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Research on gambling and gambling harm in Aotearoa New Zealand: A scoping review

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Background

Gambling harm is a significant public health issue made more urgent by the rapid growth of online gambling. In Aotearoa New Zealand, gambling access expanded following the introduction of gaming machines in the 1990s and is expected to expand again with the regulation of online casinos. With online casinos now being regulated, it is timely to examine the local evidence and identify gaps in the research. This study aimed to determine: (i) the focus of peer-reviewed gambling research conducted in New Zealand between 2003 and 2024; (ii) the methodologies used and their adequacy; and (iii) the nature and extent of funding reported in peer-reviewed publications.

Methods

MEDLINE, PsycINFO and Scopus were searched for peer-reviewed articles published between 2003 and 2024. Articles of any design were eligible if they focused on gambling, gambling harm or problem gambling, were conducted in New Zealand and included at least one New Zealand-based author.

Results

A total of 176 articles were included. Research addressed overlapping domains of individual factors (23.3%), epidemiology and harm (18.2%), social and cultural factors (18.8%), community and context (15.3%), screening and treatment (23.3%), and policy and industry regulation (14.8%). Cross-sectional studies were the most common design (37.5%), followed by non-systematic reviews (20.5%) and qualitative studies (13.1%). Only five clinical trials and seven experimental or quasi-experimental studies were identified. Qualitative methods were most common in research addressing social and cultural factors. Among 167 articles reporting funding information, 37% received gambling levy funding, 27% general

research funding, 30% reported no funding and 6% received overseas funding; none reported direct gambling-industry funding.

Conclusions

New Zealand has produced a substantial body of peer-reviewed gambling research, but relatively little research has tested what works to reduce gambling harm. Major gaps were evaluations of public health and regulatory responses, treatment and prevention outcomes, the effects of gambling on affected others and whānau, online gambling, and culturally grounded responses for Māori, Pacific and Asian communities. The introduction of regulated online casinos increases the need for prospective research that can track changes to gambling and gambling harm and inform policy and regulation.

Keywords: Gambling, problem gambling, prevalence, treatment, culture, policy, epidemiology

Background

Gambling is widely accessible in New Zealand which is a country of approximately 5.3 million people. Regulated activities include lotteries, sports and track betting, electronic gaming machines (EGMs) in hotels and clubs, six casinos offering table games and EGMs, and community-organised raffles and bingo. Before the introduction of the new online casino regime in 2026, regulated online gambling was restricted to monopoly New Zealand providers of wagering and lottery products [1]. Approximately seven in ten New Zealand adults gamble each year [2]. In 2023/24, annual gambling expenditure reached NZ$2.792 billion; excluding lottery products, more than half of this expenditure was on EGMs outside casinos [3]. Gambling harm is a significant public health issue, with approximately 6% of adults experiencing some level of gambling risk [2]. Harm is disproportionately experienced by Māori, the Indigenous people of New Zealand, Pacific peoples, and some Asian communities [2]. Gambling disorder, as defined in the DSM-5 and ICD-11, represents the most severe clinical form.

Gambling is regulated under the Gambling Act 2003 and the Racing Industry Act 2020, both administered by the Department of Internal Affairs [1]. The Gambling Act replaced the previous legislative framework established under the Casino Control Act 1990 and the Gaming and Lotteries Act 1977. It is intended to control the growth of gambling and prevent and minimise gambling-related harm. The Act also requires an integrated problem gambling strategy encompassing public health measures, treatment and support services, independent scientific research, and evaluation. More recently, the Online Casino Gambling Act 2026 established the legal basis for online casino gambling and the issue of up to 15 licences [4]. Its stated purposes include preventing and minimising harm, protecting consumers, and ensuring that revenue from online casino gambling benefits the community.

The Ministry of Health and Health New Zealand are responsible for developing and implementing the strategy required under the Gambling Act 2003 [5]. The 2025/26 to 2027/28 strategy has four overarching priorities: improving access to gambling harm services, developing the gambling harm

workforce, strengthening prevention and early intervention, and improving the effectiveness of gambling harm support through better data management, research, and evaluation [5]. These goals sit within the broader statutory requirement for "independent scientific research associated with gambling, including (for example) longitudinal research on the social and economic impacts of gambling, particularly the impacts on different cultural groups; and evaluation." The strategy allocates NZ$5.035 million to research and evaluation over three years, representing 6.2% of its total budget [5].

More than 20 years after the Gambling Act 2003 was introduced, and as the gambling market expands to include regulated online casinos, it is timely to assess the scope of gambling research conducted in New Zealand. Reviews of gambling research have been conducted in other national and regional contexts, including the Nordic countries [6] and Europe [7] as well as Ghana [8] the United Kingdom [9]. A New Zealand review is needed to determine whether the available research reflects local gambling environments and the experiences of communities disproportionately affected by harm. This is particularly important in the context of Te Tiriti o Waitangi and the Crown's responsibilities concerning active protection of Māori health, equitable health and wellbeing outcomes, and Māori self-determination (tino rangatiratanga) in the design, delivery, and monitoring of health services [10, 11]. Evidence specific to New Zealand is needed to guide regulatory and public health responses to gambling expansion and address existing inequities in harm.

This scoping review aims to map peer-reviewed gambling research conducted in New Zealand over the past two decades. It examines the subject matter and methodologies used, as well as reported funding. The review was restricted to peer-reviewed publications because grey literature is not consistently indexed and would have required a separate search of government, industry, and organisational sources. The specific research questions were: (i) What has been the focus of peer-reviewed gambling research in New Zealand in the past 20 years? (ii) Which methodologies have been used and are these sufficient? (iii) What is the nature and extent of funding for research that has been disseminated through peer-reviewed publications in New Zealand?

Methods

This study used scoping review methodology. A scoping review was selected rather than a systematic review because the aim was to map the focus, methodologies, and funding of gambling research in New Zealand, rather than evaluate the effectiveness or quality of the evidence. The review followed the PRISMA Extension for Scoping Reviews (PRISMA-ScR) [12] for the identification, screening, eligibility assessment, and inclusion of articles. It was preregistered with the Open Science Framework (https://osf.io/85xuk). One change was made to the registered eligibility criteria: research activities, including data collection where applicable, were required to have been conducted at least partly in New Zealand. This excluded publications involving a New Zealand-affiliated author where the research was

conducted entirely outside New Zealand.

Eligibility criteria: Articles were included if they:

- had at least one author affiliated with a New Zealand university, research institution, company, or organisation;
- focused on gambling, gambling harm, problem gambling, or gambling disorder, with a substantial portion of the article presenting relevant information, data, or analysis;
- were published between 2003 and 2024;
- used any study design, with or without empirical data, including qualitative, quantitative, and mixed methods studies, systematic reviews, and narrative reviews;
- included any population or perspective relevant to gambling or gambling harm; and
- were published in English.

Articles were excluded if they:

- used gambling activities to investigate another topic, such as decision-making in children, without substantively examining gambling;
- reported research conducted entirely outside New Zealand;
- were conference papers, grey literature, dissertations, books, or reports;
- focused on gaming without examining gambling;
- were not peer reviewed or provided no evidence of a peer-review process; or
- focused on promoting gambling, such as through product marketing.

Information sources and search strategy

MEDLINE, PsycINFO, and Scopus were searched for peer-reviewed articles published between January 2003 and December 2024. Expertscape was searched for authors affiliated with New Zealand institutions. New Zealand Ministry of Health, Health Research Council of New Zealand, and university websites and repositories were also searched to identify eligible peer-reviewed publications that may not have been retrieved through the database searches. Grey literature identified through these sources was not included. Reference lists of included articles were searched using Google Scholar to identify additional eligible publications. The search strategy was developed with an experienced librarian and refined through discussion within the research team. Search terms relating to gambling included gambling, gamb*, gam*, bet*, wager*, pokies, and loot boxes. These were combined with terms identifying the New Zealand context, including New Zealand, Aotearoa, NZ, Māori, Pasifika, and Pacific Island*. Keywords and Medical Subject Headings were used where available.

Study selection

Records were exported from each source, duplicates were removed, and titles and abstracts were screened using Rayyan review software. Records considered potentially eligible were exported to an Excel spreadsheet for full-text assessment. Reasons for excluding articles at the full-text stage were recorded. Two reviewers (SR and research assistant JP) independently assessed the full texts, achieving 95% agreement. Disagreements were resolved through discussion.

Data charting and synthesis

A data-charting spreadsheet was developed in Excel. Data were independently extracted by three reviewers (SR and research assistants HK and CB). Extracted information included publication details, author affiliations, research design, study population, study aims and outcomes, and reported funding sources. Articles were assigned to one or more research areas according to their topic focus, with subtopics identified within each area. Results were synthesised using descriptive counts and percentages to map the focus, methodologies, populations, and funding of the included publications. Methodological sufficiency was assessed descriptively by examining the range and distribution of study designs across research areas, populations, and time periods. This assessment identified areas dominated by particular methodologies and areas in which relevant designs were absent or underrepresented. Funding sources were extracted as reported in each publication and classified according to whether they were derived from the hypothecated gambling levy or other sources. The extent of funding was summarised using the number and proportion of publications in each category. Funding amounts were not examined because the review assessed funding reported in individual publications rather than the total monetary investment in gambling research. Risk of bias and methodological quality were not assessed because the purpose of the review was to map the New Zealand gambling research literature rather than evaluate the validity or effectiveness of the evidence. Throughout the review, the inclusive term "problem gambling" was used to encompass related terms, including pathological gambling, gambling problems, gambling addiction, gambling harm, and gambling disorder, except where publications explicitly distinguished between gambling harm and gambling disorder.

Results

Study selection

Database searches identified 1,553 records. After 366 duplicates were removed, 1,187 records were screened by title and abstract, of which 908 were excluded. A further 275 records were identified through other methods; 256 were excluded during screening and 19 proceeded to full-text assessment. In total, 298 reports were assessed for eligibility, of which 122 were excluded. The most common reason for exclusion was that studies were conducted exclusively overseas (n = 57), including studies led by New Zealand authors for which all research activities were undertaken outside New Zealand. Other reasons were no New Zealand author (n = 20), grey literature (n = 20), no gambling focus (n = 12), not peer reviewed (n = 8),

conference papers or theses (n = 4), and duplication (n = 1). A total of 176 articles were included in the review.

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Figure 2 shows that 176 articles were published between 2003 and 2024, averaging eight articles per year. Publication output peaked in 2022 (n = 17) and 2006 (n = 15) and was lowest in 2003 and 2015 (n = 3 each). The articles appeared across 69 journals, of which 46 (66.7%) published only one included article (see Appendix for the full list). Journals publishing more than five articles were the *International Journal of Mental Health and Addiction* (31 articles, 17.6%), *International Gambling Studies* (18, 10.2%), *Journal of Gambling Studies* (18, 10.2%), *Journal of Gambling Issues* (8, 4.5%), *Addiction* (7, 4.0%), and the *New Zealand Journal of Psychology* (6, 3.4%). Overall, 210 New Zealand-affiliated authors contributed to these publications, with 124 (59.0%) contributing to only one article. Eight authors contributed to 10 or more publications; however, only four currently hold academic or research positions in New Zealand.

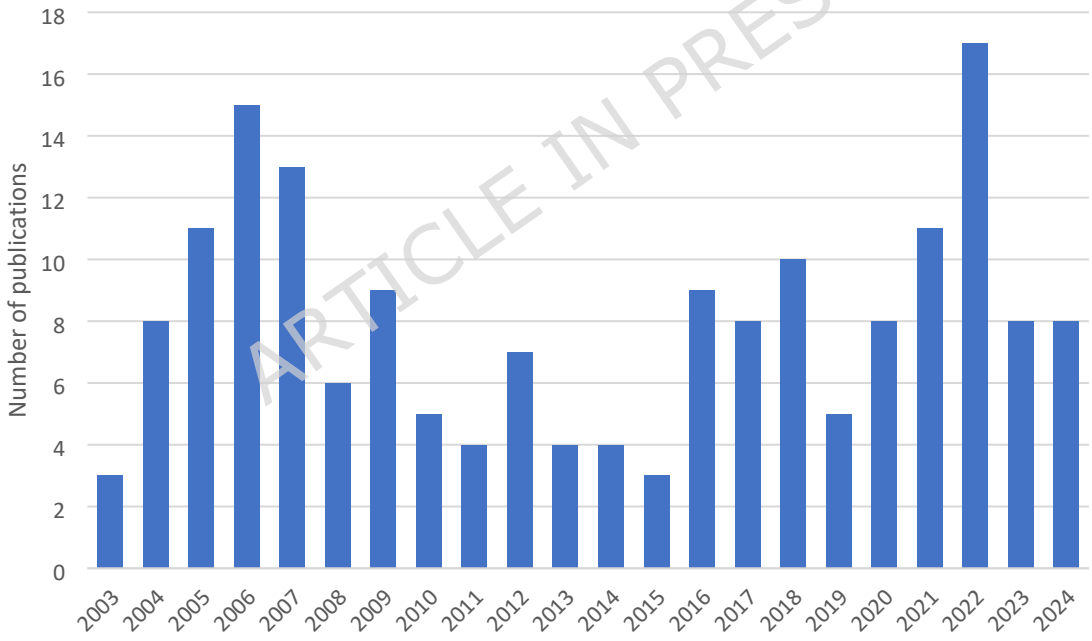

Figure 2. Number of included articles published per year, 2003–2024

Study characteristics

Categorisation of the included articles identified six broad research domains: individual factors (n = 41, 23.3%), epidemiology and harm (n = 32, 18.2%), social and cultural factors (n = 33, 18.8%), community and context (n = 27, 15.3%), screening and treatment (n = 41, 23.3%), and policy and industry regulation (n = 26, 14.8%). Articles could be assigned to more than one domain.

As shown in Table 1, cross-sectional studies were the most common design (n = 66, 37.5%), followed by non-systematic reviews (n = 36, 20.5%), qualitative studies (n = 23, 13.1%), cohort studies (n = 15, 8.5%), systematic reviews (n = 13, 7.4%), mixed-methods studies (n = 11, 6.3%), experimental or quasi-experimental studies (n = 7, 4.0%), and clinical trials (n = 5, 2.8%). Cross-sectional studies were the most common design in the individual factors (61.0%), epidemiology and harm (53.1%), and community and context domains (40.7%), limiting opportunities to examine temporal or causal relationships. Longitudinal and intervention research was comparatively uncommon. Seven of the 15 cohort studies drew on either the Pacific Islands Families Study (n = 4) or the Dunedin Multidisciplinary Health and Development Study (n = 3), while clinical trials accounted for 2.8% of all studies. Policy and industry regulation research relied predominantly on non-systematic reviews (65.4%). Qualitative methodologies were most common in the social and cultural domain (42.4%) and accounted for 22.2% of community and context research.

Table 1. Distribution of research methods across gambling research domains (n,%)*

Methodology	**Individual factors**	**Epidemiology & harm**	**Culture & social**	**Community & context**	**Screening & treatment**	**Policy & regulation**	**Total**
Clinical trial	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5 (12.2)	0 (0.0)	5 (2.8)
Cohort	7 (17.1)	3 (9.4)	4 (12.1)	0 (0.0)	3 (7.3)	0 (0.0)	15 (8.5)
Cross-sectional	25 (61.0)	17 (53.1)	9 (27.3)	11 (40.7)	9 (22.0)	4 (15.4)	66 (37.5)
Experimental/quasi-experimental	3 (7.3)	0 (0.0)	0 (0.0)	3 (11.1)	0 (0.0)	1 (3.8)	7 (4.0)
Mixed methods	1 (2.4)	0 (0.0)	1 (3.0)	3 (11.1)	6 (14.6)	2 (7.7)	11 (6.3)
Non-systematic review	3 (7.3)	6 (18.8)	5 (15.2)	2 (7.4)	7 (17.1)	17 (65.4)	36 (20.5)
Qualitative	1 (2.4)	3 (9.4)	14 (42.4)	6 (22.2)	4 (9.8)	2 (7.7)	23 (13.1)
Systematic review	1 (2.4)	3 (9.4)	0 (0.0)	2 (7.4)	7 (17.1)	0 (0.0)	13 (7.4)
Total articles in domain	41	32	33	27	41	26	176

* Articles were classified under one methodology but could be assigned to more than one research domain. Percentages within each domain were calculated using the number of articles assigned to that domain as the denominator. The final column reports unique articles by methodology, with percentages calculated using all 176 included articles; it therefore does not equal the sum of the domain columns.

Focus of gambling research

Individual factors

Forty-one articles were coded to the individual factors domain, which encompassed risk and protective factors (n = 19), correlates of gambling and problem gambling (n = 11), gambling motivations and experiences (n = 8), and brain and biological factors (n = 3).

Approximately half (n = 19) of the included articles reported on risk and protective factors for gambling problems [13-31]. Three articles utilised data collected in the longitudinal Dunedin Multidisciplinary Health and Development Study, two examined childhood precursors of adult problem gambling [29, 31], and one examined personality correlates of problem gambling in young adults [16]. Lower childhood socioeconomic status, lower general intelligence, and lower self-control each predicted gambling problems in adulthood [29]. More television viewing during childhood and adolescence in the 1970s and 80s were associated with adult gambling problems [31]. Higher scores on negative emotionality, risk-taking, and impulsivity, and lower scores on constraint at age 18 years were all associated with problem gambling at age 21 years [16]. An analysis of another longitudinal study, the Pacific Islands Families Study, showed that in this population, maternal gambling was associated with food insecurity and financial difficulties in meeting household costs [22].

Several articles utilised data from large nationally representative samples [13, 21, 23, 25, 26, 30]. Māori and Pacific ethnicity, being aged 25-34 years, living alone, being employed, and lower educational attainment were identified as risk factors for problem gambling, while problem gambling was associated with hazardous drinking, smoking, and lower self-rated health [21]. Two articles included longitudinal components, one was a prospective cohort study following problem and non-problem gamblers which highlighted that most problem gamblers were non-problematic gamblers seven years later. However, more severe initial problem gambling, hazardous alcohol use and a preference for track betting were independent predictors of subsequent problem gambling [13]. A later study used a nationally representative sample with four data collection points and identified changes in a range of health and social factors over time were linked to transitions between gambling-risk levels, stressing the need for awareness of gambling issues when supporting people in substance use, health and social contexts [30]. Two articles used data from a nationally representative study of secondary school students and identified factors related to gambling

problems, including emotional regulation, gambling attitudes and activities, and suicide attempts, while school connectedness was associated with less problem gambling [25, 26]. Two further articles examined the geographical distribution of land-based gambling venues in New Zealand. Wheeler and colleagues highlighted the prevalence of non-casino gaming machines in more deprived neighbourhoods where Māori and Pacific peoples were more likely to be resident [19]. Another study used geographic information systems to measure neighbourhood access to gambling [23]. Pearce and colleagues found that neighbourhood access to gambling opportunities was associated with both gambling participation and problem gambling and that access was associated with inequities after accounting for individual-level characteristics.

Eleven articles reported on correlates of gambling in a range of contexts [32-42]. In general practice clinics, Goodyear-Smith and colleagues implemented a screening tool which included gambling and was used with 1,000 patients with a 98% participation rate [32]. They found Māori and Pacific patients were more likely to report being unhappy after gambling, but none reported wanting help for that problem [32]. Penfold and colleagues examined patient records of those admitted to hospital following a suicide attempt and found 17.1% were positive for problem gambling, and that alcohol increased suicide risk [36]. Further articles suggested that among adolescents increasing disposable income was associated with increased expenditure on fast foods, alcohol, cigarettes and gambling [35], and that gambling availability, lack of social/cultural empowerment, low socioeconomic status, personal loss, and religion and spirituality were all associated factors worth further exploration [33, 34] and a recent study on NZ rugby players reported high rates of gambling problems [42]. Rimal and colleagues showed that amongst EGM gamblers, depression and alcohol use were associated with increased gambling severity and poorer decision making [40]. A recent meta-analysis by Garea and colleagues indicated a relationship between gambling problems and loot box spending [38], while further articles confirmed these links using panel-based surveys and highlighted psychological distress as a particular factor [37, 39, 41]. The remaining articles used cross-sectional samples to examine psychological factors such as impulsiveness related to gambling [14, 17, 24] and, more recently, the impacts of mandated self-isolation on loot box spending and gaming [28].

Eight articles examined motivations for, and experiences of, gambling with all being published between 2005 and 2014 [43-50]. A series of articles led by Clarke [43, 45-48] investigated motivational factors related to gambling in various ethnic and age groups; winning or reward was consistently highlighted as a motivational factor, whereas gambling to reduce stress or escape was commonly associated with harmful gambling. A later qualitative study [49] that explored reasons for gambling in four ethnic groups highlighted a range of environmental, cultural and social factors interacted with personal ones to influence gambling behaviour. This work highlighted the impact of gambling accessibility (see also [19, 23]) and the influence of advertising.

Just three articles specifically investigated cognitive and biological factors related to gambling. All used experimental designs with simulated gambling tasks, two with human participants [51, 52] and one with pigeons [53]. Phillips and colleagues examined decision making on a gambling task [51]. Fielding and colleagues used electroencephalography to identify a measurable reward response in the absence of a tangible reward, including during free-play simulations and near misses [52]. Scarf and colleagues' pigeon study showed distinct neuronal activity associated with wins, near misses, and losses [53]. Together they contribute to understanding the biological [52, 53] and cognitive processes [51] underlying gambling behaviour.

Epidemiology, harm and measurement

Thirty-two articles were coded to the epidemiology, harm and measurement domain. These were grouped into epidemiology (n = 13), gambling-related harm (n = 14), and measurement of gambling risk or problems (n = 5).

There were 13 epidemiological articles including two that used meta-analyses [54, 55], two articles examining research methods and recruitment [56, 57] and five on the changing epidemiology of gambling in New Zealand [20, 58, 59] including two longitudinal articles [13, 60]. Three articles looked at rates of problem gambling in populations including Māori, Pacific and Asian people [61], adolescents [62], and university students [63] while one calculated disability weights for gambling problems [64]. Devlin and colleagues [54] used meta-analysis to improve problem gambling prevalence estimates obtained from two New Zealand surveys. Their initial meta-analysis established problem gambling prevalence with the PGSI at 0.53%, then with further consideration of 36 international articles this was adjusted to 0.5%, similar to estimates from Australia, Sweden, the United Kingdom, and Canada. Storer and colleagues' meta-analysis across Australia and New Zealand concluded that the per capita density of EGMs was strongly associated with gambling problems [55]. Other articles reported around one in five young people were at risk of gambling problems in high school [62] as well as university samples [63]. Rawat and colleagues examined reductions in quality of life associated with gambling problems [64]. They reported problem gambling had similar reductions to quality of life as severe alcohol use disorder, with moderate risk gambling problems similar to moderate alcohol use disorder or amphetamine dependence [64]. Two longitudinal articles examined changes to gambling behaviours drawing participants from population level surveys. Abbott and colleagues followed 143 gamblers who were initially surveyed in 1991 and reassessed in 1998 [13]. For example, some who had a gambling problem in 1991 showed improvement, while others experienced a worsening of their condition. A more recent longitudinal study by Kruse and colleagues [60] followed participants from the population-representative 2012 New Zealand Health and Lifestyles Survey. They followed up 901 participants in 2014 and found that gambling problems increased over time, especially the

proportion of those categorised as low risk on the PGSI. Predictors of increased risk from low to moderate included engagement in EGM gambling and living in areas with high neighbourhood deprivation [60].

Fourteen of the included articles focused on gambling-related harm [36, 65-77]. Five articles examined gambling-related harms more broadly. Three were non-systematic reviews synthesising research on gambling and gambling-related harms [66, 70, 76]. Abbott [66]compared findings from repeated national gambling surveys conducted over 28 years, while Landon and colleagues used qualitative interviews to examine gambling-related harms among people accessing a social service [71]. Four articles investigated associations between gambling and family violence or intimate partner violence [67-69, 77]. Dowling and colleagues' systematic review and meta-analysis reported a significant relationship between problem gambling and experiencing intimate partner violence [68]. Two articles were conducted with clients from New Zealand treatment services. The first reported more than half of clients experienced family violence, with verbal violence being the most common [69] , while the second concluded that female gamblers with dependent children reported more family violence than male gamblers without children [67]. Secondary analysis by Schluter and colleagues of data from the longitudinal Pacific Islands Families Study concluded there was no association between intimate partner violence and problem gambling amongst Pacific parents of newborn infants [77]. Palmer du Preez and colleagues used post-structural feminist discourse analysis to examine how women who gamble and gambling-related harm were positioned in 110 research texts [74]. A related qualitative study examined women's sociocultural positioning and experiences of gambling-related harm [73]. Two articles which surveyed patients recently admitted to a hospital emergency department for attempted suicide found a relationship between problem gambling and suicide attempts [36, 75]. Lin and colleagues population level telephone survey, oversampled Māori, Pacific people and Asian people, and found associations between quality of life (including various health factors) and time and money spent gambling [72].

Five articles focused on measurement of gambling risk/problem gambling [78-82]. Dowling and colleagues systematic review and meta-analysis of brief screening instruments identified five acceptable options: the Brief Problem Gambling Screen, NODS-CLiP, Problem Gambling Severity Index–Short Form, NODS-PERC, and NODS-CLiP2. The review concluded that more research was needed but identified the Lie/Bet Questionnaire and One-Item Screen as promising shorter options [79].

Social and cultural

Thirty-three articles were coded to the social and cultural domain. Most (n = 29) addressed Māori, Pacific, or Asian gambling, while four examined affected others, family, or social connectedness. Twenty-nine articles examined social and cultural factors associated with gambling and problem gambling [22, 32, 49, 61, 77, 83-106]. Walker and colleagues [61] conducted a large population study involving 1,774 people, reporting that financial harm from gambling and arguments about unpaid bills were common. The study

found that these issues disproportionately affected Māori and Pacific peoples at a higher rate compared to the rest of the population. Similarly, Lin and colleagues examined the impacts of gambling across a large sample of New Zealand European, Māori, Pacific and Asian people [94]. They found significant relationships between increased gambling engagement and lowered scores in several quality-of-life domains for Māori and Pacific respondents.

A series of eight articles reported analyses from the longitudinal Pacific Islands Families Study, providing insights into gambling experiences and harms among Pacific families in New Zealand [22, 77, 83-86, 98, 99]. The research indicated that Tongan mothers were more likely to gamble than Samoan mothers [84, 86], while engagement with traditional gift-giving obligations was associated with increased gambling [98]. Further articles found that maternal gambling was associated with food and housing security issues [22] and that, across time, Samoan mothers were less likely to gamble; however, when they did gamble they were likely to spend more money than mothers from other Pacific islands [99], though no associations were found between problem gambling and interpersonal violence in this cohort [77]. More recent articles from this cohort explored the behaviour of Pacific children, with large proportions at age nine reporting playing cards (96%), housie (60%) and betting with money (27%); associations between the children's gambling and both deprivation and effectiveness of parental monitoring were noted, but not with maternal gambling [83]. Most recently, gang involvement at age 9 years was shown as significantly associated with gambling at age 14 years, while having a mother with a partner, or being of Cook Islands ethnicity were protective factors [85].

Beyond the experiences of gambling and problem gambling, seven articles looked at responses to problem gambling via a cultural lens [89, 90, 100-103, 106]. For example, Tse and colleagues [103] reported a formative evaluation of a public health programme designed by an Asian service for Asian populations. They reported the approach as promising in terms of raising awareness and understanding and noted that fitting in with collaborators' other responsibilities was important, as was using non-threatening and culturally appropriate messaging.

Four articles looked at affected others, family and social connectedness [71, 107-109]. Landon and colleagues interviewed 10 people affected by another person's gambling who were accessing a social service. In the broader service population, 41% of clients screened positive for gambling harm [71]. The results highlighted the pervasive intergenerational nature of harms, and a determination to cope without external support. Booth and colleagues [107] conducted a large international study using data sourced from message boards and websites. They developed a taxonomy of behaviour change strategies used by affected others [107]. Family focused (n = 16 strategies) and gambler focused (n=11) taxonomies were produced. Both articles noted the need for support, with the latter providing information important for developing

appropriate resources [107]. An earlier study by Sullivan and colleagues [108] reported 7.5% of patients in General Practitioner clinics were affected by someone else's gambling.

Community and context

Twenty-seven articles were coded to the community and context domain. These comprised articles addressing gambling characteristics and types (n = 9), harm reduction (n = 9), social determinants (n = 5), and incarceration (n = 4). Nine articles focused on gambling characteristics and type [110-118], with almost all focused on EGMs and/or casino gambling. Three experimental articles examined characteristics of EGMs in simulations. Peters and colleagues conducted an animal study which showed response latency varied with reward magnitude and near wins, supporting the notion that near wins function as conditioned reinforcers [116]. Subsequent human articles showed that in simulated EGM games, free spins and bonus features were strongly preferred [111, 118], and that machines with higher balances were also preferred [111]. A qualitative study by Landon and colleagues with a range of gamblers also suggested that free spins were an important feature encouraging gamblers to gamble more intensely, along with small win related features, and the ability to make many small bets on multiple lines in low denomination machines [114]. Other articles focused on venues, with an early study highlighting that EGMs in non-casino venues more strongly associated with problem gambling than casino-based EGMs [112], one documenting community perceptions of a casino [115], and another discussing venue layouts and their possible impacts on gambler behaviour [110]. Drummond and colleagues [113] discussed similarities between loot boxes and gambling and argued that comparable regulation may be warranted, highlighting the lag between technological developments and regulation intended to protect the public. Most recently, Rimal and colleagues [117] examined gambling-sector stakeholders' perspectives on EGMs in New Zealand.

Since 2014, nine articles have explored aspects of harm reduction [103, 106, 119-125]. There were two systematic reviews, the first a scoping review of 'hard' restrictions on access to funds in a gambling context (e.g., banning credit betting, removing ATMs from venues). Rodda [124] concluded that while there were just nine articles generally of low quality, there was strong support for these financial mechanisms as useful for gamblers and their families. A second systematic review [125] examined internet delivered interventions for prevention and harm reduction and reported the main types as personalised and normative feedback, limit setting, self-directed cognitive and behavioural therapy, and self-exclusion, which were delivered via customer gaming accounts, email, and self-learning packages. Six articles evaluated policy or service provider initiatives aimed to reduce gambling harm. A series of articles examined the responses to, and effectiveness of, mandated pop-up messages on EGMs in New Zealand [121-123]. Collectively they suggested modest positive effects of the messages, and no impact on gambler enjoyment. One study found that local-government sinking-lid policies were associated with a 13% reduction in gambling expenditure relative to areas without these policies [119]. Under a sinking-lid policy,

machines cannot be replaced when a venue closes, and venues that remove machines cannot subsequently restore them. Others highlighted the usefulness of community-action approaches to ensure programmes were culturally appropriate and relevant for specific at-risk populations [120] and positive responses to a 'Gamblefree Day' project initiated by Asian problem gambling services [103]. Most recently, a qualitative study was used to develop a model for responding to Chinese migrants experiencing casino gambling harm [106].

Five articles explored the social determinants of gambling using a range of approaches [19, 23, 126-128]. Two involved geographical investigation of gambling venue locations in the context of measures of deprivation [19] and gambling behaviour [23]. As described earlier, these noted the inequitable distribution of gambling venues, and that access was linked to gambling behaviour and problem gambling. A further article analysed successive nationally representative surveys and found that although gambling participation declined, household gambling harm increased and disproportionately affected people living in more deprived areas [128]. A more recent study looked broadly at access to health constraining exposures (fast food/takeaway outlets, dairies/convenience stores, alcohol stores, gambling venues) and health promoting exposures (green and blue spaces, physical activity facilities, fruit and vegetable stores, supermarkets) similarly showing that health constraining exposures were more prevalent in deprived neighbourhoods and health promoting exposures more prevalent in less deprived neighbourhoods [127]. The final study was a qualitative investigation of gambling among people living in transitional housing setting, providing narrative accounts of gambling in the context of other issues associated with severe poverty [126].

Several articles related to incarcerated populations [82, 129, 130] or the sentencing of people with problem gambling [131]. Abbott and colleagues used the South Oaks Gambling Screen (SOGS) to assess lifetime and during the six months before sentencing probable pathological gambling rates in recently sentenced male [129] and female [130] prisoners. Both lifetime (males 21%, females 33%) and past 6-month (males 16% and females 22%) rates were far higher than evident in population surveys. Across both articles, few participants reported their early offending as gambling related, but this was more common in their recent offending. Few reported seeking any support for their gambling issues or receiving support while in prison. Another study assessed the utility of a novel short screen in a prison setting, comparing it with the SOGS and found a similar prevalence of pathological gambling [82]. Finally, a legal scholar explored the statutory obligations and relevant case law around gambling in sentencing, highlighting the inconsistency where courts factor drug and alcohol issues into sentencing, but gambling issues are often viewed as a matter of choice [131].

Screening and treatment

Forty-one articles were coded to the screening and treatment domain. These were grouped into treatment (n = 17), help-seeking patterns, needs and barriers (n = 8), screening and brief intervention (n = 7), self-help resources, including self-exclusion (n = 4), and workforce considerations (n = 5).

There were 17 articles on treatment across various modalities [132-148]. Three reviews focused on treatment approaches [135, 144, 147], with one systematic review by Rodda and colleagues [135] identifying cognitive restructuring and relapse prevention as the most common treatments, provided through in-person and self-directed methods. A meta-analysis identified personalised normative feedback as an effective brief intervention in the short term across addictions [133], but research on gambling specifically is limited. One review examined the effectiveness of internet interventions, including for internet gambling [137], noting major gaps in intervention research and follow-up. Two reviews examined treatments for affected others across addictions [138, 139], reporting improvements in outcomes (e.g., depression, life satisfaction, coping), relationship functioning, and treatment-seeking by the individual with the addiction.

Six articles examined or described gambling treatment delivered in New Zealand. A 2005 study proposed solution-focused brief therapy for individuals unresponsive to previous treatments, showing promising results [148]. Abbott and colleagues outlined a protocol for a randomised controlled trial (RCT) comparing one session of motivational interviewing with a workbook to 10 sessions of cognitive-behavioural therapy (CBT) [146]. Tse and colleagues [132] randomized 92 clients to either in-person or telephone counselling over three months and found no differences in gambling outcomes. Several articles examined brief interventions provided by the New Zealand gambling helpline. A large RCT involving 462 participants showed significant improvements in gambling symptoms for all conditions, including treatment as usual [145] after 12 months. Follow-up articles of helpline callers not in the trial included one with 150 participants, which reported gender differences in treatment responsiveness [140], and another by Ranta and colleagues [136], which found significant reductions in gambling and depressive symptoms among 131 users over 36 months. Four articles on mobile-based interventions reported a culturally adapted CBT programme [141, 142] and just-in-time adaptive interventions for real-time support [134, 143].

Eight articles examined help-seeking patterns, needs, and barriers to treatment [101, 149-155]. Bijker and colleagues [155] conducted a global meta-analysis, revealing that help-seeking for problem gambling is rare, with only 0.23% of the general population seeking help. However, rates are higher among moderate-risk gamblers (1 in 25) and high-risk gamblers (1 in 5). Five articles examined reasons for seeking help or barriers to help-seeking: two narrative reviews [153, 154], one critical qualitative analysis [151], and two empirical studies [149, 150]. Pulford and colleagues' survey of 229 help seekers and non-help seekers found that both groups primarily cited financial concerns as the main driver for seeking help, with secondary reasons including problem prevention, psychological distress, and relationship issues [149]. A

second study by Pulford and colleagues [150] involving the same help seekers, identified barriers such as the desire to self-manage, pride, shame, and feeling overwhelmed, while non-help seekers most often reported denial of the problem, followed by wanting to resolve it themselves or feeling too ashamed or proud to seek help. Two articles examined treatment needs [101, 152], one highlighting the importance of tailored responses for Asian populations, especially new immigrants [101]. McMillan and colleagues [152] addressed the needs of long-term clients (in therapy for over 12 months), noting the lack of research on the effectiveness of long-term treatments and the need for a broader range of intervention approaches.

Seven articles examined the use and impact of screening within primary care. Six articles developed, implemented or evaluated the Case-finding and Help Assessment Tool (CHAT) and its electronic versions in New Zealand primary-care setting [156-161]. The tool screened for smoking, alcohol misuse, problem gambling, depression, and anxiety among diverse patient populations, reporting high patient acceptability and a manageable burden on clinicians. The introduction of eCHAT further streamlined the screening process, demonstrating strong validity and receiving positive feedback from patients and healthcare providers [156]. In contrast, Sullivan and colleagues [108] reported low rates of support regarding patient perceptions of general practitioners as providers of help for gambling issues, quite a different response from the people who had been screened with the lifestyle and mental health tool. Collectively, these articles suggest that systematic screening for problem gambling within primary healthcare settings is acceptable when integrated into a comprehensive lifestyle and mental health assessment approach.

Four articles examined self-help resources, including two on self-exclusion [162, 163], one review on self-help interventions [164], and one qualitative analysis of strategies reported online by affected others [107]. Bijker and colleagues [163] conducted an international meta-analysis on self-exclusion rates, finding that one in 40 moderate-risk gamblers and one in seven problem gamblers had used self-exclusion, but only one in 10 people who gamble were aware of this option. Abbott's [164] review on self-help highlighted its widespread use but noted the lack of long-term evaluations. Booth and colleagues' qualitative analysis identified family-focused strategies involving financial management, planned consequences and feedback on behaviour. However, the study noted the absence of short- or long-term evaluations on the effectiveness of these self-help methods.

Five articles examined workforce issues, emphasising the need for culturally relevant and responsive services. The earliest study identified the need for tailored treatment to address gambling-related issues within Māori communities [100]. A follow-up study argued that a culturally competent workforce is essential for addressing the unique needs of Māori clients and ensuring that addiction services are accessible and effective within these communities [165]. The responsiveness of services was also examined in response to COVID-19, where addiction treatment services, including gambling services, experienced

significant disruptions caused by the pandemic, such as reduced access to services and the necessity for rapid adaptations in service delivery, including flexible appointments, the transition to online formats, and addressing the inequities that online treatment may create or exacerbate [166]. Chen and colleagues [167] also reported positive experiences of tele-mental health for Asian New Zealanders. Focus group testing identified time and cost savings for clients but the need for formal training and delivery protocols. One study also looked at workforce issues concerning the integration of treatment for video gaming within gambling, addiction, and mental health services [168]. It found that gambling services were already responding to gaming presentations with informal screening. Compared with addiction services, gambling treatment providers were more confident in delivering a range of therapeutic techniques. This study called for workforce development in gaming as well as additional resources and support for their work.

Policy and industry regulation

Twenty-six articles were coded to the policy and industry regulation domain. These were grouped into public policy (n = 7) and industry and regulation (n = 19). Of the seven policy articles, five proposed a public health approach to addressing gambling harm, including three non-systematic reviews [89, 169, 170] and two empirical articles [117, 171]. Ward et al., [171] geographic analysis reported higher gambling proceeds (money lost to gambling) by location and suggested tighter controls on the number of venues in areas with greater deprivation. Rimal et al., [117] interviewed 14 health professionals, academics, and policy advisors to develop a framework for minimising EGM gambling harm. Two articles evaluated public health approaches [120, 172], both focusing on community action-based programmes. These studies evaluated 100 six-monthly progress reports and reported good community engagement, ownership of programme delivery, and achievement of expected outcomes, such as increased community awareness of gambling harm [120, 172].

There were 19 articles on industry and regulation [110, 113, 119, 173-188]. The role of industry influence was examined in seven non-systematic reviews including the ethical, financial, and policy-related challenges associated with receiving funding or sponsorship from industries that promote addictive behaviours, such as gambling, alcohol, and tobacco [173-179]. These articles led by Adams highlighted potential conflicts of interest when gambling research is funded by industry [175-177], as well as conflicts for community beneficiaries more broadly [174, 178]. Four articles examined sponsorship [187] or marketing [183, 185, 188], all of which called for bans or tighter regulation, especially when gambling marketing was viewed by children.

Four articles examined broader social and policy perspectives on gambling in New Zealand [180-182, 186]. Three non-systematic reviews examined gambling-related inequities and questioned whether the community benefits of gambling outweighed its harms [180, 182, 186]. Livingstone's [186] review argued that multidisciplinary approaches are needed to understand the political, social and cultural dimensions of

the continued expansion and commercialisation of legal gambling. The only empirical article in this group examined public perceptions of greyhound racing [181]. Among 1,327 participants, concerns were reported about animal welfare and industry transparency, and the authors advocated phasing out greyhound racing.

Regulation was examined in two non-systematic reviews [113, 184], an empirical evaluation of sinking-lid policies [119], and an article addressing factors that enable and promote extended gambling periods [110]. Erwin and colleagues [119] reported that sinking-lid policies were associated with reduced gambling expenditure. Drummond and colleagues [113] examined whether loot boxes could be regulated as gambling products, particularly when virtual items had potential monetary value.

Funding Sources for New Zealand Research

Among the 167 articles that reported funding information, gambling levy funding was the most common category, supporting 62 articles (37.1%) (Table 2). This funding was administered by the Ministry of Health (or equivalent) from the hypothecated problem-gambling levy paid by gambling operators. General research funding supported 45 articles (26.9%) and included funding from Health Research Council, Marsden Fund, health and medical organisations, and universities. Fifty articles (29.9%) reported receiving no funding, while 10 (6.0%) received overseas funding. Nine articles did not include a funding statement. No articles reported receiving funding directly from the gambling industry. Although, 37.1% received levy-derived funding, this was classified separately from direct industry funding because allocation decisions were made by a government department rather than gambling operators.

Table 2. Distribution of funding sources across research methodologies (%).*

Methodology	Gambling levy funding	General research funding	No funding	Overseas	Total
Clinical trial	3 (1.8)	1 (0.6)	0 (0.0)	1 (0.6)	5 (3.0)
Cohort	10 (6.0)	3 (1.8)	1 (0.6)	1 (0.6)	15 (9.0)
Cross-sectional	28 (16.8)	20 (12.0)	14 (8.4)	1 (0.6)	63 (37.7)
Experimental/quasi-experimental	0 (0.0)	4 (2.4)	3 (1.8)	0 (0.0)	7 (4.2)
Mixed methods	4 (2.4)	5 (3.0)	2 (1.2)	0 (0.0)	11 (6.6)
Non-systematic review	6 (3.6)	3 (1.8)	20 (12.0)	1 (0.6)	30 (18.0)
Qualitative	11 (6.6)	6 (3.6)	6 (3.6)	0 (0.0)	23 (13.8)
Systematic review	0 (0.0)	3 (1.8)	4 (2.4)	6 (3.6)	13 (7.8)
Total	62 (37.1)	45 (26.9)	50 (29.9)	10 (6.0)	167 (100.0)

- Percentages are based on the 167 articles that included a funding statement. Nine articles did not report a funding statement.

Discussion

This scoping review mapped the focus, methodologies and reported funding sources of peer-reviewed gambling research conducted in New Zealand between 2003 and 2024. This analysis is timely given the continued high expenditure on gambling and the establishment of a regulated online casino licensing regime in 2026. The review identified 176 articles involving research conducted at least partly in New Zealand and authored or co-authored by at least one New Zealand-based researcher. Annual publication output varied but showed no sustained increase across the review period, contrasting with the growth reported in reviews of gambling research from Australia and Canada [189] and other jurisdictions [6, 8]. Of the 210 authors identified, 59% contributed to only one article. Of the eight authors who contributed to at least 10 publications, only four currently held academic or research positions in New Zealand. Although these findings do not directly measure research capacity, they suggest a relatively small group of sustained contributors and limited growth in the research base. Maintaining and developing expertise will be important as gambling technologies, products and regulatory arrangements continue to evolve.

Focus of Peer-Reviewed Gambling Research

New Zealand gambling research covered a range of areas, although some were studied much more often than others. The largest domains were individual factors and screening and treatment, each comprising 41 articles, followed by social and cultural factors (n = 33), epidemiology, harm and measurement (n = 32), community and context (n = 27), and policy and industry regulation (n = 26). Within these domains, considerable focus was given to risk and protective factors, treatment, gambling-related harm, epidemiology, and gambling among Māori, Pacific and Asian populations. This breadth indicates recognition that gambling harm arises through interacting individual, social, cultural, community and regulatory influences rather than individual behaviour alone.

There were also major gaps in the peer-reviewed literature. Only four articles focused specifically on affected others, family or social connectedness, despite evidence that gambling harm extends across families, whānau and communities [190]. Five examined the measurement of gambling risk or harm, seven addressed public policy, and only four examined gambling marketing or sponsorship. The marketing articles primarily documented practices or advocated tighter regulation rather than evaluating the effects of regulatory responses. Similarly, only one empirical article evaluated sinking-lid policies. Although 17 articles were about treatment, only a few examined or described specific practices in New Zealand. Research on emerging gambling technologies was largely confined to a small group of articles on loot boxes, gaming and gambling convergence and online gambling during COVID-19 restrictions. No articles examined online casino gambling. Although a regulated market had not been established during the review

period, international experience and access to offshore online casinos provided opportunities for research before regulation. The introduction of a regulated market means an urgent need to build a local evidence base on this topic.

Twenty-nine articles specifically examined gambling and gambling harm among Māori, Pacific or Asian peoples and communities. Most used qualitative methods or surveys to examine gambling experiences, harms and service needs. There were fewer studies evaluating culturally grounded prevention, treatment or policy responses. This is an important gap given the continuing inequities in gambling harm. For Māori, evaluation of these responses should also take account of Crown obligations under Te Tiriti o Waitangi[182, 191].

Throughout the review period, the Gambling Act 2003 required the national problem-gambling strategy to include independent scientific research and evaluation. New Zealand research was consistent with several priorities subsequently identified internationally, particularly research on gambling harm, treatment, help-seeking and populations experiencing disproportionate harm. However, international priorities extend into areas that were less present in the New Zealand literature. The Lancet Public Health Commission called for research to support effective regulation, reduced exposure to gambling and its promotion, universal self-exclusion, enforceable limits and regulation according to product risk [192]. A priority-setting exercise involving 307 researchers from 35 countries identified emerging technologies, advertising, treatment seeking, attrition and relapse, as well as research involving populations at greater risk [193]. UK priorities included longitudinal research, improved measurement, identification of vulnerability and resilience, neurobiology of gambling, treatment trials and evidence-based clinical guidelines [9]. Against these priorities, gaps in the New Zealand literature include research on affected others, evaluation of regulatory and public health interventions, advertising controls, neurobiology, emerging digital products, treatment outcome studies and evaluation of culturally grounded responses. Some of these priorities were published after the review period and are included to identify areas for future research, not as criteria for assessing research conducted between 2003 and 2024.

Methodologies Used

The methodological profile was well suited to describing gambling behaviour, identifying associations and understanding social, cultural and lived experiences. It was less suited to determining how gambling harm develops over time or whether treatment, prevention and regulatory responses are effective. This imbalance is particularly important because recent international priorities emphasise longitudinal research, improved measurement, intervention trials and evaluations of policy and consumer-protection measures [9, 192, 193]. New Zealand research therefore addresses some priorities well, particularly the need for contextual and culturally grounded knowledge, but provides a more limited basis for causal inference and evaluating change. Greater methodological diversity is needed rather than a simple hierarchy in which qualitative or

cross-sectional research is considered inferior. Qualitative and culturally grounded methodologies are important, but should be complemented by prospective cohort studies, clinical and pragmatic trials, natural experiments, implementation studies and policy evaluations. Greater use of linked health, social service and administrative data could also strengthen understanding of gambling harm and service use over time. This combination would provide a stronger basis for determining what works, for whom and under what conditions.

Funding of Gambling Research

New Zealand has produced a substantial body of peer-reviewed gambling research, but relatively little research has tested what works to reduce gambling harm. Among articles reporting funding information, 37% received gambling levy funding and none reported direct gambling-industry funding, although 30% received no funding. The hypothecated levy requires gambling operators to contribute to research while protecting researchers from direct commercial funding. However, Ministry administration has largely operated through short-term contracts addressing predetermined topics (see for example: Request for Proposals: Preventing and Minimising Gambling Harm Research Programme 2025/26 – 2027/28). Levy funding supported most cohort studies and clinical trials, demonstrating its importance for resource-intensive research, but only 15 cohort studies, five clinical trials and seven experimental or quasi-experimental studies were published across two decades. This commissioning model has produced epidemiological, cultural and longitudinal research but has not generated a body of peer reviewed publications evaluating treatment outcomes, public-health initiatives, regulation, venue practices or emerging gambling products. Only a few articles involved venue-based or venue-connected research, with few evaluations of harm reduction approaches like self-exclusion, limit setting or venue staff training. Furthermore, the funding model has not supported continued growth in New Zealand research capacity. Publication output showed no sustained increase comparable with that reported elsewhere [189], most authors contributed only once, and only four of the eight most prolific authors currently hold New Zealand research positions.

These findings raise the question of whether greater separation between research funding and government commissioning would support a broader and more sustained programme of gambling research. Bowden-Jones and colleagues proposed that levy-derived funding be administered by an independent scientific body able to support investigator-led research alongside calls addressing policy, prevention and treatment priorities [9]. A comparable arrangement in New Zealand could provide longer funding periods (comparable with national funding bodies), support experimental and longitudinal programmes, protect researchers' control over publication, and develop local research capability. The need to develop local capability is particularly relevant given that most New Zealand national research funds allow a maximum of 20% of funding to go to offshore providers, whereas the last two levy-based research rounds have been

open to overseas researchers with no requirement for local capacity building. All New Zealand universities also currently apply overheads of around 115% to research salary costs, which can make offshore providers more competitive and able to offer better value for the available funding.

Funding arrangements alone, however, would not address barriers to conducting some types of research. Given the very limited venue-based research identified in this review, licence conditions could require gambling operators, particularly online casinos, to provide independently governed access to venues, participants and de-identified player data. This would retain freedom from direct industry funding while enabling research on consumer protections, operator practices and populations at risk.

Limitations

This is the first review to map the focus, methodologies, and funding of peer-reviewed gambling research in New Zealand and is timely given the changing gambling environment and introduction of regulated online casinos. However, several limitations should be considered. First, the broad scope of the review produced a heterogeneous body of literature and limited detailed examination of individual research areas. Consistent with the purpose of a scoping review, methodological quality and risk of bias were not assessed. The findings therefore describe the extent and characteristics of the literature rather than the strength of evidence supporting particular policies or interventions. Publications were also counted separately, although several reported analyses were from the same projects or longitudinal datasets. The results consequently represent published outputs rather than the number of independent studies conducted.

Second, the exclusion of grey literature means that the review does not represent all gambling research undertaken in New Zealand. Ministry-funded reports provide important evidence for policy and service development, but requires a specific search strategy. A complementary review of grey literature and commissioned research would provide a more complete account of gambling research and funding in New Zealand. The funding analysis was also limited to information reported in the included articles, nine of which did not contain a funding statement. Future research should examine funding more comprehensively, including the timing and frequency of levy-related funding, the extent to which independent scientific research has been funded in accordance with the Gambling Act 2003, and funding amounts, duration and contractual conditions. This could also include a review of all research commissioned under the national strategy.

Third, requiring at least one author to be affiliated with a New Zealand institution, company, or organisation provided a pragmatic boundary but excluded some research involving New Zealand participants or data. These studies were not always focused on New Zealand context. For example, one article used New Zealand data in secondary analyses addressing broader theoretical questions [194] whereas another included New Zealand participants without reporting country-specific analyses [195] and one study excluded New Zealand-specific cultural items from its analysis [196]. Future reviews may benefit from

broader eligibility criteria, although findings based on New Zealand data need to be interpreted in relation to local policy, service, and cultural contexts. Finally, allocating articles to research domains and methodology required judgement and may have simplified studies spanning several topics or methodological components. Publication counts and current author affiliations are also imperfect measures of research capacity, while annual publication patterns were examined descriptively rather than through formal trend analysis.

Conclusion

New Zealand has produced peer-reviewed gambling research across a broad range of topics, providing an important foundation for understanding gambling and related harm. However, the evidence is more developed in some areas than others, with fewer studies evaluating treatment outcomes, prevention initiatives, regulation, and emerging gambling products. The levy has supported important research and no included article reported industry funding. However longer-term funding and greater continuity may help strengthen research capacity and support more sustained programmes of work. Addressing these gaps will become increasingly important as New Zealand's gambling environment changes. Although this review is situated within the New Zealand context, the challenges and evidence gaps, identified are likely to resonate across many jurisdictions. With countries worldwide confronting the expansion of gambling opportunities and evolving approaches to online gambling regulation, the lessons drawn from the New Zealand experience may help inform international efforts to reduce gambling-related harms and strengthen evidence-based policy and practice.

Declarations

Ethics approval and consent to participate: Not Applicable

Consent for publication: Not Applicable

Availability of data and materials: Excel file containing included articles is appended to this article

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