fear of coming out.

[9] Only two articles examined protective factors against gambling in LGBTQ+ people, the results of which were based on the same research study (Bush et al., 2020; Bush et al., 2021).

> *"If you're in the closet and you just want to escape from reality, it [gambling] is a route to escape."*
>
> *- (Bush-Evans, 2023)*

> *"Maybe it's the stress of actually coming out and maybe at that time I couldn't cope with it very well. I just decided to at the time just do that gambling thing instead of actually focussing on what I actually needed to focus on."*
>
> *- (Bush et al., 2020)*

These quotations demonstrate the connection of gambling, identity, and subjective reality, with gambling used as a form of escapism, as a means of dealing with the fallout from adverse life events. Here gambling acts as a vehicle to ensure adverse life stressors are manageable, however, given gambling is associated with myriad harms, its use as an escape is not without risk. Vulnerability to gambling harms may be seen to follow on from certain risk factors that preceded. These risk factors reflected in the literature included **minority stress, societal stigma and/or discrimination, isolation and victimisation that was framed in some instances as hate crime[10]:**

> *"If someone's been a victim of hate crime that's something that can potentially get them into the habit."*
>
> *- (Bush-Evans, 2023)*

In Bush et al (2020) the theme of secrecy came up both in relation to participants' sexual and gender identity and regarding their gambling behaviour, as shown by the following quotation:

> *"One of the things that always get reinforced is the fact that they are very good at hiding and so, and that sort of is in conjunction with gambling which is also something that people hide. So it's become like a double risk factor because they are so expert in hiding their sexuality. So it's not so hard for them to hide their gambling as well."*
>
> *- (Bush et al., 2020)*

[10] As the full research report by Bush-Evans (2023) is not yet available, quotes were embedded with limited contextual information.

The above indicates that LGBTQ+ people may experience multiple stigma and associated shame both on account of their sexual orientation or gender identity and based on their gambling behaviour. As such, LGBTQ+ people may be more likely compared to cisgender and heterosexual people to keep their gambling hidden, and to avoid sources of potential help from friends or formalised services. As many LGBTQ+ people did not feel safe in traditional gambling settings or when attending in-person venues, online gambling was viewed as more inclusive and accessible, due to the virtual environment offering some form of anonymity (Bush-Evans, 2023).

Service barriers and LGBTQ+ people

Information on LGBTQ+ gambling service user experiences and the associated barriers that prevented access to care were limited. Bush et al. (2020), in the second part of their study with LGBTQ+ people explored via in-depth interviews the experiences of participants' when accessing gambling-related support services. The study reported that none of the respondents with 'problem gambling' had accessed gambling support services (n=13). Instead, commentary centred on barriers experienced within mental health and social services and, in particular, a lack of awareness, education and cultural competency concerning LGBTQ+ issues amongst health and social care professionals (Bush et al., 2020). Interviews with stakeholders (i.e. LGBTQ+ health workers, gambling support workers) suggested that LGBTQ+ people's experience of stigma and discrimination due to their sexual orientation or gender identity might act as a "double barrier" to help seeking (Ibid.).

Other barriers LGBTQ+ people encountered in these gambling services included where professionals used pathologising language based on the gender identity and/or sexual orientation of service users and asked inappropriate questions (Bush et al, 2020). Related to the use of language Mattelin et al. (2022), found barriers to accessing care for sexual and gender minority migrants and refugees included an inability to speak the language (Swedish), and experiences of stigma due to their minority status, or sexual and gender minority participants were faced with heteronormative attitudes. Sexual and gender minority migrants and refugees had limited awareness of services available and how to access these services. Hence, there is a need to increase care access for sexual and gender minority people, as well as developing interventions specifically tailored to meet their needs (Mattelin et al., 2022).

4.0 SUMMARY AND RECOMMENDATIONS

4.1 Summary of findings

In this section, key findings from the review are summarised in relation to the overarching research question and the associated aims for this review.

Prevalence: The results yielded mixed evidence regarding the prevalence of gambling and gambling harms amongst sexual minority populations. There was evidence of higher burdens of gambling harms amongst sexual minority individuals, particularly in relation to sexual minority men and LGBTQ+ youth. However, other studies reported that sexual minority individuals reported lower prevalence, and some studies reported no association between sexual orientation and gambling. There is, however, consistent evidence that trans and gender diverse people might experience higher levels of gambling harms compared to cisgender people. One study found that trans and gender diverse youth were more likely to experience gambling harms compared to their cisgender peers, with trans youth assigned 'male' at birth being at particular risk (Rider et al., 2019). One study (Mattelin et al., 2022) found that trans people with refugee status had the highest odds for risk gambling compared to other sub-groups.

Gambling harms: There is limited research focussing on the lived experience of gambling harm amongst LGBTQ+ communities in GB. In addition, few studies have examined the wider impact of gambling (e.g., financial harm, negative impact on relationships and work) amongst LGBTQ+ people. The few studies which did examine gambling-associated harms found that sexual minority men reported high rates of participation in gambling activities associated with greater gambling harms, such as electronic gambling machines, horse/greyhound racing, and sports betting (Bush et al., 2021).

Risk and protective factors: The literature highlighted risk factors including minority stress, societal stigma and/or discrimination, isolation, and victimisation that was framed in some instances as hate crime (Bush et al., 2020; Bush-Evans, 2023). Emerging evidence suggests that perceived stigma may play a role both in terms of the severity of gambling harms experienced and related impact amongst sexual minority men (Bush et al., 2021). There is some evidence to suggest that general anxiety around everyday disclosures of gender identity or sexual orientation, and anticipated stigma, may be a risk factor for gambling harms where gambling offers a form of escapism. There is also some evidence linking higher levels of drug and alcohol use to gambling harms (Birch et al., 2015; Mattelin et al., 2022). In terms of protective factors, higher levels of support, positive social interaction, and mainstream community connectedness predicted lower levels of gambling harm for sexual minority men, but not for heterosexual cisgender men (Bush et al., 2021). Accordingly, social support emerged as a protective factor unique to the LGBTQ+ population (Bush et al., 2020; Bush et al., 2021).

Gambling-related help-seeking, service barriers, and interventions: No studies were identified in the current review which looked at services or interventions for LGBTQ+ people experiencing gambling harms. The limited research that was available focused on accessing mental health and social care services in general (Bush et al., 2020). General health service barriers included professionals' heteronormative attitudes that became apparent in the use of pathologising language, and/or a lack of cultural competency and education for health professionals on LGBTQ+ issues (Bush et al., 2020; Mattelin et al., 2022). Elsewhere, there is some evidence suggesting that LGBTQ+ people who gamble may experience shame both based on their LGBTQ+ status as well as their gambling habits, which can compound and, in turn, act as a barrier to help-seeking.

4.2 Strengths and weaknesses of the scoping review

The current review included the synthesis of **both** peer-review and grey literature. Previous reviews have excluded grey literature, however it can be an important source of research involving minoritised populations as well as under researched areas. Although only three studies were included from the grey literature search, these nevertheless provided useful insight into the prevalence of gambling in LGBTQ+ people (e.g. Rotermann & Gilmour 2022), as well as in-depth insight into the LGBTQ+ people's experiences of gambling as well as risk and protective factors using mixed-methods research (Bush et al., 2020; Bush-Evans, 2023). Indeed, the only qualitative research included in this review was identified in the grey literature search. The overall lack of research into LGBTQ+ gambling harms means that data presented in this review, and subsequent interpretations and conclusions, are necessarily limited. Moreover, the heterogeneity of included studies in terms of study design, measurement of gambling, and measurement of sexual orientation and gender identity makes it difficult to compare across studies and draw robust conclusions about gambling in LGBTQ+ populations. Furthermore, half of the studies were conducted in the United States, which limits generalisability to other settings. Finally, only English language articles were included (due to limited time/resource for translation).

4.3 Strengths and weaknesses of the included research

Some research included in the review demonstrated the importance of the inclusion of community members and the importance of researchers having relevant expertise when working with and on marginalised and socially excluded communities. Several issues were noted in relation to the language and framing of LGBTQ+ identities in the research we reviewed, and subsequent data collection across the studies. Our review not only identified a lack of standardised monitoring of gender identity and sexual orientation but also some contentious issues around the definition (and therefore monitoring) of sexual orientation and gender identity. We identified several studies that seemed to be informed by authors own preconceptions of LGBTQ+ communities, and a superimposition of these assumptions and encumberments. For example, Hershberger and Bogaert (2004) drew on Gebhard and Johnson's (1979) problematic (and we would argue discriminatory) definition of sexual orientation. Here, men and women were classified as 'homosexual' if they reported more than twenty same-sex sexual partners – regardless of how they themselves chose to identify – or had more than fifty 'homosexual' experiences (with one or more partners). By turn, heterosexuality was defined on the basis of participants having one same-sex sexual partner or between 1 – 5 'homosexual' experiences AND not experiencing arousal from seeing or thinking about 'members of their own sex.' Furthermore, Hershberger and Bogaert's (2004) paper is based on now outmoded beliefs about the 'cause' of minority sexuality, informed by a model that heavily pathologises all LGB communities, which asserts to be linked to hormone exposure during prenatal development

(translated here as 'the feminization of pre-homosexual males' and 'the masculinization of pre-homosexual females'). Based on this outmoded and, we would argue, homophobic, interpretation the authors speculate that: 'Finding hormonal or genetic influences on gambling behaviour is consistent with a biological (e.g., prenatal hormones) explanation of sexual orientation development.' The problematic nature of the article highlights the need for care to avoid reproducing stigmatising language and frameworks of interpretation, which, in turn, can produce inaccurate measurements and potentially misleading results. Elsewhere in the review, Wicki et al. (2021), referred to 'homosexual(s)' and 'mostly homosexual(s)' on their scale of sexual orientation. This is of particular concern given how recently the paper was published.

Broman and Hakansson (2018), conflate gender identity with sexuality, subsuming trans identities into a 'non-heterosexual' category, despite trans being a gender identity as opposed to a sexual orientation. Other studies (Noel et al., 2022a; 2022b), included 'transgender' as a third gender option (i.e. 'male/female/transgender'), negating the inclusion of trans people as either male or female rather than via a separate question around gender identity/trans status. Only a few studies had a separate category for capturing data around non-binary and other gender variant identities (e.g. Bush et al. 2021; Rider et al., 2019), the remainder of studies following binary categories of gender. In their narrative review, Gartner et al. (2022) found that most studies on gambling used the terms 'sex' and 'gender' interchangeably, and a recent scoping review by Kairouz et al. (2023) found that gambling scholarship conceptualised gender as 'a descriptive demographic variable and an indicator of comparative analysis between men and women' (p.1). Of the 2532 articles studied in the review by Kairouz et al. only 2.3% focused on gender from a socio-cultural perspective, and these were mainly limited to a binary understanding of gender. However, some examples of good practices regarding the monitoring of sexual orientation and gender identity were noted in some of the papers included in the present review (e.g Bush et al., 2021; Rider et al., 2019).

4.4 Implications and recommendations for research

The overriding implication of this review is that more **robust, respectful,** and **culturally competent** research is urgently needed to understand gambling and gambling harms in LGBTQ+ populations globally, and certainly in GB, where there is a notable dearth of robust research. There is a need for large-scale, population-based surveys to estimate the prevalence of gambling and gambling harms in LGBTQ+ populations. Qualitative, ethnographic, and/or longitudinal research is needed to establish a picture of gambling harms across the life course, and to identify the risk and causal factors for gambling harms in LGBTQ+ people, as well as the protective factors against gambling harm. Research is also needed to test some of the key hypotheses and variables linked to gambling in LGBTQ+ populations, including stigma, discrimination, hate crime, minority stress, gender dysphoria, drug and alcohol use, and adverse life events. The results of the review also highlight the need for standardised and robust monitoring of gender identity and sexual orientation, and linked data collection which separates gender identity from sex assigned at birth, and which considers the unique needs and perspectives of the various minority groups within the LGBTQ+ umbrella. Finally, this review did not identify any research which explored help-seeking for gambling in LGBTQ+ populations, or any interventions targeted at LGBTQ+ people experiencing gambling harms, though it did identify some of the significant barriers and stigmatisations experienced by these communities in gambling harm service provision. Therefore, **there is an urgent need for evidence-based interventions** that address gambling harms in LGBTQ+ people. However, there was a suggestion that LGBTQ+ people might experience a "double barrier" when accessing gambling support services, because of perceptions of stigma due to their sexuality and/or gender identity **and** gambling, as well as a general reluctance to access services where staff are not trained in LGBTQ+ issues. This suggests

the importance of cultural competency education and training of health professionals and specialists working to reduce LGBTQ+ gambling harm.

Key recommendations arising from the review for consideration research, practice and education are summarised below:

Recommendations for Research

- Gaps in the research evidence-base regarding gambling and gambling harms in LGBTQ+ populations are considerable and require redress. Much of the research that does exist is problematic, in part due to inconsistencies in how gambling prevalence is measured and reported.
- Large-scale cross-sectional research (quantitative and qualitative) is required that engages collaboratively with communities to generate appropriate research designs that are representative (e.g. samples), participatory (co-produced), and include relevant outcome variables/indicators allowing analyses to be conducted by gender and sexual orientation as well as by intersecting identities.
- Involved qualitative, ethnographic, participant observation, and longitudinal research is additionally required to identify the potential risk and causal factors for gambling harms in LGBTQ+ people over time; as well identify the protective factors against gambling harm. This would be particularly valuable to inform development of targeted interventions for LGBTQ+ people, and the related at-risk groups.
- Linked to the above two points, whilst LGBTQ+ communities are diverse and vulnerabilities are commonly 'masked' within the LGBTQ+ grouping, this is the same for those experiencing gambling harms. Future research should therefore consider the needs and experiences of the most marginalised, vulnerable or at-risk individuals and groups within these communities with an intersectional focus; case study methodology can be particularly helpful to achieve this.
- Qualitative research (e.g. in-depth interviews) is particularly important to understand the lived experiences of LGBTQ+ people in relation to their gambling behaviour as well as the impact of gambling harms, and potential for future intervention(s).
- Qualitative research should also explore the experiences of LGBTQ+ people who access support or interventions for gambling harms, and any barriers that may prevent access to support and how these barriers can be overcome.
- Research should be co-produced with involvement of community groups and LGBTQ+ peers with lived experience of gambling harms, and work towards benefiting these groups. Targeted community outreach should actively engage with otherwise "hard-to-reach" sub-groups of the LGBTQ+ community.

Recommendations for Practice and Education

- Culturally appropriate health promotion work is needed across LGBTQ+ groups to support those at risk, and to highlight harms as well as protective factors associated with gambling.
- Community-based support mechanisms including community development initiatives may be particularly suitable for this, especially work with links to relevant NHS primary care services (e.g. through GP practices).
- There is a need for cultural competency education and training of health professionals and specialists working to reduce LGBTQ+ gambling harm. It is well acknowledged that many health professionals find it difficult to engage with LGBTQ+ populations through lack of confidence, worry about 'getting it wrong', and lack of culturally competent training. Development of new standardised modular training would therefore be useful to support practitioners in raising and discussing difficult issues relating to LGBTQ+ gambling harms, and to ultimately reduce inequalities.
- Training is required to equip practitioners with greater knowledge and skills to address the barriers such as discrimination and stigma that prevent LGBTQ+ people from accessing support to reduce gambling harm.

4.5 Conclusions

This scoping review summarised the available literature on gambling in LGBTQ+ populations. However, the limited evidence and inconsistent findings limits what can be concluded about gambling in LGBTQ+ populations. The mixed findings around prevalence highlight the need for large-scale, population-based surveys using validated measures of gambling. This would be particularly valuable to identify risk and causal factors, which are essential to the development of prevention work and targeted interventions for LGBTQ+ populations. Consistent data collection around gender identity and sexual orientation are crucial to produce meaningful and robust new research. There is also a need for qualitative research around lived experiences of LGBTQ+ people, their gambling behaviour, and the linked harms. Future research should be intersectional, and should prioritise the LGBTQ+ population including the sub-groups within who are multiply marginalised, and who may experience multi-layered levels of vulnerability and risk. Any research should be undertaken with greater community involvement and in collaboration with LGBTQ+ peers. Improved understanding of gambling could inform a whole systems approach with health promotion initiatives and the development of targeted interventions to protect against gambling harm in LGBTQ+ communities, and to ultimately achieve greater health equity.

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