

The Impacts of Gambling on Māori

scoping of themes for Te Rūnanga o Kirikiriroa



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Tumana Research, 2014

Acknowledgements

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 - Programme advertising a Maori horse racing meeting in Karioi, Waikato. Ref: 1/1-000855-F. Alexander Turnbull Library, Wellington, New Zealand.
 - New Zealand Women's Christian Temperance Union :Tainted money! 'Tain't yours! Tain't mine! NZ Women's Christian Temperance Union (Inc). Wright & Carman Ltd, 177 Vivian St, Wellington [Flyer. 1900-1950?] Ref: Eph-A-LOTTERY-1900s-01. Alexander Turnbull Library, Wellington, New Zealand.
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The research paradigm

Te Rūnanga o Kirikiriroa (the Rūnanga) has led seven research projects, from 2002 to the current report, which have collectively aimed to understand, and address, the harm that gambling may cause for Māori whānau and communities. This work has been funded by two different agencies, initially the Problem Gambling Committee then the Ministry of Health. However, the rationale for investment in strengthening Māori capacity, to determine their own solutions for the health and social issues that may arise from engagement in gambling activities, is underpinned by a raft of high-level, multi-sectorial, objectives.

The research outcomes for five of these projects have been described in detail elsewhere (Elliott & Wātene, 2003; Pou Tuia Rangahau, 2008; Wātene & Elliott-Hohepa, 2004; Wātene & Elliott-Hohepa, 2006; Wātene, Thompson, Barnett, Balzer & Turinui, 2007). This chapter unravels the research paradigm, that has been applied throughout the years, and aims to provide a formative evaluation of the underlying methods and directions, within the wider strategic climate in which the contracts occurred. We have particularly considered the common themes that emerged from 60 focus group discussions about the perceived risks and benefits of gambling, and how this activity impacts on Māori whānau and communities. This information provides a foundation for discussing the value of this work and the future directions that are needed to maximise its' potential contribution to the evidence-base which informs knowledge about strategies for the prevention and minimisation of gambling harm.

Strategic climate

As the founding document of Aotearoa, **Te Tiriti o Waitangi**, was signed by more than 500 representatives of indigenous Māori whānau and hapū to ensure and cement **tino rangatiratanga**. They sought to retain paramount authority, and autonomy, over their lands, villages, property and treasures – including the minds, values, ways of life, social systems and worldviews of Māori people. In return for the promise of protection, the Crown was granted permission to set up a government to regulate the conduct of incoming settlers (Orange, 1987). Within this implicit partnership, the Crown has had a long-standing obligation to not only protect the health and wellbeing of Māori, along with other New

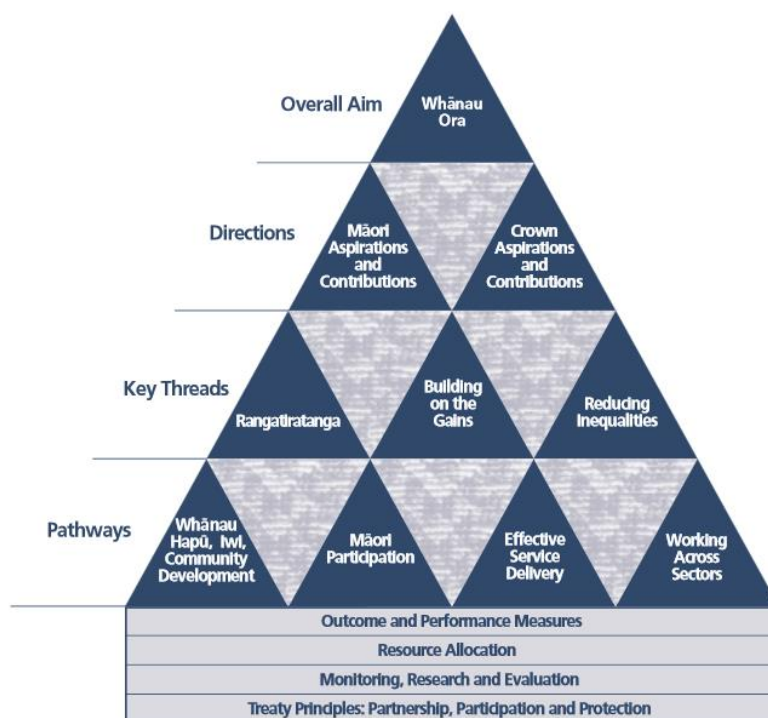
Zealanders, but also ensure their laws and policies result in positive outcomes for Māori (Durie, 2001). In relation to the introduction of gambling, it is evident Māori were excluded from decisions and the wider social, economic and cultural impacts of normalising gambling, within Māori whānau and communities, were never considered (Dyall, 2004). As Ani Mikaere (2011) so aptly suggests:

... the continuity of Māori independence and sovereignty, that lay at the heart of Te Tiriti o Waitangi, remains confined to the realms of academic inconsequence (pg 143).

Throughout the decades, Māori have, nevertheless, lobbied for the **Treaty of Waitangi** to be recognised, as an integral framework for government decision-making, within and across all sectors (Durie, 1994, 2001). Ever so slowly, some of our laws and policies have changed. By the mid-90s, acknowledgement of the need to consider Māori values was reflected in legislation which governed decision-making about the management of natural resources, Māori land, parliamentary representation, education and social services. Legislated change was less evident in the health sector. However, growing awareness of the need for new models of service delivery to address widening inequities in the health status of Māori, combined with an international shift towards public health goals identified in the Ottawa Charter on Health Promotion, had been driving sweeping reforms (Ajwani, Blakely, Robson et al, 2003; Delvin, 2001; World Health Organisation, 1986).

The Ottawa Charter on Health Promotion advocates the re-orientation of health services towards ecological, and whole of society, models of delivery (World Health Organisation, 1986). It highlights the benefits of a collaborative approach, in which government agencies, organisations, health professionals, community groups and individuals work together to meet locally identified priorities and needs. In a radical departure from previous regimes, purse-holders and policy-makers are encouraged to support the development and implementation of service delivery models which strengthened and empowered local communities to identify their own needs, develop their own skillsets, generate their own evidence and find their own solutions to the health issues and challenges that impacted on their community.

The new millennium brought a platform of strategies which generally acknowledged the special relationship Māori had with the Crown, need for greater Māori participation at all levels of society and importance of culturally appropriate health and social services (Creech, 1999; Health Funding Authority, 1999; Mental Health Commission, 1998; Ministry of Health 1997, 1998 & 2001; Te Puni Kōkiri, 1999). Medium- and long-term goals, for improving Māori health, included ‘by Māori for Māori’ models of service delivery, culturally responsive policies and measures of effectiveness, accelerated workforce development, increased resource allocations and recognition of, intrinsically wholistic, Māori models of health and wellbeing. The New Zealand Health Strategy, published in 2000, along with the NZ Disability Strategy and Primary Health Care Strategy, both published in 2001, enforced a funding regime in which District Health Boards, and associated agencies, would forge partnerships with tribal authorities, empower community development models of service delivery and enable the establishment of Māori provider organisations. This was followed by He Korowai Oranga, the Māori Health Strategy, in 2002 along with a 3 year action plan to assist its’ implementation (Ministry of Health, 2002; Minister of Health & Associate Minister of Health, 2002). An action plan for implementation of He Korowai Oranga during 2006-2011 has also been produced (Minister of Health & Associate Minister of Health, 2006).



He Korowai Oranga, the Māori Health Strategy
(source: Ministry of Health, 2002)

He Korowai Oranga, and its' action plans, encapsulate many of the Rūnanga's aspirations for health and social service delivery and, therefore, help to describe the underlying paradigm for engagement in gambling research. In particular, He Korowai Oranga enables the issue of gambling to be understood within the wider context of **whānau ora**. This construct is the overall aim of the Māori Health Strategy, and has since been the focus of dedicated policy and funding streams (Taskforce on Whānau Centred Initiatives, 2010). From a gambling perspective, whānau ora is about:

- recognising the central role of whānau, as a support system and enabler of resilience and wellbeing for Māori, both individually and collectively
- locating methods and initiatives within the communities in which whānau are known to live
- taking a broader, ecological approach, that moves beyond individual behaviours, acknowledges the inter-dependence of people within and across the various levels of society, and seeks to understand the historical, cultural, political social and economic context in which gambling behaviour occurs
- enabling Māori to achieve their maximum health and wellbeing

He Korowai Oranga highlights the important aspirations of rangatiratanga, self-determination and full participation in society within which, it is implied, Māori organisations, communities and whānau, hapū, iwi will be empowered to define their own realities, identify their own solutions and find their own pathways for positive development. Such aspirations encompass the use of models and methodologies that are culturally appropriate and responsive to Māori needs. Furthermore, the Rūnanga's involvement in gambling research is underpinned by the fundamental goals of minimising the harm that gambling can cause for Māori whānau and communities, workforce development and contributing to the evidence-base that informs effective service delivery.

Preventing & minimising gambling harm

The Problem Gambling Levy (PGL) was introduced in 1997 as a way of ensuring the gambling industry meets the costs, that Society incurs, for problem gambling services and resources including monitoring, evaluation and research (New Zealand Hansard, 1996). Until 2004, the PGL fund was administered by the Problem Gambling Committee which comprised equal numbers of gaming industry and service provider representatives (Ministry of Health, 2005). The Rūnanga was one of the first Māori provider organisations in Aotearoa to receive PGL

funds for gambling research (Elliott & Wātene, 2003; O'Connor, 2004; Wātene & Elliott-Hohepa, 2004). Alongside Hāpai te Hauora Tapui and the Problem Gambling Foundation of New Zealand, the Rūnanga was contracted to develop and deliver two phases of a **community action project** that:

- stimulated, initiated and co-ordinated activities which improved local understanding about the harmful impact of gambling
- built local resilience to gambling-related harms
- enabled the local community to take ownership of projects that lessened the impact of gambling-related harms

By all accounts, this was an exciting time of communication, consciousness raising and community mobilisation. A vibrant local network was established, comprising representatives from the Council, government agencies, gambling industry, health and social services, national stakeholders, media, Māori institutions, whānau and other ethnic groups in Hamilton and outlying regions. Rūnanga staff still talk about their involvement in meetings, discussion forums and vigorous public debates about the benefits and risks of gambling activities within their community. The research team wrote submissions, newsletters and updates and actively lobbied for change. The research outputs included Kaupapa Māori methodologies, evaluation of a radio promotion campaign and development of an education package, called the Gambling Resource Information Programme (GRIP).

With the Gambling Act 2003, responsibility for the development, and implementation, of an integrated strategy for the prevention and minimisation of gambling harm passed to the Ministry of Health. By 2005, the Ministry had produced their first strategic plan which proposed a public health approach, that aligned with directions outlined in the Ottawa Charter, New Zealand Health Strategy, New Zealand Disability Strategy, Primary Health Care Strategy and He Korowai Oranga (Ministry of Health, 2005). The over-arching goal of the strategic plan for preventing and minimising gambling harm during 2004-2010 was to assist:

Government, communities and families/whānau to work together to prevent the harm caused by problem gambling and to reduce health inequalities associated with harmful gambling

Beneath this main goal, the Ministry identified 10 underlying principles that highlighted the need for a long-term, whole-of-government, evidence-based approach and funding of programmes and services that are culturally relevant, reduce health inequalities and cover the spectrum of possible responses to gambling harm. Within this continuum, it is acknowledged most interventions will be delivered by primary, or community based, service providers (Kohl & Shaffer, 1999). The six year strategic plan aimed to:

- promote healthy public policies in relation to gambling harm
- encourage supportive environments to minimise gambling harm
- enhance the capacity of communities to define and address gambling harm
- maintain and develop accessible, responsive and effective interventions
- assist the development of people's life skills and resilience in relation to preventing or minimizing gambling harm
- enhance workforce capacity
- develop a programme of research and evaluation

With these objectives in mind, the Ministry funded three another three phases of the Community Action Project. This enabled the Rūnanga to pilot the GRIP method and evaluate some of the resources this programme produced to minimise gambling harm in local communities (Pou Tuia Rangahau, 2008; Wātene & Elliott-Hohepa, 2006). In addition, the Ministry invested in two projects that aimed to gather information about the impacts of gambling on Māori. In particular, the Rūnanga was contracted to deliver Kaupapa Māori research methodologies which:

- enable the impacts of gambling to be understood from a holistic Māori worldview (Wātene, Thompson et al, 2007)
- investigate the impacts of gambling and problem gambling on Māori families and communities in New Zealand (Ministry of Health & Te Rūnanga o Kirikiriroa Charitable Trust, 2010)

During this period, the Rūnanga established a national collaboration of Māori Provider Organisations, delivered training programmes on the use of Kaupapa Māori research methodologies and facilitated 60 focus group discussions, with Māori whānau and community groups, located throughout Aotearoa. The information collected during these discussions provide valuable insights on the attitudes and worldviews that underpin Māori participation in gambling activities and the strategies that whānau are using to minimise

harm. This material has been grouped into various themes that are considered below and have also informed the next chapters of this report. In addition, the Rūnanga has collated the stories of 16 whānau who used the photovoice method to talk about their experience of gambling and its impacts on their family and community (Pou Tuia Rangahau, 2013).

However, the rationale for investment in these two latter projects is more closely aligned with directions identified in the Ministry of Health's strategic plan for the prevention and minimisation of gambling harm during 2010-2016 (Ministry of Health, 2010). The overall goal, of this six year plan, reiterates a vision of the Government, communities and whānau working together to prevent gambling harm, and reduce inequalities, but the gambling industry is also seen to have some responsibility. Similarly, the strategic framework continues to emphasise a public health focus that is broadly underpinned by priorities identified in New Zealand's platform of health strategies, including He Korowai Oranga and associated action plans.

The integrated strategy for the prevention and minimisation of gambling harm, during 2010-2016, plan provides a stepwise framework for investment in gambling services (Ministry of Health, 2010). It comprises 10 principles, 11 objectives and 65 outcome indicators that are aligned with short-, mid- and long-term priorities. The principles and objectives encapsulate high-level acknowledgements of the need to purchase services which ensure:

- Objective 1:** There is a reduction in the health inequalities that are associated with problem gambling
- Objective 2:** Māori families are supported to achieve their maximum health and wellbeing through minimising the negative impacts of gambling
- Objective 3:** People participate in decision-making about local activities that prevent and minimise gambling harm in their communities
- Objective 4:** National, regional and local level policies prevent and minimise gambling harm
- Objective 5:** Government, the gambling industry, communities, family/whānau and individuals understand and acknowledge gambling harms
- Objective 6:** A skilled workforce is developed to deliver effective services

- Objective 7:** People have the life skills and resilience to make choices that prevent and minimise gambling harm
- Objective 8:** Gambling environments are designed to prevent and minimise gambling harm
- Objective 9:** Problem gambling services effectively raise awareness about the range of harms that directly, and indirectly, affect individuals, families/whānau and communities
- Objective 10:** Accessible, responsive and effective interventions are developed and maintained
- Objective 11:** A programme of research and evaluation establishes an evidence base, which informs, and underpins problem gambling services and activities

Each objective is aligned with indicators, and priorities, that form the drivers, for purchasing services over this 6 year period. The indicators and priorities help to clarify the intentions, and expected outcomes, of investment in strategies for prevention and minimisation of the harm that gambling may cause for Māori whānau and communities. In particular, the short-, medium- and long-term priorities suggest the Ministry is specifically interested in services that will:

- improve knowledge about the impacts and inequalities that Māori are experiencing, including contributing factors (Objectives 1 & 2)
- ensure Māori are represented in vehicles for decision-making, monitoring and surveillance (Objectives 2 & 8)
- gather, and improve, the evidence-base that informs the delivery of culturally appropriate services and interventions for Māori, including best practice models (Objective 2, 9 & 10)
- strengthen community capacity for screening, networking, development of policies, dissemination of information and active involvement in strategies for the prevention and minimisation of gambling harm (Objectives 3, 7 & 9)
- assist the development, and implementation, of integrated policy frameworks within, and across, national, regional and local sectors (Objective 4)
- identify, monitor and disseminate robust and culturally relevant information about the risks, harms and impacts of gambling on whānau and communities (Objectives 5 & 7)
- identify protective and resiliency factors for problem gambling (Objective 7)

- support communities, providers, government agencies and the gambling industry, to incorporate culturally relevant knowledge, about harms and protective factors, in their services and activities, including social marketing campaigns (Objectives 5, 7 & 9)
- develop competency frameworks for training, qualification and accreditation of Māori service providers (Objective 6)
- increase community exposure to culturally relevant social marketing campaigns (Objectives 7 & 9)
- improve systems and processes for the delivery and evaluation of problem gambling intervention services (Objectives 7, 9, 10 & 11)
- improve systems and protocols for collecting, and reporting, operator data (Objective 8)
- ensure research outputs can be accessed, by the public, and contribute to the Ministry's strategic plan for the prevention and minimisation of gambling harm (Objective 11).

Given these directions, it is evident the Rūnanga's programme of gambling research has produced outputs which contribute to a number of the Ministry's priorities for preventing and minimising harm amongst Māori whānau and communities. Previous reports have, for example, piloted a tool for the dissemination of information about gambling harm and demonstrated how community ownership of strategies for the minimisation of harm can be strengthened (Elliott & Wātene, 2003; Pou Tuia Rangahau, 2008; Wātene & Elliott-Hohepa, 2004; Wātene & Elliott-Hohepa, 2006). The Rūnanga has also implemented Kaupapa Māori focus group methodologies to investigate the impacts of gambling from a holistic Māori worldview (Ministry of Health & Te Rūnanga o Kirikiriroa Charitable Trust, 2010; Pou Tuia Rangahau, 2013; Wātene, Thompson, Barnett et al, 2007). The remainder of this chapter considers the discourse themes that emerged from focus group discussions, with Māori whānau and communities, and the robustness of this dataset as an evidence-base for the development, and delivery of, culturally appropriate gambling interventions and services.

Discourse themes

Using Kaupapa Māori and qualitative research methodologies, the Rūnanga has facilitated 60 focus group discussions during which Māori whānau and communities have talked about the impacts of gambling and strategies for minimising harm. Approximately 340 male and

female participants, from a range of backgrounds and age-groups, have taken part in the discussions.

year	number of discussions	location
2003	4	Hamilton, Tauwhare, Ngaruawahia
2004	2	Maniapoto, Hauraki
2007	2	Te Kuiti, Ngaruawahia
2008	31	Whāngarei, Waikato, Te Tairāwhiti, Rotorua, Taranaki, Wellington, Dunedin
2011-2012	21	Waikato, Te Tairāwhiti, Rotorua, Taranaki, Wellington, Dunedin
total	60	

Date, location and number of focus group discussions facilitated by the Rūnanga, 2002-2012

In general, the focus groups aimed to explore the following topics:

- Māori experience of gambling and the reasons for participation
- perceived benefits and harms
- the impacts of gambling on Māori whānau and communities
- how to reduce risks and minimise harm
- protective factors and the barriers or enablers of resilience

Each discussion was recorded, and transcribed, then sent to participants for feedback and verification. Photovoice methods assisted 9 of the discussions held during 2011-2012.

Thematic analysis of the transcripts, occurred over time, as each project was completed but generally involved independent peer-review by two or more members of the research team.

For the purposes of this analysis, themes which had been previously published in Rūnanga reports were merged with the outcomes of discussions, held in 2011-2012, and the entire dataset was iteratively reviewed for insights about the impacts of gambling on Māori whānau and communities. This produced an overall list of 13 possible themes, six of which were merged within other themes due to overlap and semantic synergies. Using this method, a core set of seven discrete discourse themes has helped to shed light on the impacts of gambling for Māori whānau and communities, ie:

- negative stereotypes & information needs
- normalisation, socialisation & conditioning
- opportunism, vested interests & exploitation
- desperation, adaptation & survival
- reconstruction of tikanga Māori
- bias, barriers and inequality

■ whānau values, skillsets and support systems

From a Māori worldview, it is evident the focus group participants found it difficult to untangle the reasons why Māori gamble from the impacts of gambling for Māori whānau and communities. Reasons and impacts were often talked about simultaneously, as if inextricable. The content, and meaning, of these core discourse themes, and insights gained about the impacts of gambling on Māori, are described below.

Discourse theme 1: Negative stereotypes & information needs

Participants often talked about their personal observations which tended to compare the gambling habits of Māori men and women as well as Pākehā and Māori, they said ... Māori are more likely to gamble than Pākehā ... Pākehā go to the Casino Māori don't play the poker tables because they can't afford it ... Māori men are more likely to go to the races ... Māori women are more likely to play pokies ... Māori who gamble are pōhara ... Māori are more likely to be playing their last 20 bucks... Māori are more likely to put their families and children at risk Māori are more likely to leave their kids in the carpark ... Māori in small rural towns play more pokies ... its no sweat for them to spend 8 hours on the pokie machines .. the venue offers free drinks, membership cards, loyalty discounts ... Māori buy into that, they think it's a good deal ... it's a status thing, Māori want the VIP card.

Perceptions about the types of people who gamble were also evident, for example ... people who gamble are mostly unemployed or bored ... they have nothing going on in their lives people who gamble are ignorant, gullible ... they honestly think they can win a home, cars, money ... they don't know the facts ... they believe the ads they honestly think they will get rich ... they think they have a chance .. they honestly think they are helping the community and our kids will benefit somehow. Such findings suggest negative stereotypes, derogatory attitudes and high information needs, particularly information which corrects inaccurate beliefs, may be an impact of gambling on Māori whānau and communities.

Discourse theme 2: Normalisation, socialisation & conditioning

Most participants talked about their towns and communities being flooded with opportunities for gambling it's overkill ... too much ... too accessible ... too many temptations ... we have a casino, every club has pokie machines and a TAB ... every city has horse or dog racing ... then there's dog fighting up the back ... we live around the corner

from housie and it's on 4 nights a week 50c raffles, \$1 scratchies at the supermarket, Lotto and sports betting ... its cheap, easy, affordable and everywhere ... you can even play online with your credit card which means you don't even have to leave the house.

It was felt the accessibility, and availability, of gambling facilities combined with high profile advertising campaigns was normalising gambling within Māori whānau and communities ... society makes it so exciting, bright lights, bling bling, glamorous everything, this makes it attractive, we want our lives to be like that ... TVs and LCDs at the bar showing how big the jackpot is getting ... all the sounds going come and play me ... we are sucked in by the advertising, posters, t-shirts, VIP cards, computer pop-ups, people we see on TV ... we have been socialised to have a good time ... society makes it seem fun ... self-gratifying behaviour is the hallmark of a good time.

Many participants thought Māori had been conditioned to gamble ... it's passed down from one generation to the next ... inter-generational learning ... it used to be cards, now is pokies ... we learn it from our whānau, friends, society ... we see our mates and whānau doing it, we always know someone in there ... there's peer pressure to conform ... it's a social event, associated with good times and drinking ... it's how we have fun these days ... we don't know any better, society tells us it's a good thing to do ... our parents did it ... everyone else is doing it so why shouldn't we?

Others talked about being socialised to think of gambling as helping the community ... we are led to believe the profits come back to the community ... it makes us feel good about what we are doing ... it's for the kids ... it's fundraising the community will benefit ... its good for businesses too ... brings money into our communities ... people eat, drink, socialise ... that means jobs and people getting off the dole ... it's good for the pubs and clubs ... it's just another way to make money it's the business model ... it's about thriving communities ... it's the way to get ahead.

Discourse theme 3: Opportunism, vested interests & exploitation

Some participants thought the Government and Councils had vested interests ... they let it happen ... they did this to our communities if they don't want us to gamble they should take away the machines ... it's a form of social control ... the marketing strategies and

flashing lights are designed to suck us in, make us believe the lies, give us false hope ... it's a deliberate manipulation of our psyche ... they know what our lives are like ... they introduced this risk ... they knew it would be dangerous ... it's a lie to suggest community groups won't survive without money from pokie machines ... we used to and we can do it again ... how many Māori communities benefit from it anyway.

The gambling industry was also seen to be unscrupulously opportunistic ... they are exploiting us and we don't even know it ... Casinos make out like they care about us but they just want our money ... they pay big money to lure us in with their marketing strategies ... anything to make it enticing, exciting and easy to spend more money ... the machines take plastic money and credit cards ... they use intermittent rewards ... they give us a \$50 win and take \$1000 ... all we remember is we had a win ... we only hear about the wins ... no-one talks about the losses ... \$200 is a big win for us ... they have those action cards now, so every time we play we earn points that turn into more chances to win ... the technology comes with flashing lights, bonus prizes, text message reminders ... we just keep playing and playing ... VIP members get free flights, free food, free drinks, loyalty cards and discounts ... Māori buy into that, we think it's a good deal ... we can smoke and drink when we play the machines at Casinos ... most of us don't realise the staff get commissions based on how much they can convince us to spend ... they don't get paid unless we gamble.

Several participants were appalled at the use of Māori taonga in gambling venues ... Casinos are exploiting Māori cultural traditions to attract Māori whānau and communities they use our pou, carvings and kupu Māori to make us think gambling is OK ... why are the Councils, Iwi leaders, politicians letting them do that? ... it degrades our mana, values and identity.

Discourse theme 4: Desperation, adaptation & survival

For some participants, gambling was grounded in a Māori philosophical worldview ... it was seen to be a natural adaptation and one of the survival strategies that Māori are using in the modern world ... our tūpuna took risks, they gambled with their lives when they stepped on that waka and headed into uncharted domains ... it was necessary for survival ... they did what they had to do ... sometimes the risk pays off ... sometimes it's worth it ... survival used to be about hunting, gathering, growing our own food but now it's about supermarkets,

mortgages and debt ... life today is about money, wealth and materialism ... you have to have an 'I'm a winner' attitude otherwise you'll just be like all the rest ... society encourages us to take risks ... we are gambling when we buy land or houses ... we don't know if it will pay off but something good might come from it ... nothing ventured, nothing gained ... it's all about risk ... if you only had \$20 and it's not enough to feed the whānau wouldn't you try to double it? ... Māori men have been taught to play hard, work hard and drink hard ... gambling is part of that ... it's another way to get ahead ... it's an opportunity ... it's instinctive ... we do what we can to improve our lot ... that's called survival.

In accordance with this view, participants talked about gambling being a coping mechanism when times were hard ... we are desperate to improve our lot ... we gamble in times of hardship, when there is nothing else to turn to ... so many of us live in poverty ... finding jobs is really hard ... not so long ago everyone was employed but the meatworks, freezing works, places where we used to work have all closed down ... let's face it, you have to be in to win ... the mere thought of getting more money is enough to make us want to try ... what have we got to lose ... real life is just more of the same ... bills, poverty, struggling to survive ... for a minute we can hope our lives will get better ... if I just put this coin in the slot ... everything could change ... like a magic wand ... so we chase that rainbow ... it gives us hope in times of despair ... what other opportunities do we have.

Participants talked about gambling to escape from their worries and woes ... we have such gloomy lives ... joblessness, poverty, relationships, stress ... it's hard to break the cycle ... we will risk anything to improve our lives ... and pokies don't answer back ... gambling is a way of escaping our mundane, everyday lives ... we gamble to get away from the hardship of life ... sometimes we don't want to talk, we don't want to socialize, we just want to escape for a while ... we spend until we can't spend any more ... kua pau ... we don't want to think about the consequences ... just one more spin ... I did it to get away from everything and everyone ... I did it to forget my woes .. it wasn't about winning ... it was a distraction, an opportunity to socialize with possible benefits ... and it was fun ... it lets you forget your problems for a while ... it's a sanctuary ... it's enjoyable ... it's a way of rewarding yourself ... gambling was my time .. away from my whānau and kids ... I didn't want people to know where I was or what I was doing ... I didn't go to make friends ... I didn't know anyone ... it was a me thing ...

we gamble when things are not right in our lives ... it's something we do when we are unhappy ... its a way of forgetting ... avoiding ... it makes you feel good for a while.

Gambling was seen to offer hope and opportunity ... it's a quick fix ... a possible solution ... a way of improving our lives ... we've got nothing anyway so nothing to lose ... we hope our dreams will come true ... we are looking for that pot of gold ... if I keep going I will get there ... I believed I would get there one day ... if we take the risk we might win and everyone will benefit ... our kids will have a better life ... we can choose to accept the status quo or we can take that risk and maybe, just maybe it will lead to a new and better life ... we have to try ... there is a chance we could win ... education, training, the other way of doing it costs so much and it takes soooooo long ... today could be the day.

Discourse theme 5: Reconstruction of tikanga Māori

Several participants thought tikanga Māori was being misconstrued so Māori could feel good about gambling ... our tūpuna were spiritual people ... their behaviour was informed by tohu, omens ... the signs might have come to them in a dream or something in their environment could have told them what to do ... we can't do that in today's world ... so we apply it where we can ... gambling has that element ... it makes it so much more exciting and mysterious when our tūpuna tell us what to do ... I had a dream it's a tohu ... someone is looking out for us ... our uncles and aunties used to do that with the horses ... our whānau spend hours figuring out what it means ... the numbers ... the patterns the right time to play the jackpot ... some have a karakia before they gamble ... this is how we are as a people ... these are the remnants of our Māori identity.

Others mentioned the reconstruction of customary concepts ... gambling is tied up with our status, mana, prestige ... our mana goes up if we win and down when we lose ... that's why people lie and hide their feelings when they are gambling ... impression management is more important than mana ... as long people think we are doing OK ... they don't realise mana is collective, what we do personally has an impact on our whānau, hapū, iwi ... the way we gamble today is breaking down the structure of Māori whānau ... people say gambling is about whānaungatanga and manaakitanga ... we used to play cards and housie with the whole whānau ... children were cared for, fed, put to bed ... it was inclusive ... we picked the old people ... everyone was there ... we were fundraising for good causes ... and

we played with pennies ... it was good for our morale ... good for our communities ... times have changed ... these days we go to the pub, play in isolation and lose everything we have ... gambling is taking our mana, deconstructing our identity, distracting us ... the children and mokos of hard out gamblers are ashamed ... manaakitanga and whānaungatanga is what keeps us well ... it heals us makes us vibrant and strong ... gambling doesn't do that anymore.

Discourse theme 6: Bias, barriers & inequalities

Participants identified some of the barriers that were preventing the advancement of Māori ... society does not protect Māori ... the government doesn't really care about the impacts of their policies they just carry on anyway ... how do we protect ourselves when society is destroying us ... they won't make the changes we really need ... one hand is saying they want to reduce gambling impacts and harms but the other hand is cutting a deal with the big guns and giving permission for more pokies and more Casinos ... we are the bottom of the heap ... they don't care about us ... they leave it to health promotion and social control to address the cause and effects ... this is how they are shaping our world.

Some also talked about systemic bias and inequities ... Māori used be communal but these days we all live in separate homes ... isolated, fragmented, doing it all by ourselves the government wants it to be like that like that ... they value profit margins, material wealth, self-gratification, keeping the rich people rich ... we have to be as good as them or better or we are left behind ... where is the place for traditional Māori values in that type of world ... society doesn't want us to have tino rangatiratanga ... they took away our whenua, language, identity, taonga and introduced subtle types of social control ... gambling, alcohol, cigarettes, poverty, disadvantage and drugs ... they like us where we are ... they keep us down ... they don't want to build Māori capacity ... how many Māori own the businesses that get rich from gambling ... how many Māori organisations struggle to get funding from Lotteries ... how many Māori clubs and communities benefit from gambling proceeds ... I don't benefit, my whānau doesn't benefit at all.

Discourse theme 7: Whānau values, skillsets & support systems

Most participants thought gambling was an okay thing to do when you can afford it and your whānau doesn't suffer ... there's nothing wrong with getting a scratchie once in a

while ... gambling can be fun and easy way to make money ... it's an adrenaline rush ... we do it for the thrill we enjoy the atmosphere and excitement ... something good might come of it ... nothing wrong with trying ... gambling can be about mingling with the whānau ... it all depends on the context ... circumstances ... what else is happening in our lives.

However, they also talked about possible harms ... most people lose their money ... hardly anyone wins ... some people have no control ... it might start small but can quickly become an addiction ... sometimes we put our families and kids at risk ... it can make us lie and steal .. it can destroy relationships ... it can destroy our whānau ... it could have repercussions ... it can lead to violence ... it decreases our rangatiratanga ... we could be doing better things ... it's a waste of our time and money it's not always enjoyable ... sometimes we are left with remorse and regret ... we can get into a downward spiral trying to claw back what we have lost ... whānau can be counter-productive best to never do it at all.

As strategies to buffer the impacts of gambling, and minimise the likelihood of harm, participants acknowledged the importance of government and local authority policies but felt the safeguards were mainly be found within whānau themselves. The need to strengthen whānau knowledge and skillsets was clearly identified ... whānau need communication skills they need to talk about gambling amongst themselves and set their own boundaries ... how much is too much for us to spend on gambling ... how long is too long to be playing the machines ... how will we know when one of ours has a problem ... and what will we do ... let your children see gambling for what it is ... don't protect them ... they need to know how gambling destroys lives.

They said problem gambling is ... when you put your rent money into the machine ... spend all day thinking about that ching, ching ... have a big win and lose it all over again ... lie, deceive and hurt the people around you ... do it every day ... hide it from your whānau ... spend more than you can afford ... get into debt .. can't break the cycle ... don't know when to say no ... a destructive emotional continuum in which anticipation quickly turns into regret, hope becomes disappointment and satisfaction transforms into greed.

Participants said whānau should ... never be judgemental ... speak out when someone has a problem ... offer shelter, food and aroha but never money ... know how to access trained

support services ... know how to say 'no' ... teach tamariki to make good choices ... gambling is no different from alcohol or drugs ... value the 'self' and understand our place in the whānau ... realise our behaviour has an impact on those around us ... love our tūpuna but live our own lives ... we don't have to gamble because our parents did.

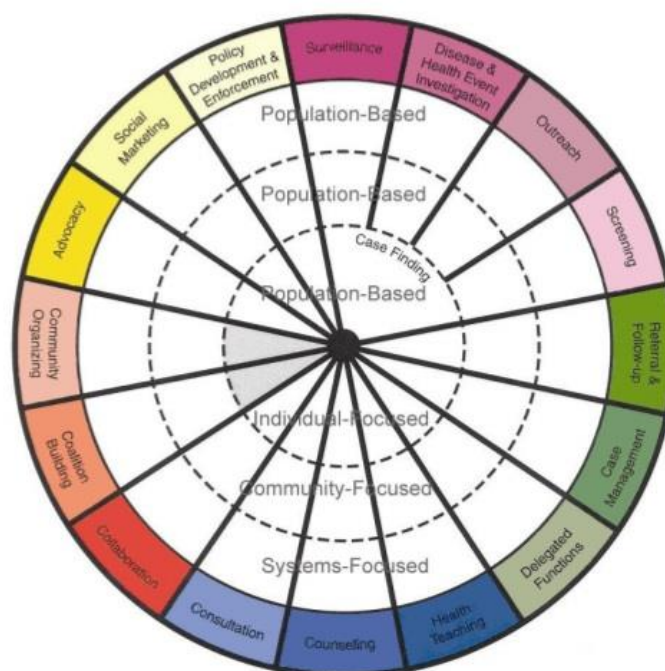
However, whānau had an important role in the minimisation of gambling harm ... relationships need to be built on a foundation of honesty, trust and love ... whānau should be connected ... able to talk freely ... do things together ... celebrate achievements ... support each other during times of hardship ... mentors and positive role models ... a tuakana to tell us when we are going off the rails ... moods, emotions, anger and stress are a part of life ... whānau need to have shared values, leadership and coping mechanisms ... sometimes whānau need help with the underlying issues ... budgeting, income, homes and jobs ... but whānau is about unconditional love ... loyalty not betrayal ... unity and positive memories ... everyone should feel like they belong.

Māori identity and cultural values were also important strategies for the minimisation of gambling harm ... whānaungatanga is empowered by manaakitanga, aroha, tikanga, rangatiratanga ... the things we do together, as a whānau, keep us strong ... laughing, singing, dancing, working, praying, talking ... having a positive Māori identity gives the skills to successfully negotiate the world we are in and shape our own lives ... we value ourselves and our whānau, hapū, iwi ... we realise the next generation needs to be nurtured, loved, supported ... we have a holistic view of the world ... we understand the connectedness ... our ancestors took risks but they had strategies to mitigate possible harm and increase the likelihood of success ... knowledge, wisdom, talking to others, learning from their mistakes, back up plans, training, decision-making frameworks, provisions .. life is no different today ... Māori cultural identity is risk aversion strategy for whānau.

Robustness & generalizability

The above discourse themes provide valuable insights on the attitudes, values, worldviews, beliefs, perceptions and experiences of Māori whānau and communities. In terms of the Ministry's strategic priorities, for the prevention and minimisation of gambling harm, this platform of themes could provide new directions for the development of public health interventions that are responsive to the needs of Māori. Of course, the desired outcome of

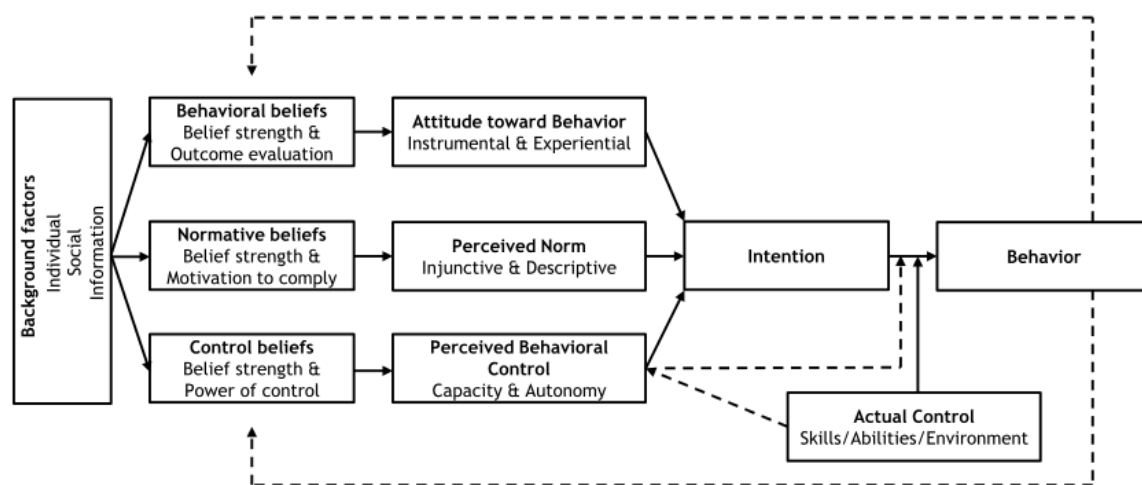
such interventions is behaviour change. That is, the Ministry's investment in gambling interventions would aim to ensure there are fewer Māori problem gamblers, fewer Māori are at risk of problem gambling and fewer whānau and communities experience gambling harm. As the following graphic suggests, the public health model uses various mechanisms to effect behaviour change (Owen, 2012). Of these mechanisms, discourse themes could feasibly inform the development and enforcement of public health policy, social marketing campaigns, advocacy, community organising, counselling and possibly the teaching of health curricula. In order for this to happen, empirical studies would need to show the discourse themes are robust and generalizable (Dallis, Willis, Small, et al, 2007).



Public health wheel of interventions (Owen, 2012)

Concepts of robustness and generalizability simply ask whether the results of a study can be applied more generally, outside of the actual participants. Within the context of this research, there is a need to know whether Māori who did **not** participate in the Rūnanga's focus group discussions agree with the discourse themes participants that have been identified. In addition, it is possible a causal relationship between the discourse themes and Māori gambling behaviour.

Studies of the relationship between attitudes and behaviour have been the cornerstone of social psychology for much of its history. This body of literature has shown that our attitudes, values, worldviews and beliefs can exert a strong influence on, and even predict, our behaviour. According to leading theorists, our behaviour is determined by intentions which are directly, and indirectly, shaped by our attitudes, perceptions about the social norms of reference groups and beliefs about our skillsets, abilities and capacity to succeed (Fishbein & Ajzen, 2010).

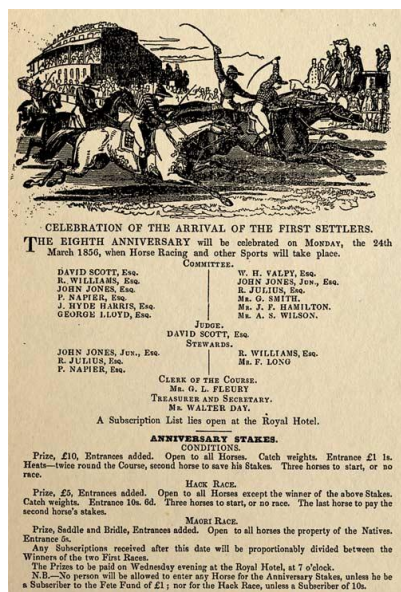


Theory of Reasoned Action (Fishbein & Ajzen, 2010)

As focus group participants intuitively thought, this theory suggests the normalisation of gambling worldviews, through the attitudes and social norms of New Zealand society, has been driving Māori participation in gambling activities. It is also likely the above discourse themes have captured some of these attitudes and social norms. The next two chapters look at how gambling has been normalised, within New Zealand society, and the inequalities that are impacting on Māori as a result of participation in this activity. As a research paradigm, to improve robustness and generalizability, the final chapters of this report have reviewed the theory on how to identify a social norm, applied this knowledge to participant's discourse themes, and proposed a pilot tool for gathering information about the social norms that may be associated with Māori participation in gambling activities.

Conditioning the Māori mind

Historical and anthropological evidence suggests gambling was a popular past-time within many ancient civilisations including the Egyptians, Chinese, Japanese, Hindus, Persians, Hebrews, Huns and some indigenous tribal people (Abbott & Volberg, 1999). However, there is no evidence of gambling in pre-European Māori society. Illustrative of this, various scholars have noted the customary language of Māori had no words, or phrases, for the concept of gambling (Herd & Richards, 2004). Over the last 170 years, gambling has been normalised within New Zealand society and indigenous Māori have been gradually conditioned to not only accept the presence of gambling facilities but also participate in its activities. The gambling history of any country can be delineated into periods of expansion, restriction or relative status quo. An expanding gambling environment is always triggered by societal changes which increase the visibility of gambling and introduce opportunities for participation. Within Aotearoa, it is evident Māori are in the midst of a sixth expansionary phase.

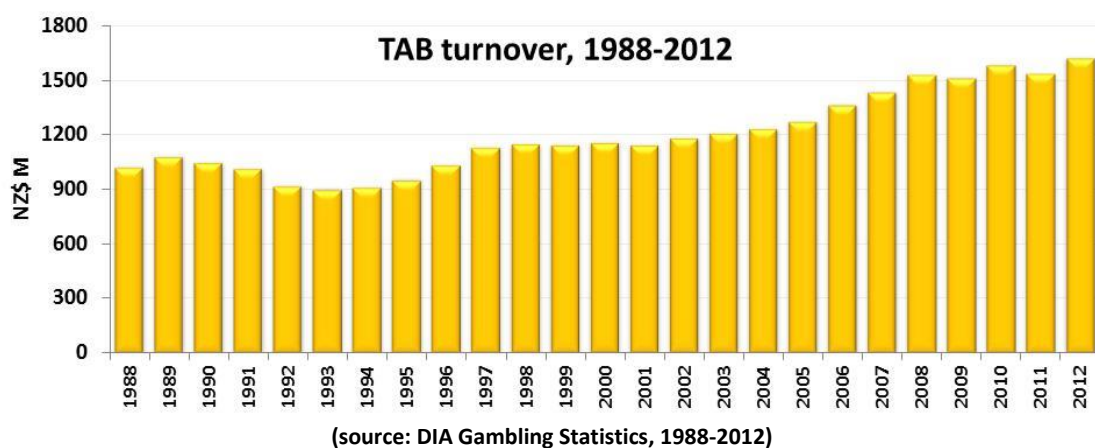


Programmes for Māori Race Meetings, 1856 and 1870

Phase 1: Within a few weeks of signing the Treaty of Waitangi, Pākehā imported the first thoroughbred racehorse and simultaneously imposed 18th century laws, from the British Empire, to curtail public participation in gaming and lotteries (see Appendix 1). By the end of 1840, eight settlements had a race-course and by 1890, sixty-seven settlements had race-

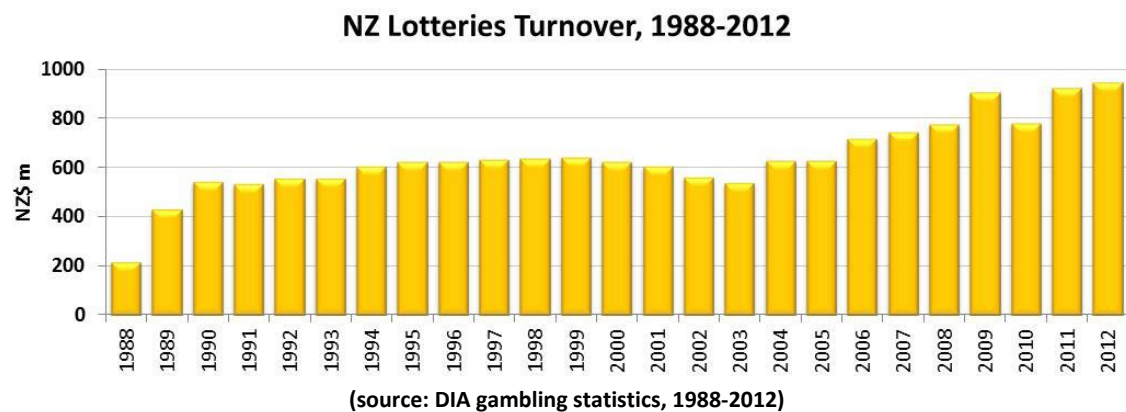
tracks, ranging between 90 to 180 acres in size, and were running regular meetings (see Appendix 2). Gambling on card games, billiards and fighting sports flourished openly in grog shops, sidewalks and penny-alley dens. Bookmaking was rife throughout the colony. During the 1880s, the Colonial Secretary was granting licences for 200 race meetings and 50 raffles a year.

Phase 2: Following a Royal Commission and national referendum, New Zealand established the world's first government-run off-course betting system, called the Totalisator Agency Board (TAB), in 1951. Within a single year, public spending at the TAB increased by 2000 percent. By 1964, 25 branches and 285 agencies had opened in all of the main centres and towns over 5,000 people. Between 1951 and 1964, its' turnover climbed from £118,095 to £24 million (McIntock, 1966). In 2012, the TAB's annual turnover was \$1622 billion (Department of Internal Affairs, 2013).

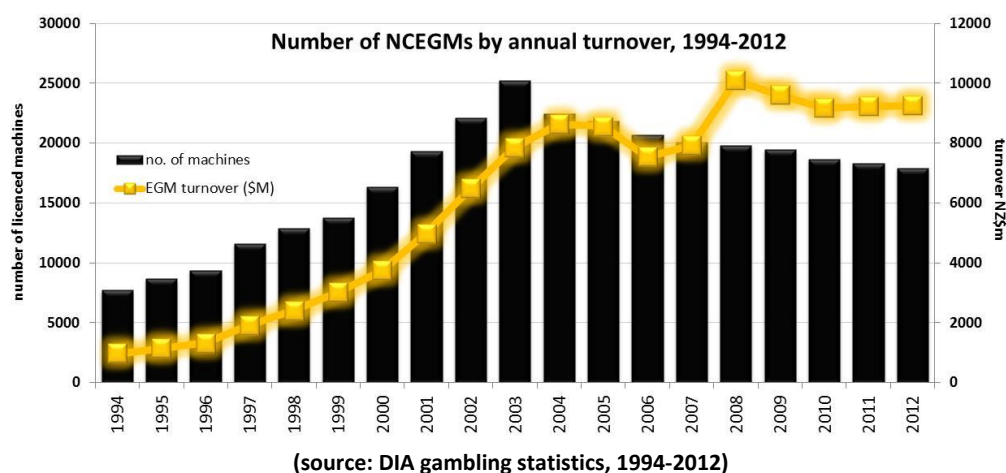


Phase 3: Although technically illegal until 1949, lotteries have been popular since the turn of last century. Art Unions, introduced through the 1908 Gaming Act, gave voluntary organisations the opportunity to raffle works of art, literature, mineral or agricultural specimens and mechanical models with permission from the Secretary for Internal Affairs (Grant, 1994; O'Sullivan and Christoffel, 1992). Monetary prizes were often paid but use of term 'Art Union' with prizes of 'alluvial gold' gave the impression of legality. In 1961, a National-led Government introduced the Golden Kiwi, a state-run lottery which aimed to replace the burdensome system of granting individual licenses for tri-weekly Art Unions. The number of tickets was initially limited to 250,000 with the lottery drawn when all had

been sold. In the first 12 months of sales, Golden Kiwi made a profit of £1,360,000 (Bolt, 1966). Between 1962 and 1965, the government improved its system for the distribution of profits, quadrupled the prize pool and tweaked the legislation so tickets were unlimited and continuously on sale. In 1988, the revenue from Golden Kiwi sales was \$76 million (New Zealand Lotteries Commission, 2013).



Phase 4: Based on the rationale of more money being available for distribution to community projects, a Labour-led Government paved the way for creation of a new bingo-type gambling game, called Lotto, in 1986. By July 1987, a nationwide chain of 420 retail outlets commenced sales. Turnover in the first year was \$210 million. Over the next few years, Golden Kiwi was phased out and a range of Lotto products flooded local communities including Instant Kiwi (1989), Lotto Strike (1993), Keno (1994), Powerball (2001), Big Wednesday (2005) and Bullseye (2009). In 2011, LCD promotional screens were installed in 600 outlets nationwide, Big Wednesday was re-launched with a new line up of luxury prizes and NZ Lotteries turned over \$926m in product sales (New Zealand Lotteries Commission, 2013).



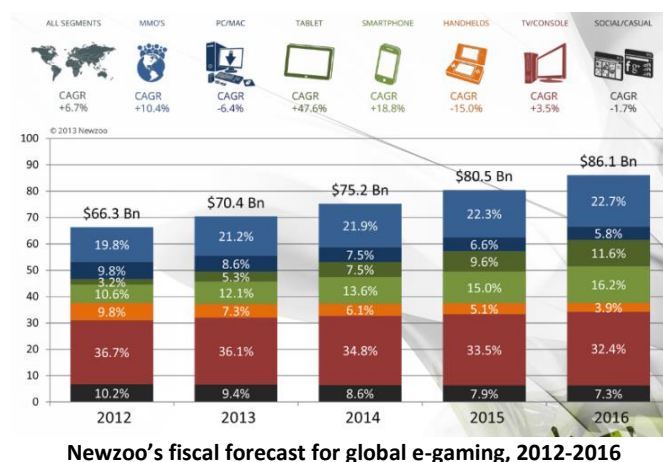
Phase 5: In 1988, the Gaming and Lotteries Act was amended to enable the licencing of electronic gaming machines (EGMs) in hotels and clubs. Legislation for the licencing of EGMs in Casinos quickly followed. New Zealand’s first Casino opened in Christchurch in mid-1994 but by 1999, Casinos were operating in Auckland, Dunedin and Hamilton. Queenstown has two Casinos. The Casinos have licences for 2,752 gaming machines and 221 gaming tables. Between 1995 and 2012, the annual turnover from New Zealand’s Casinos increased from \$313 million to \$4,244 billion. Alongside gaming machines in Casinos, the number of non-Casino EGMs (NCEGMs), operating in hotels and clubs within local communities, climbed from 7,770 in 1994 to 17,943 in 2012 and the turnover generated from gaming machines has increased from \$965 million to \$9,245 billion a year.

	licenced	gaming machines	tables
Christchurch Casino	30 June 1993	500	51
Sky City, Auckland	17 June 1998	1647	118
Wharf Casino, Queenstown	18 June 1999	74	6
Skycity, Queenstown	18 June 1999	86	17
Sky City, Hamilton	10 December 1999	339	23
Dunedin Casino	17 February 1999	180	12
total		2326	176

NZ Casinos by licencing date, number of gaming machines & tables, August 2013

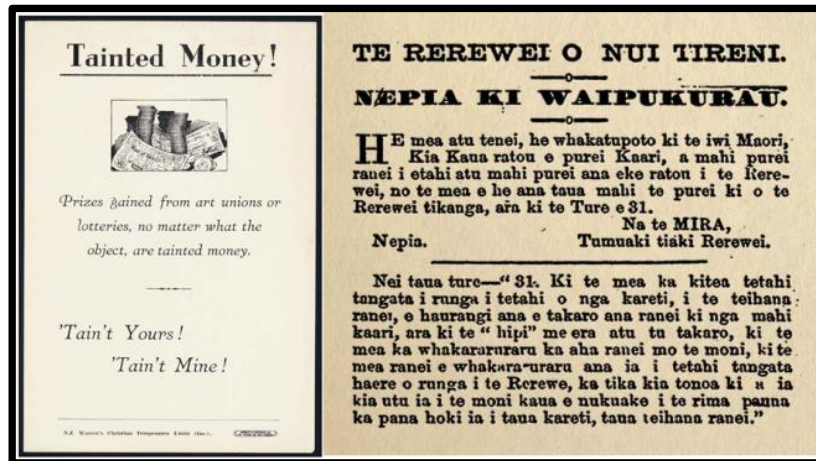
Phase 6: Remote Interactive Gambling applications - through computers, telephones, radios and/or other transmitting devices - are prohibited in New Zealand unless conducted through NZ Lotteries or the Racing Board. In 2010, around 7% of New Zealanders gambled on the TAB’s online betting site, launched in 1998, and MyLotto which was introduced in

2008 (Health Sponsorship Council, 2011). However, it is not illegal to gamble online if the website is based overseas. Estimates suggest the number of New Zealander's participating in online gambling activities has increased from 18,000 in 2007 to 174,000 in 2012 (Nielsen cited in True, 2013; Townshend, 2011). This rapidly escalating trend is expected to continue. According to Newzoo, the global e-gaming market generated US\$66.3Bn in 2012, with a compound annual growth rate of 6.7% (de Heij, Bosman, Hagoort & Warman, 2013). By 2016, it is forecast the annual turnover from global e-gaming activity will be in the vicinity of US\$86.1Bn.



Liberalisation of the legislation

The 4th Royal Commission on Gaming and Racing, of 1947, was clearly a turning-point in New Zealand's constitutional approach towards gambling (Paul, 1948). Until then, the legislation was fundamentally restrictive and focused on protecting the public from gambling related criminal activities while churches, and other voluntary groups, were left to care for those who were harmed by gambling pursuits. The Commissioners recommended liberalisation of the gambling legislation because, they thought, repressive measures were ineffective and effects would be better gauged, monitored and controlled if gambling was out in the open. Ensuing Governments have embraced this ideology. Despite strident concerns about the evils of gambling being published, and hotly debated, since the 1850s, more than a century passed before the notion of 'gambling harm' received any type of official recognition (Appendices to the Journals of the House of Representatives, 1871-1904; Colenso, 1851; Davis, 1880; Pratt, 1925).



Māori and Pākehā campaigning against gambling 1800-1910,
(Grant, 2013 published with permission from the Alexander Turnbull Library)

Internationally, the mid-80s are associated with consciousness-raising about the social costs of gambling (Abbott & Volberg, 1999). Within New Zealand, the Department of Internal Affairs (DIA) commissioned a series of studies which aimed to gather information about the prevalence of problem gambling (Abbott & Volberg, 1991, 1992, 1999). The initial findings suggested around 12,000 adults were experiencing gambling problems. In comparison with other ethnic groups, it was also evident indigenous Māori were carrying a disproportionate share of the social costs that are associated with gambling. Māori had higher participation rates, preferred different types of gambling activity and spent considerably more on gambling during each session, as well as over time. Furthermore, young Māori males had the highest risk of problem gambling.

In 1988, a psychiatrist and three ex-gamesters established the Compulsive Gambling Society (CGS) and started to deliver New Zealand's first support service for problem gamblers (Abbott, Sullivan & McAvoy, 1994). Within a few years, CGS and the Salvation Army were offering telephone and face-to-face counselling services for problem gamblers in Christchurch, Wellington, Auckland, Hamilton and Manawatu. Other voluntary groups, such as Gamblers Anonymous and GAMANON, were also providing community-based services for problem gamblers and their families. Initially, these services were funded through annual applications to the Lottery Grants Board which derived its' income from the profits of state-owned suite of Lotto products.

Between 1985 and 2005, the DIA conducted 5 yearly national surveys which aimed to collect data about the level of participation in gambling activities as well as gather information

about people's attitudes towards gambling policy (Amey, 2001; Christoffel, 1992; Research & Evaluation Services, 2005; Reid & Searle, 1996; Wither 1987). The 1995 survey was particularly interested in public opinion on whether the government, privately-owned gaming industry or individuals should be responsible for the costs associated with development and delivery of problem gambling services. In 2000, the survey canvassed opinion on the role of government policy and whether intervention was required to protect individuals and society from gambling harm. Responses to these surveys suggested the public favoured a model in which the gaming industry covered the costs of problem gambling services but the government was responsible for protecting individuals and society from the harm that gambling could cause and ensuring the profits were distributed to communities. Subsequent reforms of the gambling legislation have reflected these underlying views.

In early 1996, representatives from the Lottery Grants Board and gaming industry (Casinos, TAB and non-Casino EGMs) established a Committee on Problem Gambling Management (COPGM) and began contributing to an annual fund for the development and delivery of problem gambling services (Australian Institute for Gambling Research, 2001). By August, however, the House of Representatives was debating the merits of introducing a levy on non-Casino EGMs to fund problem gambling services (New Zealand Hansard, 1996). In 1997, the Gaming and Lotteries (Problem Gambling Levy) Regulations came into effect.

Between 1997 and 2002, the levy increased from 0.56c to \$2.97 per licenced EGM and the funding available for problem gambling services increased from \$6,000 to \$65,000 per annum. At the time, conservative estimates were suggesting 20,000 to 50,000 New Zealanders were problem gamblers and up to 250,000 family members were affected by their gambling (Abbott, 2001). Compared with other ethnic groups, these studies showed that Māori had the highest risk of problem gambling, increasing rates of participation, higher monthly spends and were considerably less likely to seek help from a problem gambling service (Abbott, 2001).

The Gambling Act 2003 was introduced to ensure the full costs of problem gambling services are recovered from the industry. The original Act comprises 4 parts, 19 subparts, 377 sections, 9 schedules and a raft of regulations to which, more than a dozen amendments,

have been passed since 2005. This is the main piece of legislation that regulates gambling activities in New Zealand, its purposes are to:

- control the growth of gambling
- prevent and minimise the harm that gambling can cause
- authorise some gambling and prohibit the rest
- facilitate responsible gambling
- ensure the integrity and fairness of games
- limit opportunities for crime and dishonesty
- ensure the distribution of profits benefits the community
- facilitate community involvement in decisions about gambling

The Act implemented a hierarchical regulatory system which differentiates between the gambling activities that are least likely to cause harm, such as local raffles and housie (Class 1 and 2) through to those that require licencing and surveillance, such as the TAB, national lotteries and EGMs (Class 3 and 4). Of the Class 4 venues that operate gaming machines, Casinos and commercial venues, such as hotels and pubs, are associated with more harm than community based not-for-profit venues, such as sports and chartered clubs. The licencing of more Casinos is also prohibited.

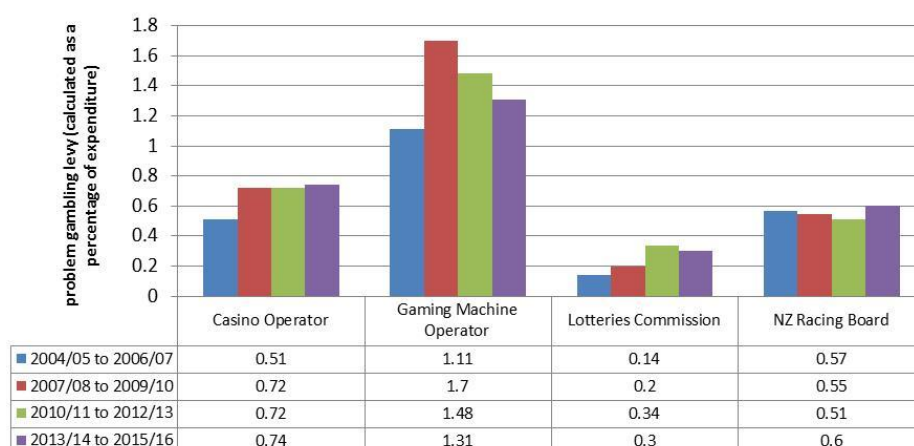
The requirements for licencing venues and operating gaming machines have also been defined. For example, Class 4 Operators must comply with an electronic monitoring system, prohibit automatic teller machines, display information about funding opportunities, transfer profits to a gaming society for distribution and implement policies for identifying and excluding problem gamblers and awareness training for employees. Gaming machines must also include features which interrupt play and display messages on the odds of winning, duration of play and the player's spend. Restrictions on advertising and the maximum stake prize have been imposed, the return to player (RTP) rate has been set between 78% and 92% (over the life of the machine) and at least 37.12% of the net proceeds must be distributed to authorised purposes.

Under Section 101 of the Act, territorial authorities are obliged to adopt policies which consider the social impacts of gambling and inform decisions about the licencing and location of Class 4 and TAB venues. In some regions, such as Gisborne and Waitakere, this

this has led to the introduction of population-based caps on the number of EGMs or sinking lid policies in which no new venues can be licenced. Within a decade, the number of gaming machines in local communities declined by 29 percent, from a peak of 25,221 in 2003 to 17,943 in 2012.

The Gambling Act 2003 has defined the roles and responsibilities of various gambling institutions, such as the New Zealand Lotteries Commission, Department of Internal Affairs, Lottery Grants Board and Distribution Committees. In addition, the Gambling Commission was established to provide ministerial advice and manage issues associated with Class 3-4 Operator licences, complaints, disciplinary procedures and appeals. When making decisions about the allocation of profits from NZ Lotteries, it is of interest to note, Distribution Committees are required to “have regard to the needs of Māori”.

Part 4, of the Act, describes the formula for estimating a problem gambling levy and objectives of an Integrated Problem Gambling Strategy. Instead of an annual levy on each licenced EGM, the new formula calculates a proportionate levy that is applied to the profits made by each subsector of the gambling industry. The levy is based on current player expenditure and the number of service presentations attributable to that sector multiplied by weightings that are calculated against the Government’s projected funding requirements and future player expenditure during the levy period. The weightings are reviewed every 3 years and specified in the Problem Gambling Levy Regulations. This formula aims to ensure the Government always recovers the full cost of developing, managing and delivering the integrated problem gambling strategy and, if an over-estimate of the recovery costs were to occur, the gambling sector will benefit from lower levy rates during the next 3 year period.



**The problem gambling levy that is paid by each subsector of the gambling industry, 2004 to 2016
(sourced from the Gambling (Problem Gambling Levy) Regulations, 2004-2013)**

Since the levy came into effect in 2004, the rate that is paid by each subsector of the gambling industry has ranged from 0.14 to 1.7 percent of annual expenditure, with Gaming Machine Operators paying the highest rate and the NZ Lotteries Commission paying the least (see Figure 2). This generates around \$18 million a year for implementation of the Integrated Problem Gambling Strategy. Despite Ministry of Health recommendations to increase the levy, the amount that is paid by gaming machine operators has substantially reduced and levies paid by Casino Operators and the NZ Racing Board haven't changed. During 2004-2007, the problem gambling levy captured less than half a percent of the gambling industry's turnover and this declined to 0.17 percent in 2008-2010.

The sincerity of our government's commitment to reduce the harm that gambling can cause has recently faced considerable scrutiny. Despite a statutory obligation to control the growth of gambling, and prohibit more Casinos, the National government has entered into an agreement that will establish New Zealand's 7th Casino, and enable another 304 EGMs and 58 gaming tables, to operate in Auckland and Queenstown (Fisher, 2013; One News, 2013; Roxburgh, 2013). In exchange for a much touted 400 million dollar convention centre, and the promise of a stronger economy, the Government has paved the way for SkyCity Entertainment Group (SkyCity) development of these facilities through a number of very sweet concessions including significant law changes, early extensions to already exclusive licencing provisions, compensation for future tax increases or contract changes and permission to introduce cashless (ticket-in, ticket-out) technology, automated table games, anonymous gambling and machines that accept denominations of \$20 or higher. Little wonder, SkyCity have signalled their intention to open an 8th Casino in Wellington within a few years (Nigel Morrisson cited in OneNews, 2013).

While these negotiations were underway, the Gambling (Gambling Harm Reduction) Amendment Bill was passing through Parliament. The original Bill, introduced by Hon. Te Ururoa Flavell of the Māori Party, proposed new mechanisms for the minimisation of gambling harm. It suggested responsibility for the distribution of gambling profits should be taken away from privately run Societies and Trusts and placed in the hands of sixty-six,

democratically-elected, local Councils for distribution within their communities. It also aimed to ensure at least 80 percent of the profits derived from Class 4 gambling activities would be distributed in the community of origin. The Bill sought to remove racing as an authorised purpose for the allocation of gambling profits because the racing industry's use of this money to pay stakes, or prizes, does not, by any stretch of the imagination, meet the legislated criteria of "a worthy cause that is beneficial for communities". Lastly, the Bill wanted harm minimisation devices, like pre-commit cards and play tracking, to be installed on gaming machines.

In general, this Bill has drawn public attention to the fact that gaming machines take money out of poorer communities and distribute it in communities that are better off. At its first reading, in May 2012, the Bill was passed by an overwhelming majority of 87 to 3 but by July 2013, the margin of support had slipped to a mere 6 votes. At the third reading, Parliament opted for a watered down version of the Bill submitted by the Minister of Internal Affairs. Despite, warnings the Skycity concessions would make it easier for Casinos to be involved in money laundering, the Gambling Harm Amendment Act came into effect on 14 September 2013 (Quilliam, 2013). Two months later, Auckland SkyCity casino was caught up in sophisticated money laundering scheme involving almost NZ\$200 million of the class-B drugs that are used to produce methamphetamine (Quilliam, 2013; Savage, 2013).

The new law gives the DIA more power to suspend non-Casino Class 4 licences but also allows venues to relocate, and retain already licensed machines. Such provisions have gutted local government use of sinking lid policies to minimise the harm that is caused by gambling in their communities. Although the rate of return to communities has increased to 40% (up from 37%), gambling profits can still be used for racing stakes and distributed by Societies and Trusts who favour better off communities. When making their distributions, such Trusts merely have to consider where the money was raised. Since 2006, at least 21 venue operators and 9 Societies have been convicted of misappropriation, theft, collusion and fraudulent activities which, collectively, represent more than two million dollars of gambling proceeds that did not make it to the community (Department of Internal Affairs, 2014).

In concession, the DIA has proposed four options to improve the Class 4 gambling framework (Department of Internal Affairs, 2013), ie:

- improving the transparency of grant making decisions by publishing information about the purpose of the grant, demographic location of grant recipients and whether the applicant is a local, regional or national organisations
- increasing the proportion of proceeds returned to the community to 43%
- ensuring the potential harm that can come from gambling within a particular area is balanced by the benefit of returning a commensurate level of proceeds
- maximising the amount of money that is available for return to communities by reducing compliance costs for venues, societies and the DIA

Vested Interests

The model for allocating gambling industry proceeds is defined within the Gaming Act 2003 and associated Regulations. This model is applied to the gross proceeds, or expenditure, that remains after dividends and prizes have been paid out. During 2012, the four sectors of New Zealand's gambling industry had a combined expenditure of \$2068 million. It is difficult to find accurate data on how this money was allocated in publicly available literature but the following figures have been sourced from annual reports, and personal communications, with each sector.

Allocation of the gambling industry's gross proceeds, 2012

	distribution model ¹	gaming machines	Casinos	NZ Racing Board ⁴	NZ Lotteries	total
Government duty	4% - 23%	\$177,632,000	\$105,872,000	\$14,697,681	\$10,600,700	\$308,802,381
GST	11 - 13%	\$41,299,440	\$24,992,409	\$38,794,052	\$5,991,700	\$111,077,601
problem gambling levy ²	(0.30% - 1.31%)	\$11,187,400	\$3,766,600	\$1,822,646	\$15,670,600	\$32,447,246
DIA costs ²	2% - 4%	\$18,958,800	\$11,299,800	\$138,617	\$13,827,000	\$44,224,217
Government	17%-41%	\$249,077,640	\$145,930,809	\$55,452,996	\$46,090,000	\$496,551,445
Venue payments	16% - 55%	\$136,640,000	\$81,440,000	\$1,939,021	\$29,330,000	\$249,349,021
other operating costs, eg Gaming Societies	22% - 46%	\$191,893,800	\$114,372,300	\$159,750,362	\$108,940,000	\$574,956,462
distributions to Authorised Purposes, racing codes etc	37% - 41%	\$102,595,433	\$62,085,758	\$142,796,000	\$103,241,600	\$410,718,791
undistributed surplus (industry)	3% - 21%	\$173,793,127	\$105,171,133	\$13,630,694	\$81,118,400	\$373,713,354
total expenditure		\$854,000,000	\$509,000,000	\$348,383,379	\$368,720,000	\$2,080,103,379

¹ sourced from 2012 Annual Reports for NZ Lotteries Commission, Gambling Commission and the DIA

⁴ defined by the Gambling (Problem Gambling Levy) Regulations

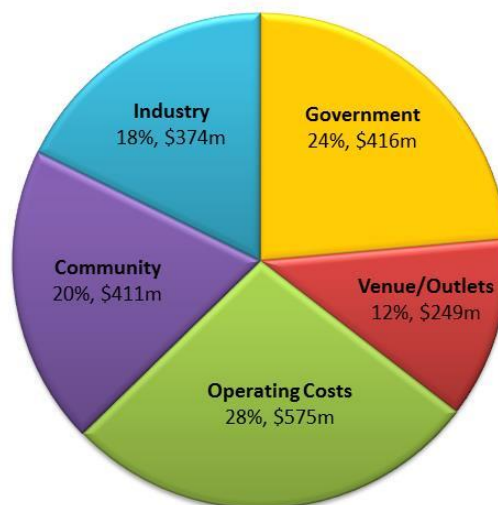
² available at www.dia.govt.nz

³ pers. comm. Megan Kloppenburg, Head of Financial Reporting, NZRB, 20 December 2013

Across all sectors, this table suggests just over half of the gambling industry's proceeds are used to pay operating costs and the Government. In 2012, \$575m (28%) of the aggregated proceeds went to Gaming Societies, the NZ Racing Board, Lotteries and similar committees for operating costs. It is of interest to note, 48 Gaming Societies were registered for the purposes of distributing gaming machine proceeds in 2013. Each Society has a Board, or

committee, comprising around 4 to 6 members, of whom some have been known to not only receive an annual honorarium of \$20,000 but also spend \$18,000 per annum on entertainment (Department of Internal Affairs, 2010). The Government received 24% of the gambling industry's proceeds, equating to \$416m, of which over \$400m (84%) went straight to the Treasury in duty fees or GST. In 2012, \$411m, or 20%, of the industry's proceeds were returned to the community through distributions to authorised purposes. However, venue operators and outlets, such as those who sell Lotto products, received a whopping \$249m for simply ensuring gambling facilities are accessible and available, for public use, throughout the country. Finally, the owners of the gambling industry, such as the SkyCity Entertainment Group Ltd, and those in the gaming machine market, made an easy profit of \$374m which represents the so-called undistributed surplus and 18% of New Zealand's gambling proceeds in 2012.

Allocation of Gross Proceeds in 2012
(aggregated across all sectors of the gambling industry)



Evidence of inequity

Within the Gambling Act 2003, a problem gambler is legally defined as someone who's gambling causes "harm or distress of any kind arising from, or caused or exacerbated by, a person's gambling and includes personal, social, or economic harm suffered –

- by the person
- by the person's spouse, civil union partner, de facto partner, family, whānau, or wider community
- in the workplace, or
- by society at large."

Information about the prevalence of problem gambling amongst people of Māori ethnicity is mainly obtained from the administration of problem gambling screening tools, during national surveys, which have been gathering data about New Zealand's participation in gambling activities, since the mid-80s. Two main instruments are currently used to collect gambling participation data. Since 2002, the New Zealand Health Survey (NZHS) has included a gambling screen which mainly aims to monitor the prevalence of problem gambling (Ministry of Health, 2006, 2009, 2012). In addition, a biennial national survey, called the Health and Lifestyles Survey (HLS), has been gathering information about gambling knowledge, experience, attitudes and participation rates since 2006 (National Research Bureau, 2007; Gray, 2011; Tu, 2013). These surveys monitor a range of variables that can be cross-tabulated with the results of problem gambling screens to identify risk factors and inequalities in, for example, the frequency of participation, type of gambling activity, amount of money spent, attitudes towards gambling, perceptions about impacts and personal knowledge or use of strategies to minimise harm.

As the agency responsible for monitoring compliance with the Gambling Act 2003, and licensing non-Casino electronic gaming machines (NCGMs), the Department of Internal Affairs (DIA) collects, and reports on, a range of data including the gambling industry's turnover and location of NCGM machines¹. The recent introduction of electronic systems for monitoring and licensing NCGMs has greatly enhanced capacity for integration with other

¹available at <http://www.dia.govt.nz/Resource-material-Information-We-Provide-Gaming-Statistics?OpenDocument#one4> on 19 December 2013

datasets, through multilevel modelling, to identify risk factors and socio-demographic inequalities (Blakely and Woodward 2000; Diez-Roux 2003). The DIA currently publishes quarterly data on NCEGM expenditure by the territorial authority, district and venue, or location, of machines. The NZRB and Lotteries Commission also have the capability to publish details about the expenditure, and location, of their various outlets, but they have not yet taken advantage of this opportunity.

Under Part 4 of the Gambling Act 2003, the Ministry of Health (the Ministry) has delegated authority for development and implementation of an integrated problem gambling strategy which must be focused on public health. Through funding derived from the triennially assessed Problem Gambling Levy, the Ministry purchases outputs that align with service specifications for implementation of the integrated problem gambling strategy. This includes measures for public health promotion and contracting non-government organisations to deliver prevention and intervention services. Anonymised data about the use of problem gambling services has been published online since 2004². Public access to this dataset enables analysis of Māori service use trends by the type of client, level of service, basic demographics and the mode of gambling perceived to cause harm.

Service specifications, for the integrated problem gambling strategy, include a research agenda which outlines the principles for purchasing outputs during the period of implementation (Ministry of Health, 2013). In general, this agenda aims to strengthen gambling harm research capacity, inform public health policy, develop the evidence-base on risk and resiliency factors and improve the effectiveness of prevention and intervention services. The Ministry's research outputs are supplemented by knowledge that is generated by other institutions, such as New Zealand's Centres of Research Excellence, local councils and universities (Dyall, Thomas & Thomas, 2009; Morrison, 2008; Thorne, Bellringer, Abbott & Landon, 2012). Between July 2010 and June 2013, the Ministry invested in 22 research contracts of which Te Rūnanga o Kiriikirōa (the Rūnanga) is primarily charged with generating outputs that inform knowledge about the impacts of gambling on Māori (KMPG, 2013).

²available at <http://www.health.govt.nz/our-work/mental-health-and-addictions/problem-gambling/service-user-data/intervention-client-data#ethnicity> on 19 December 2013

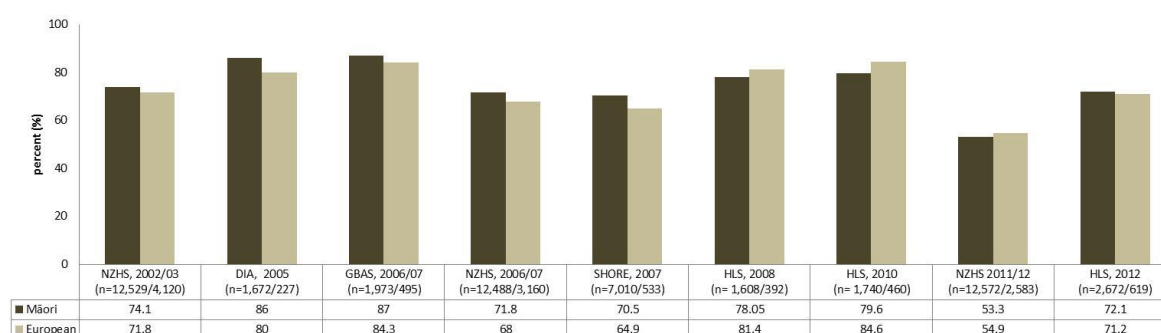
In 2010, Cabinet approved the Ministry's integrated problem gambling strategy for 2010/11 through to 2015/16 (Ministry of Health, 2010). The six-year strategy is underpinned by 10 guiding principles, 11 objectives and an outcomes framework, comprising 65 indicators (KPMG, 2013). Seventeen of the indicators are monitoring variables that have particular relevance for Māori including workforce development, involvement in decision-making and investments in research. In May 2013, the Ministry of Health published a baseline report on the hard and soft data that can feasibly inform 54 of the 65 indicators (KPMG, 2013). This chapter aims to consolidate, and reflect on, the evidence of inequalities and prevalence of problem gambling amongst Māori.

Participation Surveys

Fifteen (15) nationwide surveys have collected data about New Zealand's participation in gambling activities since 1985. Comparison of this data is limited by methodological differences in the wording of questions and reporting of data. Prior to the NZHS 2002/03, findings from the national datasets were noticeably unreliable due to small sample sizes, under-representation of Māori, variable use of 6 and 12 month participation measures and inconsistencies in the collection, analysis and reporting of ethnicity data.

Although methods for gathering information about New Zealand's participation in gambling has improved considerably, there is still concern about the reliability of datasets. Responses to the gambling questions, asked in national surveys, can be influenced by a range of factors including the interview technique, place of residence, community attitudes and perceptions about social desirability (Blaszczynski, Dumlao & Lange, 1997; Blaszczynski, Ladouceur, Goulet & Savard, 2006; Volberg, Gerstein, Christiansen & Baldridge, 2001). Recruitment strategies exclude respondents known to have high participation rates, such as prison inmates and those in hospitals or residential care (Abbott & McKenna 2000; Abbott, McKenna & Giles, 2000). The use of computer-assisted personal interviews (CAPI) to administer lengthy national surveys, in which gambling is canvassed alongside other topics, has greatly increased respondent burden along with the likelihood, therefore, of superficial replies due to respondent fatigue (Groves, 2003). For obvious reasons, it is also difficult for national surveys to gather accurate information about participation in illegal gambling activities, such as dog fighting, backyard boxing, internet gambling, sports picks and other social syndicates.

National surveys have produced mixed results on Māori past-year participation in gambling activities. NZHS findings suggest a downward trend from 74% in 2002/03 to 53% in 2011/12 (Ministry of Health, 2006, 2009, 2012, 2013). In contrast, HLS results have fluctuated between 87% in 2006/07 to 79% in 2008, 80% in 2010 and 72% in 2012 (Health Sponsorship Council, 2010; National Research Bureau, 2007, 2008, 2010; Tu, 2013). Compared with the Pākehā/European ethnic group, findings from both the NZHS and HLS surveys suggest Māori have slightly higher past-year participation rates.

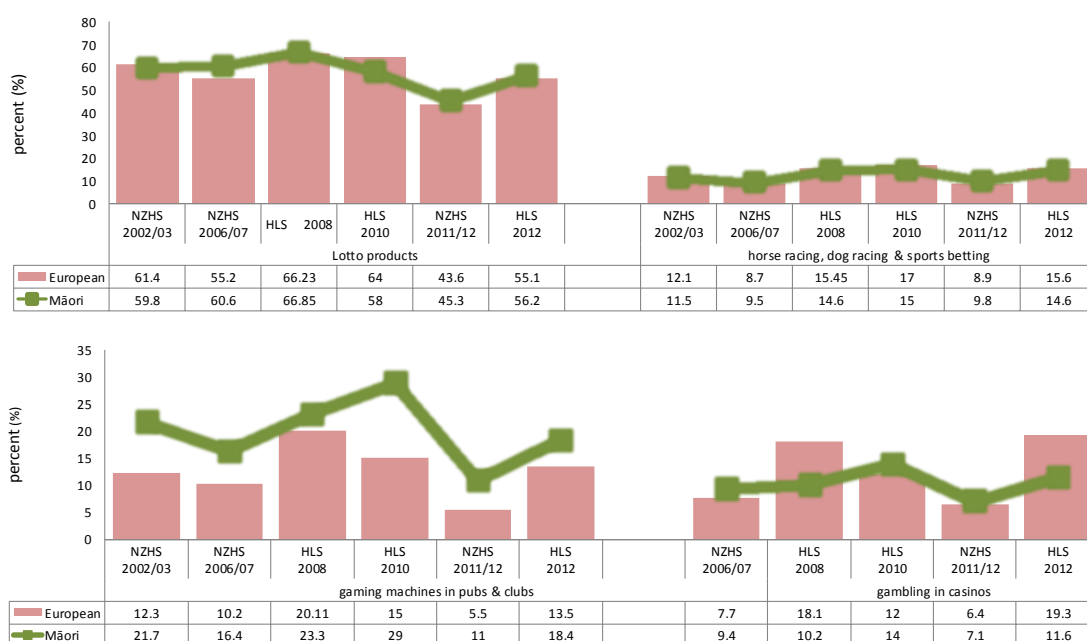


Past-year gambling participation rates by ethnicity, sample size and data source, 2002-2012

Without access to raw data sets, it is difficult to consider trends for individual gambling activities. Although this information has been collected for many years, the wording of questions, and the way this information is reported, has varied and changed as new activities are introduced. For example, the HLS combines results for Lotto, Instant Kiwi and scratch ticket participation whereas the NZHS reports this data separately. Similarly, the NZHS combines horse racing, dog racing and sports betting participation rates but the HLS reports this data separately. Demographic data is mostly, but not always, weighted, or adjusted, to ensure sub-groups are adequately represented and this is sometimes reported by gender without an overall rate, ethnicity classifications have also changed over time. For example, the NZHS has recently reported Māori and non-Māori participation rates instead of respective rates for each ethnic group in the non-Māori classification (KPMG, 2013).

The following table presents comparable data on Māori and European participation in the four, most common, gambling activities over the last decade (Health Sponsorship Council, 2010; KPMG, 2013; Ministry of Health, 2006, 2009, 2012, 2013; National Research Bureau, 2008, 2010; Tu, 2013). The findings suggest similar levels of participation in Lotto and sports betting activities and variable participation in casino gambling but Māori participation in

NCEGMs is consistently and considerably higher than European. Across both ethnic groups, the NZHS data suggests participation in all four activities has declined since 2002 but this is not necessarily evident in the HLS results. Excepting NCEGM participation, the HLS has found a slight decline in Lotto participation, little change in sports betting activities and a slight increase in casino gambling.



Past-year participation in the four main types of gambling activity by ethnicity and data source, 2002-2012

It is reasonable to assume NZHS data is more reliable than HLS findings, given the sample comprises over 12,000 residents of whom roughly a third are Māori. However, large datasets can sometimes mask important details. In comparison with non-Māori, for example, 2012 HLS data on how often people gamble shows Māori have higher weekly, and monthly, participation in EGM activities, regardless of venue. In addition, it appears Māori are more likely to gamble on Lotteries at least once a week.



Weekly and monthly participation in the most common gambling activities, 2012 (Tu, 2014)

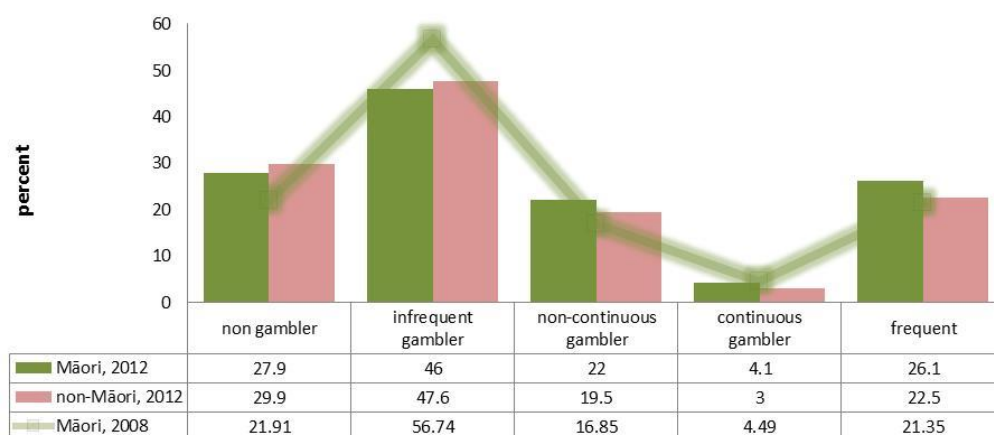
The HLS dataset also shows Māori tend to participate in more gambling activities than non-Māori. In 2012, 43% of Māori, versus 37% of non-Māori, said they participated in 3 or more gambling activities during the previous 12 months and over half of the Māori respondents, in this group, had participated in 4 or more activities. Māori past-year participation in 3 or more gambling activities has increased by 5% since 2006/07.



Number of gambling activities during the previous 12 months by ethnic group, 2008 & 2012 (Tu, 2014)

A frequent gambler is someone who participates in non-continuous forms of gambling, such as Lotteries and making bets with friends, or continuous forms, such as playing EGMs, betting on the TAB and Casino games, at least once a week. In 2012, most Māori were non-gamblers (30%) or infrequent gamblers (46%) but the number of frequent gamblers seems to be on the rise. Since 2008, Māori frequent gamblers have increased from 21% to 26% (Tu, 2013, 2014). In comparison with non-Māori, New Zealand's national surveys have generally

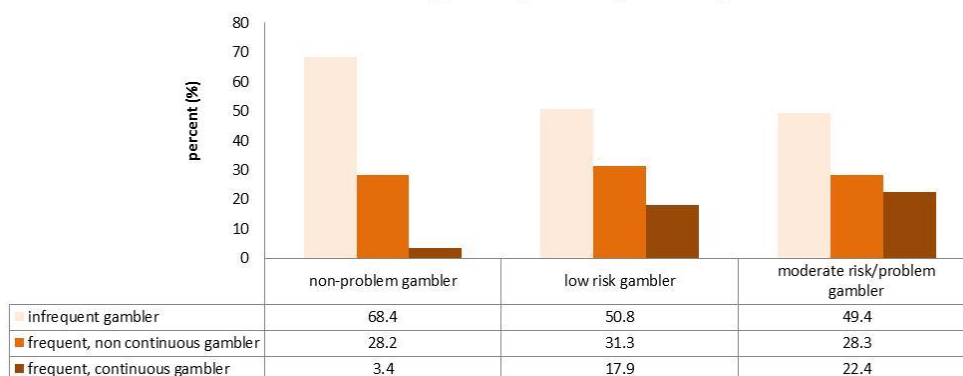
found that Māori are more likely to be frequent participants in both non-continuous and continuous forms of gambling (Ministry of Health, 2009, 2012; Tū 2014).



Frequency of gambling by ethnicity, 2008 & 2012 (Tu, 2013, 2014)

The amount of time people devote to gambling, in terms of the number of activities they participate in, and the frequency of participation, is known to be a key risk factor for problem gambling (Ministry of Health, 2009, 2012). In the NZHS 2006/07, 60% of problem gamblers said they had participated in 4 or more activities, during the previous 12 months, and 80% said they had played on non-casino gaming machines (Ministry of Health, 2009). New Zealand's literature shows that people who frequently engage in continuous forms of gambling have a much higher risk of problem gambling (Abbott & Volberg, 2000; Health Sponsorship Council, 2012; Ministry of Health, 2009; National Research Bureau, 2007). Compared with non-problem gamblers, for example, the HLS 2012 has shown that frequent, continuous players are roughly 7 times more likely to experience problem gambling (Tu, 2013).

Risk of problem gambling by the frequency & type of gambling activity, 2012



(source: Tu, 2013)

Gambling Expenditure

The DIA publishes information about the gambling industry's turnover, the amount of money that is returned in prizes, or dividends, and player expenditure by the four main types of activity. Annual turnover refers to the total, or gross, amount of money that is wagered in any one year³. Data on each sector's turnover and returns is collected from reports published by the Lotteries Commission and Racing Boards, extracted from the DIAs electronic monitoring system for gaming machines or estimated from Casino gaming duties. Expenditure and Gross Profit are interchangeable terms for the profit that is made by gaming operators and amount of money that is lost or spent on gambling activities. This figure is calculated by deducting the amount each sector returns to players, in prizes or dividends, from their turnover.



Annual turnover & expenditure, 1988-2012 (extracted from DIA gambling statistics)

Expenditure data determines a wide range of fiscal and policy directions, including the problem gambling levy, operator tax obligations, socio-demographic inequalities and local authority strategies for the minimisation of gambling harm. However, the methods that are used to calculate the gambling industry's annual expenditure may under-estimate the profits that are made by gaming operators and the amounts that gambler's actually spend (Productivity Commission, 2010; Siegel & Vaughn-Williams, 2013).

³ see http://www.dia.govt.nz/diawebsite.nsf/wpg_URL/Services-Casino-and-Non-Casino-Gaming-Gambling-Expenditure-Statistics-Explanations, retrieved on 28 January 2014.

	1995		2012		% increase (1995-2012)
	\$NZm	% of turnover	\$NZm	% of turnover	
NZ RACING BOARD (TAB)					
Expenditure	209	22%	286	18%	37%
Dividends	746	78%	1336	82%	79%
Turnover	954	100%	1622	100%	71%
NZ LOTTERIES COMMISSION					
Expenditure	275	44%	419	44%	52%
Prizes	348	56%	529	56%	52%
Turnover	623	100%	948	100%	52%
GAMING MACHINES (outside Casinos)					
Expenditure	171	15%	854	9%	399%
Prizes (estimated as 83-88% return to players)	967	85%	8391	91%	768%
Turnover	1138	100%	9245	100%	712%
CASINOS					
Expenditure	40	13%	509	12%	1173%
Prizes	273	87%	3735	88%	1268%
Turnover (estimated from gaming duty fees)	313	100%	4244	100%	1256%
TOTAL					
Expenditure	695	23%	2068	13%	198%
Dividends/Prizes	2334	77%	13462	84%	499%
Turnover	3028	100%	16060	100%	430%
NZRB expenditure as % of total expenditure	209	30%	286	14%	-16%
Lotteries expenditure as % of total expenditure	275	40%	419	20%	-19%
NCGM expenditure as % of total expenditure	171	25%	854	41%	17%
Casinos expenditure as % of total expenditure	40	6%	509	25%	19%

Proportionate increase in gambling expenditure, RTPs & turnover, 1995-2012
(extracted from DIA datasets)

In 2012, the gambling industry's turnover was NZ\$16.06 billion. This is a 13-fold increase on 1988 which suggests New Zealander's are currently wagering around \$45 million a day. Since 1995, the Lotteries Commission and Racing Board (NZRB) have increased their turnover by 52% and 71% but this pales against the exponential increase of NCGMs (712%) and Casinos (1256%). These figures partly reflect increased expenditure, during this period, notably the NZRB's expenditure has increased by thirty-seven percent (37%), Lotteries Commission 52%, NCGMs 399% and Casinos 1173%. Across the industry, however, the relative proportion of turnover that is allocated to expenditure has declined from 23 percent in 1995 to 13 percent in 2012. This is mainly due to reduced proportionate expenditure from the NZRB (22% to 18%) and NCEGMs (15% to 9%) combined with increased returns in prizes and dividends.

Legislation stipulates the rate of return to players (RTP) for each sector of the gambling industry. Class 4 activities, including TABs and NCGMs, must return between 78 to 92 percent of their turnover to players, Casinos must return 87% or more and returns from the

Lotteries Commission generally range between 56 and 60 percent⁴. Since 1988, RTPs from the NZRB have increased by 4%, NCGMs 8% and Casinos 1%. In 2012, RTP allocations from the NZRB, NCGMs, Casinos and Lotteries Commission represented 82%, 88%, 91% and 56% of their, respective, annual turnover.

To varying degrees, the turnover that is generated within each sector of the gambling industry includes a 'churn' factor that refers to the way in which players are able to re-invest, or bankroll, their winnings. This is the reason why some sectors are required to pay higher RTPs. Churning flourishes in Casinos and Class 4 venues where winnings can be rapidly and repeatedly re-invested without players even leaving their chair. Churn is good for venue owners and operators (Dixon, Harrigan, Sandhu, Collins & Fugelsang, 2010; Hagon, 2012; HANA, 2011). The longer we churn, the longer it takes to lose. The longer it takes to lose, the more RTPs are recorded on the machine. Higher RTPs mean lower gross profit (and player expenditure) which translates into less tax, lower problem gambling levies, less public scrutiny and less perceived need to minimise gambling harm.

The following, hypothetical, example explores how churn may impact on calculation of the gambling industry's turnover, RTPs and expenditure. In both scenarios the player's initial outlay is \$50. In the second scenario, the player won \$100, withdrew the cash and held it in their hands. For all intents and purposes, the player owned this money, they had the choice of reinvesting in gambling or spending it on something else. However, the system is structured to record every investment as turnover and every win as a prize that is returned to players until an initial outlay is expended. No matter how much each player wins, withdraws or re-invests, the recorded expenditure, in this example, will always be \$50. When winnings are withdrawn partway through a churn, and the aggregated turnover is not large enough to cover it, the expenditure column simply records a debit that is balanced against the next investment. From the operator's perspective, no distinction is made between physical or notional investments and winnings, both have a value that contributes to their aggregated turnover and RTPs. Yet the player's winnings and re-investments are

⁴ see NZ Lotteries Commission game rules available at <https://mylotto.co.nz/downloads/> on 16 January 2014

ignored, as if that \$100 win didn't really exist. In real life, an initial outlay of \$50 could have easily churned thousands of dollars.

Scenario 1: player on one machine				Operator		DIA
personal outlay	re-investment	win	loss	turnover	paid in prizes or dividends	expenditure
50.00		30.00	20.00	50.00	30.00	20.00
	30.00	100.00	0.00	30.00	100.00	-70.00
	100.00	50.00	50.00	100.00	50.00	50.00
	50.00	30.00	20.00	50.00	30.00	20.00
	30.00	0.00	30.00	30.00	0.00	30.00
50.00	210.00	0.00	120.00	260.00	210.00	50.00
Scenario 2: player on two machines or occasions				Operator		DIA
personal outlay	re-investment	win	loss	turnover	paid in prizes or dividends	expenditure
50.00		30.00	20.00	50.00	30.00	20.00
	30.00	100.00	0.00	30.00	100.00	-70.00
100.00		50.00	50.00	100.00	50.00	50.00
	50.00	30.00	20.00	50.00	30.00	20.00
	30.00	0.00	30.00	30.00	0.00	30.00
150.00	110.00	0.00	120.00	260.00	210.00	50.00

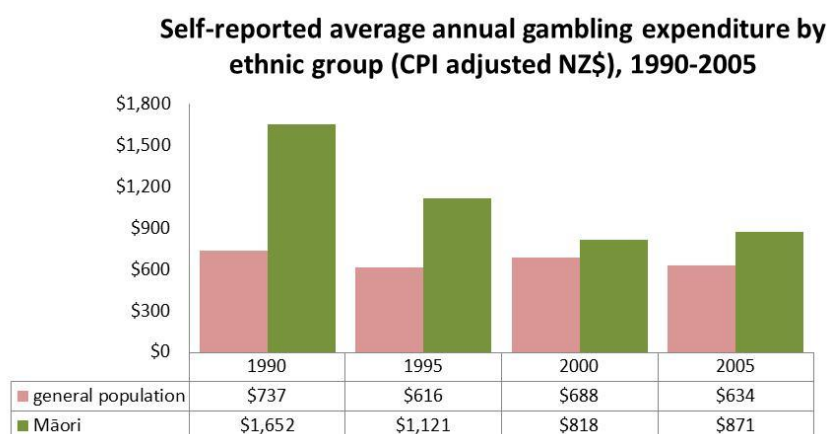
Hypothetical example of the 'churn' effect on turnover, RTPs and expenditure

As a context for considering the following points, this discussion has raised the possibility of our expenditure data under-estimating New Zealand's actual spend. It is suggested information about a player's winnings, re-investments and churning activity would improve the quality of expenditure data and, therefore, contribute to knowledge about the minimisation of gambling harm. Nevertheless, it is important to note, New Zealand's model for reporting the gambling industry's annual expenditure is the international gold standard and known to be more reliable than self-reported estimates (Volberg et al, 2001).

Disproportionate NCEGM spend

New Zealand's early studies, of gambling participation and the prevalence of problem gambling, have clearly informed the current use of expenditure data to identify inequalities (Abbott & Volberg, 1999; Abbott & Volberg, 2000; Amey, 2001; Christoffel, 1992; Department of Internal Affairs, 2005; Reid & Searle, 1996). From 1990 to 2005, the 5-yearly participation surveys asked respondents to estimate the amount of money spent on gambling activities. This produced evidence of disproportionate spends within a number of socio-demographic groups. Throughout this period, the self-reported average annual spend on gambling activities seemed to be declining, but Māori expenditure was consistently higher than the general (European) population. On average, Māori self-reported annual

expenditure was 66 percent higher than European. The dataset suggests Māori spent more on Lotto, Keno, Instant Kiwi and Housie than other ethnic groups, except Pacific Islanders occasionally. Europeans initially spent more NCGMs, Casinos and track betting but results from the 2000 survey suggested Māori were more likely to have played NCGMs in the last 12 months, and in 2005, self-reported Māori expenditure on NCGMs and track betting through the TAB exceeded that of their Europeans counterparts. In 2005, Māori expenditure on NCGMs trebled that of all other ethnic groups (Department of Internal Affairs, 2005).



source: DIA participation surveys, 1990-2005

Amongst comparative socio-demographics, the DIA surveys found low income groups comprising blue collar workers, beneficiaries, the unemployed and those without secondary school qualifications generally reported the highest annual expenditure on gambling activities. In particular, these groups tended to spend the most on Lotto, Instant Kiwi and Housie but those without tertiary qualifications also had higher expenditure on track betting, NCGMs and Casinos. In 2005, the self-reported NCGM spend of unemployed respondents exceeded that of those who were employed, and there was little difference in Casino expenditure.

	2000	2005
casinos	\$65	\$80
horse/dog betting (TAB)	\$28	\$29
NCGMs	\$20	\$26
Housie	\$24	\$25
sports betting (TAB)	\$17	\$16
Internet gambling	\$20	\$15
Lotto	\$9	\$12
Keno	\$7	\$8
Instant Kiwi/scratchies	\$9	\$6

Self-reported average per session spend, CPI adjusted
(source: Department of Internal Affairs, 2005)

Despite apparent declines in self-reported gambling expenditure overall, the average per session spend at Casinos and NCGMs was increasing, along with, the number of people spending large amounts of money, over \$1300 per annum (CPI adjusted), on these activities (Department of Internal Affairs, 2005). The trend towards substantially higher spending on NCGMs and Casinos is clearly evident in annual expenditure data, for the gambling industry. In 1995, the DIA's dataset showed 70 percent of New Zealand's gambling expenditure came from the Lotteries Commission and NZRB but, a mere decade later, the situation had completely reversed. By 2005, 74 percent of New Zealand's gambling expenditure came from Casinos and NCGMs. During this period, prevalence studies revealed a significantly greater risk of problem gambling among people in medium to high EGM spend bands (Abbott & Volberg, 1999 & 2000). In addition, it was estimated problem gamblers were accounting for 22 to 60 percent of gaming machine expenditure (Productivity Commission, 1999, 2010).

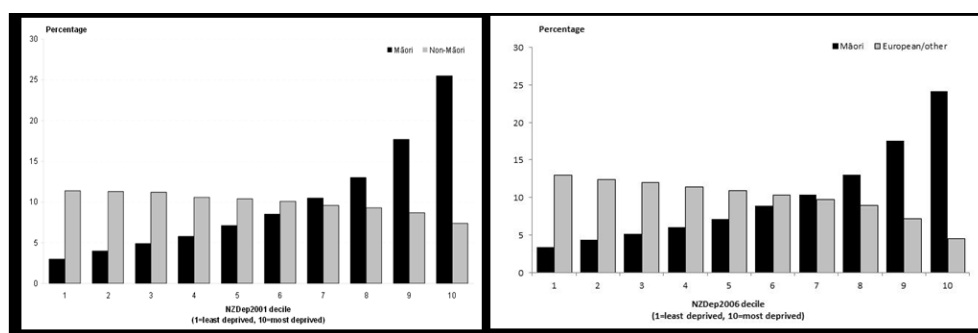
However, a number of authors have queried the reliability of self-reported gambling expenditure (Blaszczynski, Dumlao & Lange, 1997; Blaszczynski, Ladouceur, Goulet & Savard, 2006; Volberg, Gerstein, Christiansen & Baldridge, 2001). This work shows self-reported expenditure on casinos and gaming machines tends to under-estimate the actual spend, by as much as 60-70 percent, whilst expenditure on lottery type activities is overstated. Self-reported expenditure is not collected in either of the instruments that currently monitor New Zealand's gambling participation rates, the NZHS and HLS. Instead, a number of indirect, multi-level modelling, techniques are helping to monitor, and identify, inequalities in the gambling expenditure of socio-demographic groups.

Diversion of funding from high-deprivation communities

Over the last few decades, the health sector has become aware of alarming social and economic inequalities, amongst New Zealand families and demographic groups, and an association with devastating, life-long, health disparities (Ajwani, Blakely, Robson et al, 2003; Blakely, Fawcett, Atkinson et al, 2005; Blakely, Tobias, Aitkinson et al, 2007; Robson, 2004; Robson & Harris, 2007). In 2005, for example, UNICEF published a damning report

which showed 1 in 6 New Zealand children were living in entrenched poverty. Only 3 of the 26 rich nations, in UNICEF's analysis, had higher rates of child poverty. Statistics New Zealand (2005) also demonstrated increasing rates of unemployment and a steady rise in the number of families living on less than the median annual income. Similarly, the Ministry of Social Development identified falling standards of living and increasingly severe hardship amongst beneficiaries, sole parents and elementary occupations (Jensen et al, 2006). Such findings contributed to a raft of concerns about the impacts of inequalities on society's most disadvantaged whānau and inevitable harm of engagement in gambling past-times and activities (Dyall, 2009 & 2010; Eckersley, Dixon & Douglas, 2001; Mason, 2008; Wynd, 2005).

At the time, 3 in 5 Māori adults had an annual income of \$20,000 or less; Māori rates of unemployment were 3 times higher than European; 40 percent of Māori were known to be living in extreme hardship and Māori families were predominant recipients of food bank services nationwide (NZCCSS, 2005). Since 2001, the standardised deprivation index has shown that Māori are grossly over-represented in New Zealand's poorest, most deprived, communities (Crampton, Salmond & Kirkpatrick, 2004; Salmond & Crampton, 2002; Salmond, Crampton & Atkinson, 2007).



NZDeprivation Index by ethnicity, 2001 & 2006
(source: Crampton, Salmond & Kirkpatrick, 2004; Salmond, Crampton & Atkinson, 2007)

New Zealand's deprivation index divides the country into ten meshblocks, or small geographical areas, based on indicators derived from national Census data, including rates of unemployment, home ownership, sole parenting, educational qualifications, receipt of a means-tested benefit and access to a car or telephone (Crampton et al, 2004). A high score represents communities in the most deprived areas of New Zealand which means their socio-economic status is low. In comparison, a low score represents households in the least deprived, higher socio-economic, communities.



The deprivation continuum (KPMG, 2013)

A number of studies have shown that EGMs are concentrated in the most deprived areas of New Zealand (Ministry of Health, 2008; Wheeler, Rigby & Huriwai, 2006). Indeed, by 2008 it was known more than half (56%) of the annual NCEGM expenditure was occurring in New Zealand's poorest, and most deprived, neighbourhoods (Ministry of Health, 2008).

Preliminary studies suggest TAB and Lottery outlets are also concentrated in these areas (Ministry of Health, 2008). This evidence of greater exposure to gambling, amongst people living in high deprivation neighbourhoods, has been linked to increased risks of problem gambling and gambling-related harm (Health Sponsorship Council 2007; Ministry of Health 2008b, 2008d). Many are concerned high deprivation communities are spending disproportionate amounts of an already meagre income on gambling activities.

Furthermore, the money that high deprivation groups are spending on gambling activities represents money that is leaving their community.

To explore this issue further, as an outcome indicator for the prevention and minimisation of gambling harm, KPMG have applied a multi-level model to NCEGM expenditure for the period 1 July 2011 to 30 June 2012. The analysis involved integration of Census and NZDep2006 meshblock data within the internationally recognised Geographic Information System (GIS) in order to classify the socio-economic status of EGM venues, throughout the country, in a robust and reliable way. A 200 metre buffer was placed around each meshblock to ensure the socio-demographic characteristics of neighbouring communities were taken into account (KPMG, 2013). This method has provided valuable baseline knowledge about some of the inequalities Māori and high deprivation groups are experiencing, as a result of gambling venues and facilities being established in their home towns and communities.

	socio-economic status (general population)		
	low	medium	high
number of venues per 10,000 adults	13.1	9.5	4.8
number of EGMs per 10,000 adults	177	120	58
per person, per annum spend	\$866	\$581	\$263

Socio-economic status by gambling venues, EGMs and per person annual spend, 2011/12 (source: KPMG, 2013)

Compared to people living in high socio-economic neighbourhoods, KPMG's analysis has shown that low socio-economic communities had slightly fewer than three times as many EGM venues and four times as many EGM machines per 10,000 adults during 2011/12. On average, it is also evident the people living in New Zealand's poorest, most deprived neighbourhoods spent two to three times more on NCEGMs than their more affluent counterparts.

	higher than average Māori population	lower than average Māori population
number of venues per 10,000 adults	9.9	6.9
number of EGMs per 10,000 adults	129	90
per person, per annum spend	\$603	\$429

Number of EGM venues and machines by the per person annual spend in higher and lower than average Māori population communities, 2011/12 (source: KPMG, 2013)

KPMG have compared their results by the number of Māori living in each community (KPMG, 2013). A high Māori population was identified when Census data indicated the community comprised more than 14.6% Māori, which represents the average number of Māori living in New Zealand during 2011/12. In comparison with lower than average Māori populations, the number of venues and EGMs, per 10,000 adults, is 43 percent greater in communities with higher than average Māori populations. Furthermore, it is evident the people who live in communities with higher than average Māori populations spend 40 percent more on NCEGMs than those who live in communities with lower than average Māori populations.

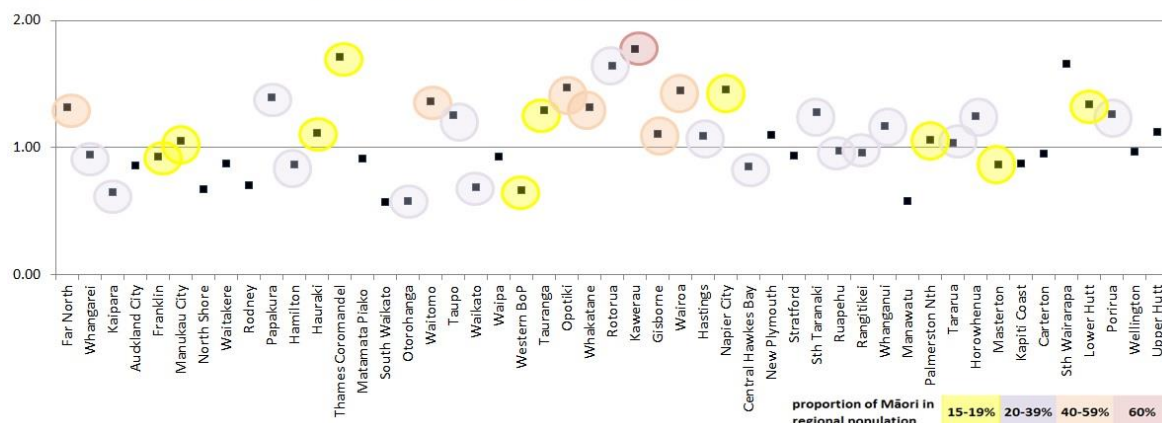
	socio-economic status in <u>higher</u> than average Māori populations		
	low	medium	high
number of venues per 10,000 adults	12.9	14.4	12.2
number of EGMs per 10,000 adults	174	183	137
per person, per annum spend	\$831	\$848	\$572

Number of EGM venues and machines by the per person annual spend and socio-economic status in communities with higher than average Māori populations (source: KPMG, 2013)

Furthermore, KPMG have looked at the number of venues, EGMs and per person annual spends by the socio-economic status of people living communities with higher than average Māori populations (KPMG, 2013). Within high Māori population communities, it is evident the people who live in low and medium socio-economic areas have slightly more venues and considerably more gaming machines than high socio-economic neighbourhoods. In 2011/12, the people who lived low socio-economic communities spent \$300 more per annum on EGMs than those from high socio-economic areas. There was little difference in the number of venues, EGMs and per person annual spends of low and medium socio-economic communities. Across all groups, however, medium socio-economic communities had the most venues, most EGMs and the highest per person annual spend. Compared with medium and high socio-economic communities in general, it is of interest to note, the people living in equivalent communities with higher than average Māori populations had twice as many venues, twice as many EGMs and spent almost twice as much per annum on EGMs.

Such findings provide empirical evidence of shocking inequities which clearly suggest Māori, and whānau living in lower socio-economic neighbourhoods, are carrying the burden of harm from gambling in their communities. To explore this issue further, this report looked at the ratio of aggregated NCEGM expenditure, for the 3 year period ending June 2012, by the resident population in each Territorial Authority (TA). As an exploratory technique, a ratio that is greater than 1 would suggest the TA's NCEGM spend was excessive compared to other districts during this period.

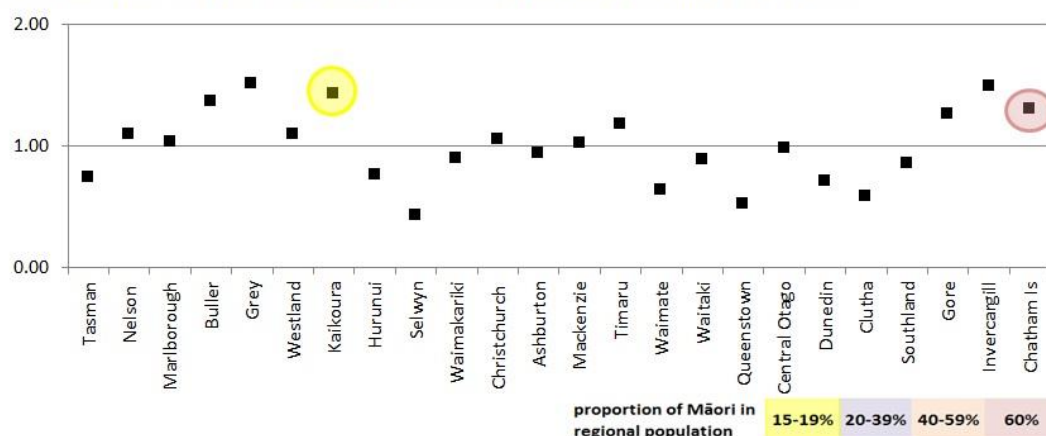
Te Ika a Māui Ratio: Aggregated NCGM expenditure by Territorial Authority, 2010-2012



(extracted from Department of Internal Affairs NCGM expenditure data)

The results suggested 38 (52%) of 72 TAs nationwide had a disproportionate NCGM spend. In respective order, Kawerau, Thames-Coromandel, South Wairarapa, Rotorua, Grey and Invercargill had the highest NCEGM spends during 2010-2012. From the 2010 Census on regional populations, it is also evident, 24 of the TAs (63%) with a disproportionate spend had Māori populations that were higher than the national average of 14.6%. In particular, Kawerau, Rotorua, Waitomo, Opoitiki, Whakatane, Wairoa and the Far North have Māori populations over 40%. It is of interest to note, this analysis also highlights the TAs with high Māori populations that did **not** have a disproportionate NCEGM spend, notably Whāngarei, Kaipara, Franklin, Hamilton, South Waikato, Otorohanga, Waikato, Western Bay of Plenty, Central Hawkes Bay, Ruapehu, Rangitikei and Masterton. In this regard, a number of explanations would need to be considered. For example, the TA boundary definition could be masking expenditure at the community level or local policies, for the prevention and minimisation of gambling harm, may be effective in these regions.

Te Waipounamu Ratio: Aggregated NCGM expenditure by Territorial Authority, 2010-2012



(extracted from Department of Internal Affairs NCGM expenditure data)

Problem Gambling

New Zealand has a data-base of eight (8) national surveys, in which a screening tool has been administered to measure the prevalence of problem gambling. Although this spans to the early 90s, the initial surveys were clearly trialling methods for the collection of national data and identification of a problem gambler. Due to differences in various aspects of the survey design - such as the interview technique, classification of ethnicity and criteria for assessing problem severity – data that has been gathered in national surveys conducted before 2010 is not directly comparable with more recent datasets. However, the various instruments which have been used bear remarkable similarities that warrant some discussion, as a starting point for considering the impacts of problem gambling on Māori.

Survey	sample size (n)	response rate (%)	Māori sample (n)	Māori response rate (%)	ethnicity classification	age-group (yrs)	interview technique	screening tool
Abbott & Volberg, (1992) - Phase One of National Prevalence Survey	4053	66%	323	8%	sole ethnicity	18+	phone	SOGS-R
Abbott & Volberg (2000) - Phase Two of National Prevalence Survey	6452	75%	432	6.7%	sole ethnicity	18+	phone	SOGS-R
Ministry of Health, (2006) - NZ Health Survey 2002/03	613	NR*	NR	NR	prioritised (Māori, Pacific, Asian, Other)	15+	CAPI**	10 questions
Ministry of Health, (2009) - NZ Health Survey 2006/07	12488	68%	3160	25%	total response	15+	CAPI	CPGI/PGSI
National Research Bureau (2008) - Health & Lifestyles Survey, 2008	1608	NR	392	24%	NR	15+	CAPI	CPGI/PGSI
Health Sponsorship Council (2011) - Health & Lifestyles Survey, 2010	1740	NR	460	26%	prioritised (Māori, Pacific, Asian, Other)	15+	CAPI	CPGI/PGSI
Ministry of Health (2013) - NZ Health Survey 2011/12	12370	52%	2583	20%	NR	15+	CAPI	CPGI/PGSI
Tu (2013) - Health & Lifestyles Survey, 2012	2672	86%	619	23%	prioritised (Māori, Pacific, Asian, Other)	15+	CAPI	CPGI/PGSI

* NR = not reported

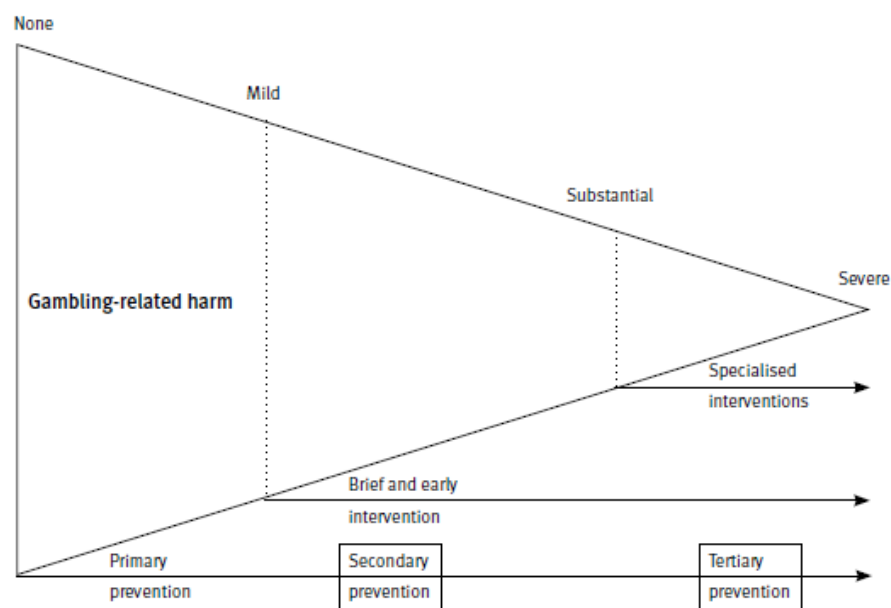
** Computer Assisted Personal Interview

Methodological differences in the national surveys that have screened for problem gambling, 1991-2012

Problem gambling is typically conceived as a continuum of harm that gradually progresses towards a pathological state, or mental disorder (National Research Council, 2003). The continuum starts with people who do not experience problems and progresses through minor transient problems towards increasingly serious, often co-existing, problems of prolonged duration. A mental disorder is a clinical condition, the severity of which is assessed by a psychiatrist, or delegated professional, in accordance with diagnostic criteria that have been established by the American Psychiatric Association (APA), and defined in various editions of their Diagnostic & Statistical Manual (DSM).

Some are concerned the medicalization of problem gambling as a mental disorder places undue emphasis on a pathological approach in which the causes are located within individual deviance, abnormality and physiological disease instead of societal factors that are known to exacerbate gambling intemperance, such as liberalised legislation and the availability of gaming machines (Bunkle & Lepper, 2004; National Research Council, 2003; Reilly & Smith, 2013; Rosecreanse, 1985). Others insist the evidence, of problem gambling progressing to a mental disorder, is robust (National Research Council, 2003).

New Zealand adopted the continuum of harm, as a public health framework for monitoring the prevalence of problem gambling and funding the delivery of services, in 2004 (Ministry of Health, 2005). As a model for service delivery, it is assumed the vast majority of problem gamblers will experience mild difficulties that can be resolved through brief interventions, in primary care, but some will experience substantial difficulties and require specialist care. Within this latter group, it is expected a minority will progress to a pathological state.



Public Health's continuum of gambling harm (Ministry of Health, 2010)

Pathological gambling became a recognised mental disorder, in 1980, with the introduction of diagnostic criteria in the 3rd edition of the APA's Diagnostic & Statistical Manual (DSM-III) (National Research Council, 2003). Until recently, it was classified as an Impulse Control Disorder, like kleptomania and pyromania but the DSM-5, published in 2013, has changed the classification, and the name, and also lowered the threshold for diagnosis (Reilly &

Smith, 2013). Pathological gambling is now called ‘disordered gambling’ and listed under Addictions alongside disorders relating to alcohol and drug use. Clinical assessment involves testing for underlying, or co-existing conditions, such as depression, anxiety, personality, attention-deficit or antisocial disorders but the severity of problem gambling is determined by responses to a Diagnostic Interview Schedule (DIS).

Since the early 90s, there have been minor revisions to the wording of DIS questions, and some realignment of items, but the conceptual paradigm for diagnosis of pathological gambling, has largely remained the same⁵. The APA’s DIS identifies nine (9) key aspects, or areas, of a person’s gambling behaviour which need to be assessed, ie:

- the frequency of **preoccupation** with gambling
- the level of **tolerance**, or need to gamble larger amounts of money to get the same feeling of excitement
- experience of **withdrawal symptoms** such as restlessness or irritability when unable to gamble
- **loss of control** or repeated unsuccessful attempts to stop gambling
- **chasing of losses** or gambling to try and recoup losses
- **disruption**, or risk, to significant relationships
- **financial problems** and/or reliance on others to pay gambling debts
- using gambling as an **escape** from personal problems, stress or dysphoric mood, such as feelings of helplessness and guilt
- **lying** to conceal the extent of involvement

Information on the use and outcomes of DIS assessments for gambling disorders, in clinical settings, is not published in New Zealand (Ministry of Health, 2014). Although the DIS was once used to measure the prevalence of problem gambling in a small Christchurch study, during the late 80s, it has never been administered in a national survey (Wells, Bushnell, Joyce, Oakley-Brown & Hornblow, 1992; Wells, Bushnell, Hornblow, Joyce & Oakley-Brown, 1989). However, the three instruments that have measured the prevalence of problem gambling, nationally, represent iterations of the APA’s conceptual paradigm for assessment of pathological gambling. For all intents and purposes, it appears New Zealand has a database in which these instruments have been screening the population for sub-clinical indicators of problem gambling since 1991 (Reilly & Smith, 2013).

⁵ Appendix 4

Indicators of problem gambling	DSM-5	SOGS-R	NZHS 2002/03	PGSI
preoccupation	✓	✓		
tolerance/motivation	✓			✓
withdrawal symptoms/negative effects on health	✓	✓	✓	✓
escape/feelings of guilt	✓	✓	✓	✓
chasing losses	✓	✓	✓	✓
lying	✓	✓	✓	
loss of control	✓	✓	✓	✓
disruption/risk to significant relationship	✓	✓	✓	
bail out/borrowing/financial problems	✓	✓	✓	✓✓
problem recognition		✓	✓	✓
experience of criticism		✓	✓	✓

Indicators of problem gambling in NZ screening tools

During the 90s, two national surveys used a revised version of the Southern Oaks Gambling Screen (SOGS-R)⁶ to measure the prevalence of problem gambling (Abbot & Volberg 1991, 2000; Lesieur & Blume, 1987). This tool contained 10 items which collected data on 8 of the 9 indicators that would currently be measured in a DSM assessment for pathological gambling. Similarly, the New Zealand Health Survey 2002/03 developed a 10-item questionnaire⁷ to measure the prevalence of problem gambling (Ministry of Health, 2006). This questionnaire collected data on 7 of the DSM indicators of pathological gambling. The five national surveys, since 2006, have used a shortened form of the Canadian Problem Gambling Index (CPGI), called the Problem Gambling Severity Index (PGSI)⁸, to measure the prevalence of problem gambling (Ferris & Wynne 2001; Health Promotion Agency 2013; Health Sponsorship Council, 2012; Ministry of Health, 2009, 2012; National Research Bureau 2008, 2010; Tu, 2014). The PGSI contains 9 questions which collect data on 7 of the 9 indicators that would be considered in a clinical assessment for pathological gambling.

⁶ Appendix 5

⁷ Appendix 6

⁸ Appendix 7

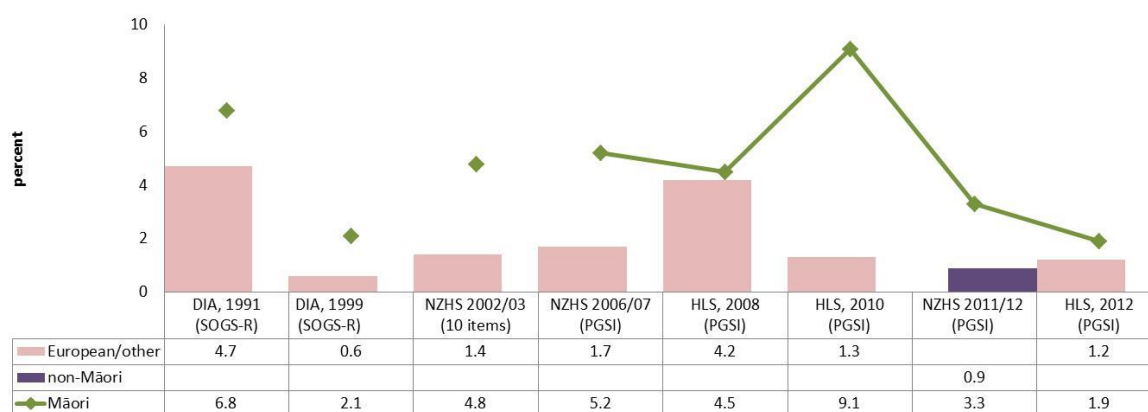
Classification	DSM-III (7 items)	DSM-III-R (8 items)	DSM-IV (10 items)	DSM-5 (9 items)	SOGS-R (10 items)	NZHS 2002/03 ⁽¹⁾ (10 questions)	PGSI ⁽²⁾ (9 items)
level 0 gambler/non-gambler/recreational gambler/non-problem gambler/social gambler	0	0	0-2	0-1	0-2	0	0
Level 1 gambler/low risk gambler						0	1-2
Level 2 gambler/at-risk gambler/moderate risk gambler	1-2		3-4	2-3	3-4	1-3	3-7
Level 3 gambler/high risk problem gambler/problem gambler						≥4	8-27
probable pathological/disordered gambler (PPG)	≥3	≥4	≥5	≥4	≥5		
mild	3-4	4-5	5-6	4-5			
moderate	5	6	7-8	6-7			
severe	6-7	7-8	9-10	8-9			

⁽¹⁾ NZHS responses were question specific

⁽²⁾ CPQI/PGSI is points based depending on frequency, ie 'never' (0 points), 'sometimes' (1 point), 'most of the time' (2 points) and 'almost always' (3 points)

Taxonomy and criteria for measuring the severity of problem gambling by the type of instrument

In addition to monitoring sub-clinical symptoms of pathological gambling, New Zealand's screening tools collect data about respondent's problem recognition (whether respondents think they have a gambling problem?) and experience of criticism (do other people criticize/worry about their gambling?). Responses to all of the items in these screening tools are scored then classified, against severity criteria, in order to measure the prevalence of problem gambling. In the PGSI, for example, respondents with a score of 3 or more fall into the moderate risk/problem gambler classification. Unfortunately, the scoring of responses, criteria for determining severity and taxonomy for classifying problem gamblers varies across the screening tools. This is problematic for analysis because prevalence data, which has been gathered with screening tools other than the PGSI, is not directly comparable. Even when the PGSI has been used, inconsistencies in the reporting of data make it difficult to explore trends. Until recently, for example, prevalence rates for the main ethnic groups were reported separately but Māori data now tends to be compared against an aggregated non-Māori group (Health Sponsorship Council 2012; Health Promotion Agency, 2013; KPMG, 2103; Ministry of Health 2006, 2009, 2012; National Research Bureau, 2008; Tu, 2014). The use of adjusted and unadjusted data to discuss results, within and across reports, is also somewhat haphazard.



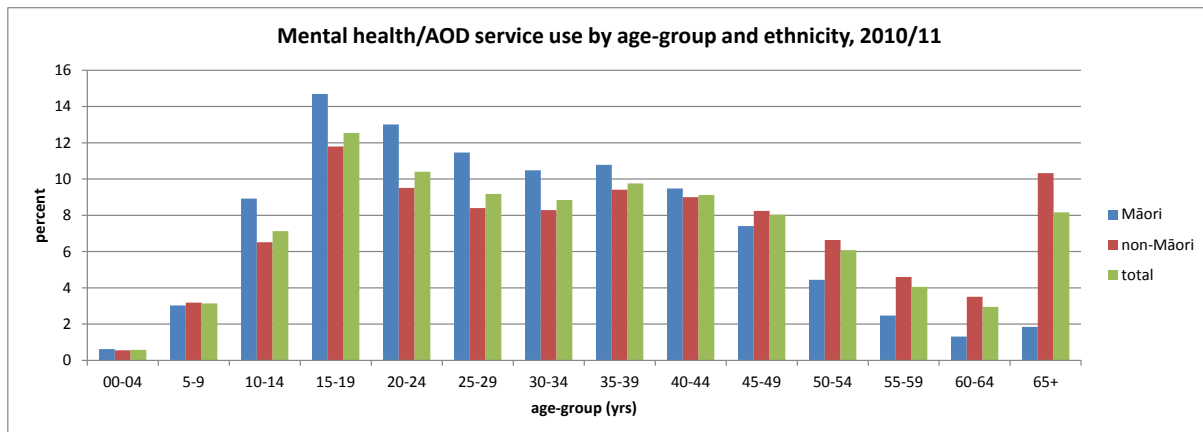
Combined moderate risk and problem gambling rates by ethnicity, 1991-2012

Prevalence surveys have produced mixed results on the problem gambling rate (PGR) in New Zealand. Since 2006, when the PGSI was introduced, the PGR seems to decline across all ethnic groups but the European spike in 2008 is unexplained, Māori rates are somewhat erratic and the findings of surveys, conducted in close proximity, appear divergent. Nevertheless, no matter which instrument has been used, nor when the survey was conducted, the prevalence data has repeatedly shown that problem gambling is primarily impacting on Māori.

For three decades, Māori have been over-represented in problem gambling statistics and typically have significantly higher rates than Europeans as well as the aggregated non-Māori ethnic group (Health Sponsorship Council 2012; Ministry of Health 2006, 2009, 2012). During NZHS 2006/07, for example, Māori comprised less than 12% of the total adult population yet half of the identified problem gambler group (Ministry of Health, 2009). Māori youth, Māori women, older Māori, Māori with mental illnesses, Māori with co-morbidities, lower socio-economic groups and people living in more deprived communities have a higher risk of problem gambling (Bellringer, Abbott, Coombes et al, 2008; Health Sponsorship Council 2007, 2012; Ministry of Health, 2009).

Problem gambling is significantly associated with hazardous lifestyle behaviours, and resultant health and social issues, in which Māori are known to be over-represented (Delfabbro, 2012; Ministry of Health, 2009; Robson & Harris, 2007). Compared with recreational gamblers, for example, problem gamblers are significantly more likely to be current smokers, consume excessive alcohol and have higher risks of anxiety-depression disorders (Abbott, 2001; Dyal, 2003; Ministry of Health, 2009; Tse, Wong & Chan, 2007).

Problem gamblers also have poorer self-rated wellbeing, tend to visit a general practitioner more frequently and are more likely to have seen a psychologist, counsellor or social worker in the previous year (Ministry of Health, 2009; SHORE 2008).



(source: MHS data set request, extracted 25 November 2011)

Māori are already over-represented in mental health addiction services, across most age-groups, but it is likely this will intensify with the APA's recent lowering of the threshold for diagnosis of pathological gambling (Reilly & Smith, 2013). Preliminary studies suggest the more severe classification, introduced via DSM-5 criteria, will more than double the number of people who are diagnosed problem gambling disorder that requires specialist psychiatric care (Temcheff, Derevensky & Paskus, 2011).

There are also long-standing concerns the prevalence of problem gambling is underestimated in New Zealand's national surveys (Abbott 2001; Abbott & Volberg, 1996, 1999, 2000; Volberg & Wray, 2007). Scholars have cautioned the need for validation studies in which the psychometric properties of screening tools are fully examined and PGR findings are supplemented by field research employing longitudinal, epidemiological and qualitative designs that enable stronger causal inferences. Although the results of a recent meta-analysis suggests otherwise, telephone and face-to-face interview techniques, such as the CAPI method that is currently used, have been shown to produce lower rates of problem gambling than postal surveys (Abbott, 2001; Abbott & Volberg, 1999; Delvin & Walton, 2012). By way of explanation, this may be because respondents tend to conceal, or understate, activities they see as undesirable from interviewers and household members in hearing range. In a recent Australian study, for example, 41% of problem gamblers said they would likely understate their position in a prevalence survey (Australian Government

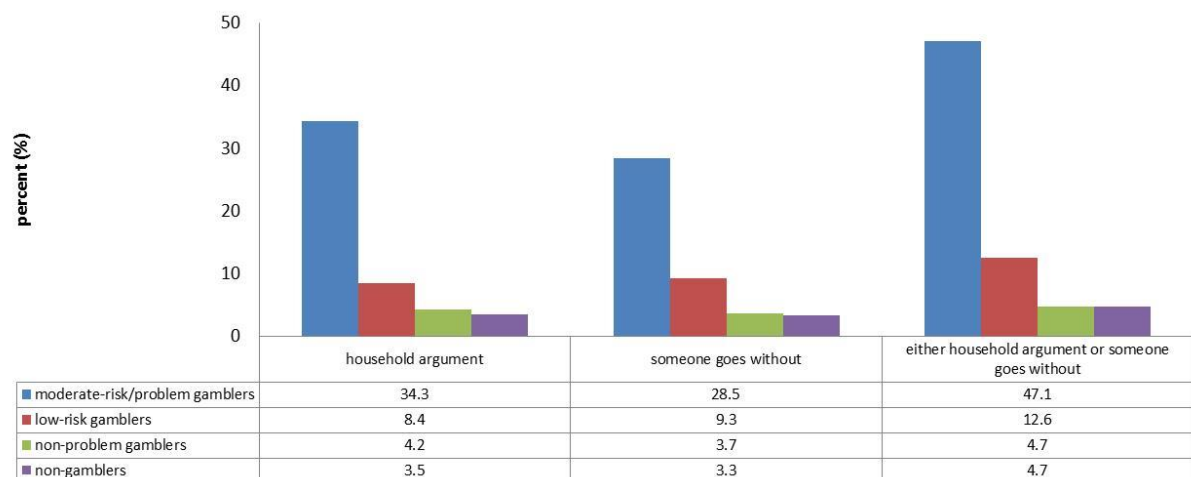
Productivity Commission, 2010). SOGS-R was known to produce false-negatives, and the PGR was unstable, but high refusal rates, particularly amongst Māori, have also cast doubt on the reliability of findings (Abbott & Volberg, 1999).

Although the PGSI has been the instrument of choice in prevalence surveys, since 2006, the tool was developed for a Canadian population and has never been validated in New Zealand (Abbott, 2001; Ferris & Wynne, 2001; Ministry of Health & Department of Internal Affairs, 2013; Wynne, 2002). As mentioned above, validation methods are informed by psychometric theory and involve the gradual accumulation of evidence from studies that explore different aspects of the tool's reliability including its' generalizability, as a universal measure within the target population, the variance in test scores and overall construct validity (Embretson & Reise, 2000). Theorists highlight the need for methods to explore the validity of operationalizations, rather than the validity of measures per se, because in real life settings, it is the translation of data into relevant and meaningful constructs that is really of interest (Trochim, 2002). Given the evidence of an alarmingly disproportionate spend, there is a clearly a need to demonstrate the PGSI's robustness and reliability, as an instrument for screening problem gambling amongst Māori.

A recent meta-analysis has looked at the reliability of PGSI data in two of New Zealand's prevalence surveys, the NZHS 2006/07 and 2010 Health and Lifestyles Survey (Delvin & Walton, 2012). The methods were primarily informed by concerns about the equation that is used for triennial calculation of the Problem Gambling Levy (Gambling Commission, 2009; Ministry of Health & Department of Internal Affairs, 2010, 2013). Specifically, it is felt the equation's use of problem gambling service data, instead of the PGR, may under-estimate the actual prevalence of problem gambling and, thereby, result in lower levels of funding being available for the minimisation of harm (Gambling Commission, 2009).

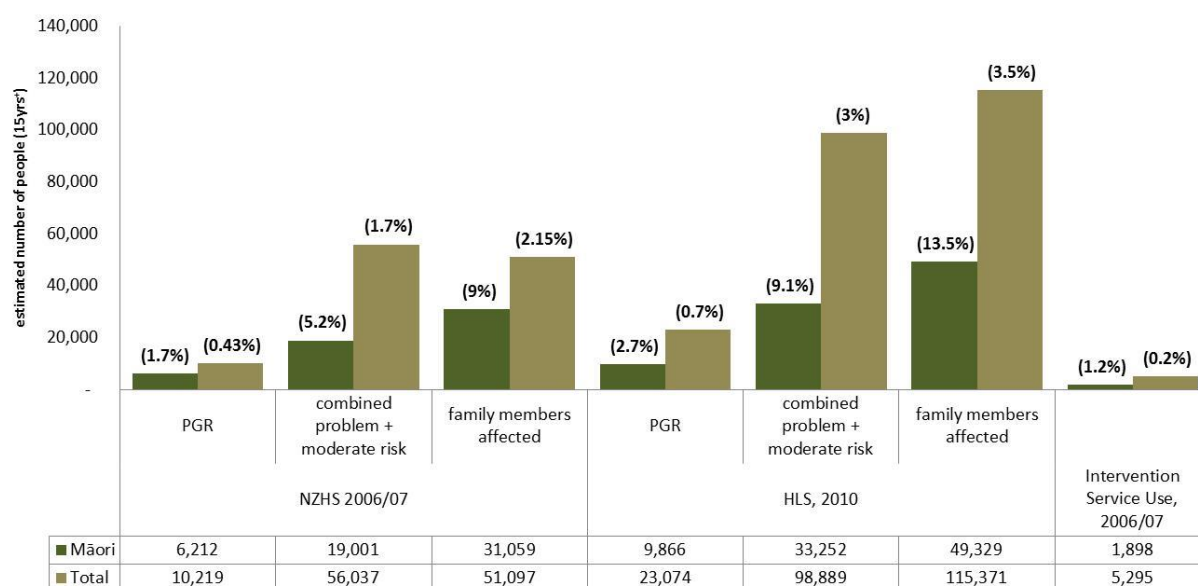
Delvin & Walton (2012) have provided some evidence of the PGSI's validity and reliability, as a screening tool for problem gambling in New Zealand. In particular, the items were found to have acceptable levels of internal consistency, across all ethnic groups, which means each question measures a different, unique aspect of the problem gambling experience but responses can also be summed and represented as a single overall score. As evidence of

criterion and construct validity, positive associations were also found between the PGSI score and supplementary survey questions, notably: past year participation in gambling, by the number and frequency of activities; use of gambling intervention services; cigarette smoking and self-rated perceptions about the number of times respondents had spent more than intended, household arguments about gambling and someone went without or bills weren't paid.



PGSI categories by responses to supplementary questions, HLS 2010 (Health Sponsorship Council, 2012)

However, Delvin & Walton (2012) have also produced evidence of variability, in two aspects of the PGSI score, which raise concerns about the generalisability of this tool and its' appropriateness for Māori. Firstly, their findings showed PGSI estimates of New Zealand's PGR not only varied by the questionnaire that was used but also under-estimated the actual prevalence of problem gambling during this period. Although the difference between NZHS 2006/07 (0.43%) and HLS 2010 (0.70%) estimates of the PGR were not statistically significant, the authors note substantial discrepancies in corresponding estimates of the people affected by problem gambling, at a population level, which is the core objective of PGL calculations.



NZHS 2006/07 and HLS 2010 estimates of the PGR, high risk groups and family members affected as well as intervention service use in 2006/07 by ethnic group (based on Census 2006)

Based on Census 2006 data, the NZHS 2006/07 suggests 10,219 (0.43%) people, within the total population, were problem gamblers. This is less than half the HLS 2010 estimate of 23,074 (0.7%) but twice the number of service users (5,295 or 0.2% of the total population) which formed the basis for calculation of the Problem Gambling Levy during this period. Corresponding estimates for the Māori population reflect even greater discrepancies. Furthermore, the target group of intervention services is not just problem gamblers but, more importantly, people who are at-risk of problem gambling. Indeed, the Ministry of Health's service specifications firmly emphasise the need for intervention to occur **before** the emergence of harm (Ministry of Health, 2008b, 2010b). By this measure, therefore, PGR estimates in the NZHS 2006/07 (1.7%) and HLS 2010 (3%) suggest 56,000 to 100,000 people had a moderate to high risk of problem gambling. In other words, the target population for problem gambling intervention services is 10 to 20 times larger than the figure that is used in PGL calculations. In addition, research has shown that each problem gambler directly, or indirectly, affects the wellbeing of at least five family members or friends (Pulford, Bellringer, Abbott et al, 2009; Productivity Commission, 1999; Rankine & Haigh, 2003; Sullivan, Arroll, Coster, Abbott, & Adams, 2000). By NZHS 2006/07 and HLS 2010 estimates of the PGR, up to 115,371 family members or friends are affected by problem gambling. Once again, the needs of this group are not acknowledged in PGL calculations nor considered in funding allocations for service delivery.

Through meta-analysis of NZHS 2006/07, HLS 2010 and overseas data, Delvin & Walton (2012) suggest the actual prevalence of problem gambling, during this period, was between 0.50 and 0.53%. As a policy direction, they recommend future use of the meta-analysis method to improve the reliability, and precision, of PGSI-derived PGR estimates. Given the PGL's current reliance on service-user data is grossly under-estimating the level of problem gambling in New Zealand's population, PGSI-based calculations would undoubtedly provide a more robust measure.

The second concern, about the reliability of PGSI data, relates to the items in this screening tool. Although further work is needed, initial factor analysis of responses to PGSI questions, in NZHS 2006/07 and HLS 2010, suggest the operationalization of items may differ across surveys and ethnic groups (Delvin & Walton, 2012). In general, factor analysis is an exploratory statistical technique that provides information about the structure of multi-item measurement tools, like the PGSI. Factor analysis describes the variance, or proportion of information, that each factor reproduces in a correlation matrix. Items with the highest factor loadings have a strong association, with the overall score, which suggests they are more reliable and could even represent an underlying latent variable. In contrast, a low factor loading suggests the item is highly interdependent, contributes little to the overall score and may be redundant (Embretson & Riese, 2000). Ideally, there should be some correlation, or collinearity, amongst the items in a measurement tool, but no evidence of singularity. Regardless of when the survey is administered, or ethnic group, factor analysis of the data obtained from a universally reliable measurement tool should demonstrate evidence of consistency, or similar patterns of response, which make sense within the particular context and also help to explain how the construct is operationalized.

The following table presents the highest and lowest factor loadings for PGSI items, in NZHS 2006/07 and HLS 2010, by reported ethnic groups (Delvin & Walton, 2012). Although factor loadings, for the Māori ethnic group, show some consistency, this is not at all evident Pacific and Asian findings. Within Māori responses, across both surveys, the 'felt problem' item had the highest factor loading and "borrowed" had the lowest. At first glance, this could suggest the PGSI produces consistent factor loadings, and is therefore reliable, as a measurement tool, but personal acknowledgement of problem gambling ("felt problem") may be a better

indicator of problem gambling than “borrowing” money. However, 2nd and 3rd order factor loadings on Māori PGSI items, in the NZHS 2006/07 and HLS 2010, were not at all consistent. Furthermore, there is little similarity in Pacific factor loadings, across both surveys, and findings for the Asian ethnic group were noticeably inconsistent. Overall, such findings suggest the PGSI is not reliable across ethnic groups and validation studies are needed.

	highest factor				lowest factor			
	NZHS 2006/07		HLS 2010		NZHS 2006/07		HLS 2010	
	item	FA	item	FA	item	FA	item	FA
Māori	felt problem	0.83	felt problem	0.93	borrowed	0.54	borrowed	0.49
	felt guilty	0.79	chase	0.76	tolerance	0.63	bet	0.61
	criticized	0.69	health problem	0.74	chase	0.66	financial problem	0.64
Pacific	financial problem	0.81	chase	0.82	criticized	0.57	bet	0.4
	felt guilty	0.79	felt problem	0.7	tolerance	0.62	criticized	0.44
	felt problem	0.77	health problem	0.64	chase	0.66	financial problem	0.52
Asian	health problem	0.71	chase	0.95	bet	0.38	felt problem	0.34
	felt problem	0.66	financial problem	0.95	financial problem	0.43	felt guilty	0.74
	chase	0.65	bet	0.91	tolerance	0.48	criticized	0.77

Highest and lowest factor loadings for PGSI items in NZHS 2006/07 and HLS 2010 (Delvin & Walton, 2012)

Information about the operationalization of problem gambling, and how this may differ across demographic groups, is clearly important for development of effective interventions. Given the PGSI presents a conceptualisation of the problem gambling construct, analysis of item responses could provide insights that may be of value, in terms of understanding how problem gambling is operationalized, or socialised, within everyday life. Unfortunately, national data on PGSI item responses is rarely reported. In 2009, the Ministry of Health published a one-off analysis of NZHS 2006/07 data by the prevalence of PGSI item responses within the total population. In addition, Delvin & Walton (2012) have reported mean responses to PGSI items, in the NZHS 2006/07 and HLS 2010, for the total population. This information provides a starting point for discussing the operationalization of items.

The PGSI has an ordinal scale in which responses to the items are weighted, or scored, to reflect the frequency of occurrence (Ferris & Wynne, 2001). Within the scale, a “never” response has a weighting of zero (0), the “sometimes” response scores one (1), “most of the time” scores two (2) and “almost always” scores three (3). Comparison of the mean scores, obtained for each item, is a purely descriptive technique that provides information about relative differences and possible pathways for more detailed analysis. Mean scores

are influenced by sample size, and outliers, and total population data can mask important demographic differences.

Area / Abbreviation		PGSI item/question/factor/indicator	NZHS 2006/07		HLS 2010
NZHS 2006/07 ¹	Delvin & Walton (2012)		prevalence (%) ¹	mean ²	mean ²
loss of control	bet	Bet more than you could really afford to lose	3.1	1.17	1.26
motivation	tolerance	Needed to gamble with larger amounts of money to get the same feeling of excitement	1.0	1.17	1.16
chasing	chase	Gone back another day to try and win back the money you lost	1.7	1.1	1.08
borrowing	borrow	Borrowed money or sold anything to get money to gamble	0.4	1.08	1.12
problem recognition	felt problem	Felt you might have a problem with gambling	1.2	1.34	1.49
criticism	criticized	People criticized your betting or told you that you had a gambling problem regardless of whether or not you thought it was true	1.4	1.24	1.13
feelings of guilt	felt guilty	Felt guilty about the way you gamble or what happens when you gamble	2.1	1.26	1.25
negative effects on health	health problem	Gambling caused you any health problems, including anxiety stress or anxiety	0.8	1.27	1.18
financial problems	financial problem	Gambling caused any financial problems for you or your household	0.8	1.34	1.06

¹ Ministry of Health (2009)

² Delvin & Walton (2012)

PGSI items by the prevalence and mean scores of NZHS 2006/07 and HLS 2010 responses

In Delvin & Walton's (2012) analysis of NZHS 2006/07 and HLS 2010 responses, higher mean scores represent the PGSI items with higher overall scores which implies more people had said they experienced the item "sometimes," "most of the time" or "almost always". It is, therefore, reasonable to expect these items would have a higher prevalence, which the NZHS 2006/07 estimated by simply aggregating the number of people across all three response categories (Ministry of Health, 2009). Given Delvin & Walton (2012) have found the difference between NZHS 2006/07 and HLS 2010 estimates of the PGR was not significant, it is also reasonable to expect similarities in the pattern, or order, of mean scores derived from PGSI items. When NZHS 2006/07 and HLS 2010 findings are compared, the latter assumption is partially supported but there are incongruities that warrant further discussion.

The following table ranks PGSI items by prevalence and mean scores derived from NZHS 2006/07 and HLS 2010 responses (Delvin & Walton, 2012; Ministry of Health, 2009). Across both surveys, there are similarities in the order of mean scores which suggest these components of the PGSI are reliable for the total population. In both surveys, "problem recognition" had the highest mean score, "feelings of guilt" ranked third, "motivation"

ranked fifth and “borrowing” had the lowest mean score. However, discrepancies within the order of mean scores for remaining items, notably “financial problems” which ranked 1st equal in NZHS 2006/07 responses but 9th in the HLS 2010, suggest the need for validation. Furthermore, inconsistencies between the prevalence and mean scores of PGSI items in the NZHS 2006/07 are also evident. In general, “loss of control” had the highest prevalence (3.1%) followed by “feelings of guilt” (2.1%), “chasing” (1.7%), “criticism” (1.4%), “problem recognition” (1.2%) and “motivation” (1%). The prevalence of remaining items: “negative effects on health”, “financial problems” and “borrowing” was less than 1%. This picture deviates from mean score findings in which “problem recognition”, “financial problems” and “negative effects on health” had the highest ranking.

Area / Abbreviation 1 2		PGSI item/question/factor/indicator	NZHS 2006/07		HLS 2010
			prevalence (%) ¹	mean ²	mean ²
loss of control	bet	Bet more than you could really afford to lose	1	5	2
feelings of guilt	felt guilty	Felt guilty about the way you gamble or what happens when you gamble	2	3	3
chasing	chase	Gone back another day to try and win back the money you lost	3	6	8
criticism	criticized	People criticized your betting or told you that you had a gambling problem regardless of whether or not you thought it was true	4	4	6
problem recognition	felt problem	Felt you might have a problem with gambling	5	1	1
motivation	tolerance	Needed to gamble with larger amounts of money to get the same feeling of excitement	6	5	5
financial problems	financial problem	Gambling caused any financial problems for you or your household	7	1	9
negative effects on health	health problem	Gambling caused you any health problems, including anxiety stress or anxiety	7	2	4
borrowing	borrow	Borrowed money or sold anything to get money to gamble	8	7	7

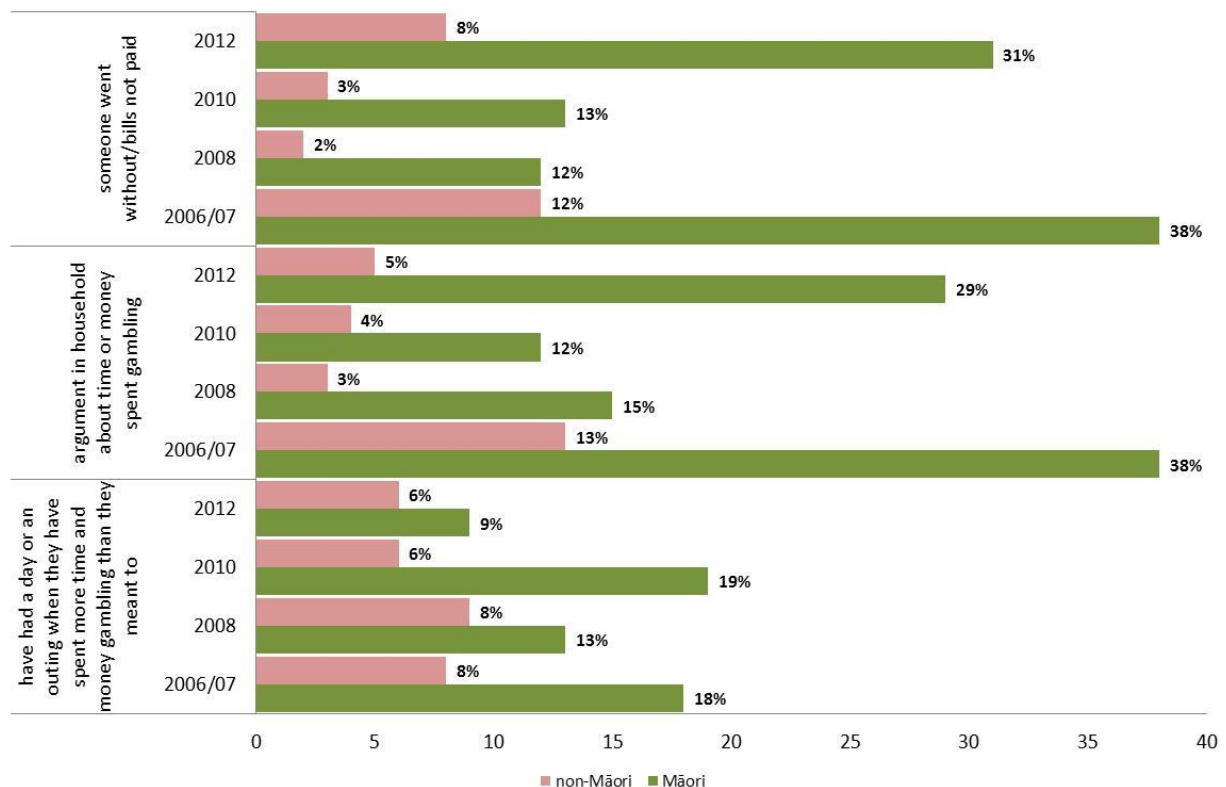
¹ Ministry of Health (2009)

² Delvin & Walton (2012)

Ranking of PGSI items, in the NZHS 2006/07 and HLS 2010, by total population prevalence and mean scores

Unfortunately, mean scores and the prevalence of PGSI items, in the NZHS 2006/07 and HLS 2010, have not been reported for the Māori ethnic group so comparison is not possible. Based on Delvin & Walton’s (2012) factor analysis, however, it seems reasonable to expect the total population data will be masking differences in Māori response patterns. Following this line of thought, it is pertinent to note the HLS administers a range of questions, in addition to the PGSI, which aim to gather information about New Zealander’s knowledge, views and experience of gambling and gambling-related harm (Health Sponsorship Council, 2012; National Research Bureau 2007, 2008, 2010; Tu, 2013). Three of these questions are analogous to the PGSI items “loss of control”, “financial problems” and “criticism/negative

effects on health”, albeit worded another way. In particular, the HLS asks respondents to rate the frequency of “spending more time or money gambling than intended”, “household arguments about time or money spent gambling” and “someone going without or bills not paid”. As mentioned above, highly significant associations between the PGSI score and “household arguments about gambling” and “someone going without/bills not paid” have been cited as evidence of criterion validity (Delvin & Walton, 2012).



HLS supplementary questions by ethnic group, 2006/07 to 2012

In comparison with non-Māori, the HLS 2010 found Māori respondents were 3 to 4 times more likely to spend more time or money than intended (19%), experience household arguments (12%) and someone went without/bills not paid (13%). By the prevalence of corresponding PGSI items for the total population, ie - loss of control (3.1%), financial problems (0.8%) and criticism (1.4%) or negative effects on health (0.8%) - the HLS data suggests Māori experience of these harms may be six to ten-fold higher than their non-Māori counterparts. Alarming, the HLS 2012 has also reported significant increases in Māori household arguments (29%) and going without/bills not paid (31%). By the 2006 Census, more than 100,000 Māori whānau may have this experience. Furthermore, 9% of Māori respondents, and 6% of non-Māori, said they had a day or outing when they spent

more time or money gambling than they meant to. In terms of day-to-day experience, this data suggests PGSI indicators of prevalence grossly under-estimate the impacts of gambling harm.

The underlying issue, this discussion raises, is the wording of survey questions. Validation studies should be asking whether responses to PGSI items are more reliable than comparable HLS questions. There is a need to know whether the wording of questions is influencing the operationalization of concepts across ethnic groups. For all intents and purposes, when asking a lay member of the public, what is the difference between: In the past 12 months ...

- “have you had a day or an outing when you have spent more time or money gambling than you meant to?” and “have you spent more than you could really afford to lose?”
- “has there been an argument in your household about the time or money you have spent gambling?” and “has gambling caused you any health problems, including stress or anxiety?/have people criticized your betting or told you that you had a gambling problem, regardless of whether you thought it was true?”
- “has someone gone without or have bills not been paid because of your gambling?” and “has gambling caused any financial problems for you or your household?”

More importantly, which of these questions is more reliable as a measure of gambling harm? and which format is most appropriate, meaningful and acceptable for the New Zealand population, specifically indigenous Māori who are clearly carrying the burden of gambling harm?

In summary, this chapter presents a grim and cumulative picture of the inequities that gambling has created for Māori. On top of horrendously disproportionate expenditure on NCEGMs, Māori are gambling more often, play a wider range of activities and are more likely to participate in continuous and non-continuous types of activity. The number of frequent gamblers is also on the rise and past year participation rates are increasing. Māori have higher risks of problem gambling but this is clearly exacerbated by a system that has enabled gambling venues, gambling outlets and gambling machines to be concentrated in high density Māori communities. Despite screening the population for sub-clinical indicators

of problem gambling since 1991, no-one has taken the time to consolidate this information into a meaningful dataset. New Zealand's gambling literature is largely characterised by incompatible datasets, under-estimated expenditure, inadequate measures of problem gambling and an urgent need for validation studies. After decades of research, in New Zealand, Australia, Britain and the USA, principal investigators have concluded the introduction, and use, of more robust tools for the measurement of problem gambling is unlikely (Volberg & Wray, 2007). In their vast experience, flawed definitions of problem gambling are an integral part of the mechanism that ensures wealth is transferred from the poor to the rich in contemporary societies.

Appendix 1: Gambling Resource Information Project (GRIP)

Session	Introduction	Education & Awareness Raising	Support Services	Community Action	Title	Content
1	✓				Introduction	overview of course content, whakawhanaungatanga, resource packs
2	✓				What is Gambling	general discussion about definitions of gambling, gambling and gaming, safe and problem gambling
3		✓			Views from the Gambling Industry	Guest speaker talks about the gambling industry, eg Casino operations, management, host responsibilities to minimise gambling harm, eg self-bar, staff training
4		✓			What is happening in our communities?	Guest speaker talks about potential impacts/harms for individuals/whānau/communities, distribution of funding, statistical information about the number of pokie machines, strategies for change
5			✓		Where can we go for help?	Guest speakers from Gambling Support Services talk about the signs of problem gambling and support services
6		✓			History of Māori & Gambling	Guest speaker talks about historical impacts on Māori, when gambling was introduced, prevalence among Māori
7				✓	Funding opportunities to help reduce Gambling Harm	Guest speaker talks about funding opportunities & how to fill out application forms and
8		✓			Some Realities about Gambling Stats & Facts	deconstruction of popular myths, fact sheets on the odds of winning, who profits most from the pokie machines, interactive (true/false) game, general discussion
9				✓	Creating Your Own Community Resource	individuals design a community resource around their own health promotion message/slogan to reduce gambling harm, eg - a bumper sticker, fridge magnet or pamphlet/flyer
10				✓	Presenting Your Community Resource	individuals present/explain/hand over their resource for evaluation (by independent judge)
					Graduation Ceremony	held one week after completion of the course, participants receive a certificate of completion, successful resource identified/submitted for publication

Appendix 2: New Zealand enacted gambling legislation 1700-2013

Year	Act	Purpose
1700	An Act for the maintenance of archery and the debaring of unlawful games	repealed by Gaming & Lotteries Act 1984
1710	The Gaming Act - an Act against deceitful, disorderly and excessive gaming	repealed by Gaming & Lotteries Act 1985
1728	The Unlawful Games Act	repealed by Gaming & Lotteries Act 1977
1738	The Gaming Act	repealed by Gaming & Lotteries Act 1978
1739	The Gaming Act	repealed by Gaming & Lotteries Act 1979
1744	The Gaming Act - an Act to suppress certain games and lotteries not authorised by Law	repealed by Gaming & Lotteries Act 1980
1835	The Gaming Act	repealed by Gaming & Lotteries Act 1981
1840	Extension of New South Wales Laws to New Zealand Act	repealed by Gaming & Lotteries Act 1983
1841	Appropriation Act (from NSW)	between 1820-1830, over 11,000 convicts shipped to NSW
1841	Court of Requests Act (No 6)	to generate govt revenue from personal income
1865	Otago Municipal Corporations Empowering Act (No 55)	
1866	Vagrant Act (No 10)	
1866	East Coast Land Titles Investigation Act (No 27)	
1870	Appropriation Act (No 97)	
1876	Cromwell Racecourse Reserve Act (No 77)	
1878	Repeals Act (No 28)	
1878	Greymouth Racecourse Reserve Act (No 32)	repealed some of the NSW legislation
1878	Christchurch Racecourse Reserve Act (No 29)	
1879	Queenstown Racecourse Reserve Act (No 33)	
1881	Gambling & Lotteries Act (No 10)	banned public betting, Colonial Secretary given authority to issue licences for raffles/totalisator
1881	Adoption of Children Act (No 9)	
1881	Public Reserves Act	
1881	Waimate Racecourse Reserve Act (No 18)	
1882	Asburton Racecourse Reserve Act (No 21)	
1883	Timaru Racecourse Reserve Act (No 8)	
1884	Hokitika Racecourse Reserve Act (No 14)	
1884	Police Offences Act (No 24)	
1885	Gaming and Lotteries Act Amendment Act (No 12)	
1885	Public Reserves Amendment Act (No 29)	allowed race course sweepstakes
1887	New Plymouth Recreation and Racecourse Reserve Act (No 5)	
1890	Palmerston North Reserves Act (No 13)	
1891	Stamp Acts Amendment Act (No 30)	
1893	Criminal Code Act (No 56)	
1894	Gaming Act (No 20)	
1895	Reserves Disposal and Exchange Act (No 65)	
1900	Post Office Act (No 21)	
1902	Appropriation Act 1902 (No 62)	
1906	Reserves and other Lands Disposal and Public Bodies Empowering Act (No 60)	
1906	Post Office Act Amendment Act (No 31)	
1907	Gaming and Lotteries Amendment Act (No 65)	
1907	Statutes Repeal Act (No 40)	
1907	Tariff Act (No 15)	
1907	Hutt Park Act (No 25)	
1908	Gaming Act (No 68)	
1908	Consolidated Statutes Enactment Act (No 4)	
1908	Licensing Act	
1908	Land for Settlements Act	
1909	Race Meetings Act (No 23)	
1909	Stamp Duties Amendment Act (No 17)	
1910	Gambling & Lotteries Amendment Act	
1910	Gaming Amendment Act (No 56)	banned bookmakers
1911	Invercargill Reserves Vesting Act (No 34)	1st Royal Commission
1913	Reserves and other Lands Disposal and Public Bodies Empowering Act (No 67)	
1914	Gaming Amendment Act 1 (No 23)	
1915	Cook Islands Act (No 40)	increased totalisator permits, 2nd Royal Commission to determine distribution model
1915	Gaming Amendment Act (No 57)	
1915	Finance Act (No 39)	
1915	Reserves and other Lands Disposal and Public Bodies Empowering Act (No 68)	
1920	Gaming Amendment Act (No 10)	
1920	ANZAC Day Act (No 78)	3rd Royal Commission, determine distribution of totalisator licences
1920	Finance Act (No 83)	
1920	Gaming Amendment Act No 2 (No 40)	
1920	Statutes Repeal and Expiring Laws Amendment and Continuance Act (No 12)	
1920	New Plymouth Recreation and Racecourse Reserve Amendment Act (No 6)	
1921	Public Reserves and Domains Amendment Act (No 69)	Racing Board establishes Licencing Committee to issue totalisator licences
1921	Samoa Act (No 16)	
1921	Customs Amendment Act (No 19)	
1921	Finance No 2 Act (No 25)	
1921	Valuation of Land Amendment Act (No 34)	
1922	Stamp Duties Act (No 37)	
1922	Whangarei Borough Leasing Empowering Act (No 21)	
1923	Samoa Amendment Act (No 24)	
1923	Stamp Duties Act (No 26)	
1924	Gaming Amendment Act (No 41)	
1924	Appropriation Act (No 65)	
1925	Finance Act (No 51)	
1925	Valuation of Land Act 1925 (No 31)	
1927	Industrial Conciliation and Arbitration Amendment Act No 2 (No 10)	
1927	Finance No 2 Act (No 74)	
1927	Stamp Duties Amendment Act (No 62)	
1928	Post and Telegraph Act (No 12)	
1928	Public Reserves, Domains and National Parks Act (No 36)	
1930	Finance No 2 Act (No 50)	Racing Board's Executive Committee takes over functions of Licencing Comm
1931	Stamp Duties Amendment Act (No 25)	
1932	Finance Act (No 11)	1932-1961 profits from Art Unions distributed by the Minister of Internal Affairs
1933	Card Tournament Regulation Act (No 38)	
1933	Law of Libel Amendment Act (No 47)	
1933	Finance (No 2) Act (No 41)	
1933	Reserves and other Lands Disposal Act (No 45)	
1934	Appropriation Act (No 30)	
1935	Appropriation Act (No 42)	
1936	Finance No 2 Act (No 36)	
1937	Industrial Conciliation and Arbitration Act No 2 (No 10)	
1937	Finance Act (No 17)	
1938	Reserves and other Lands Disposal Act (No 19)	
1941	Native Purposes Act	
1943	Appropriation Act (No 27)	

Year	Act	Purpose
1946		4th Royal Commission on Gaming & Racing
1948	Gaming Poll Act (No 19)	
1948	General Agreement on Tariffs and Trade (No 1)	
1949	Gaming Amendment Act (No 32)	introduced TAB, widened the scope of raffle prizes, facilitated licences - aimed to encourage legal raffles
1949	Reserves and other Lands Disposal Act (No 34)	
1950	Limitations Act (No 65)	
1950	Gaming Amendment Act (No 36)	amended 2nd Schedule of Gaming Act 1908)
1950	Finance Act (No 93)	
1951	Valuation of Land Act (No 19)	
1953	Gaming Amendment Act (No 109)	
1953	Reserves and Domains Act (No 69)	
1953	Reserves and other Lands Disposal Act (No 107)	
1954	Industrial Conciliation and Arbitration Act (No 72)	
1954	Stamp Duties Act (No 52)	
1954	Land and Income Tax Act 1954 (No 67)	
1954	Rating Amendment Act (No 48)	
1954	Stamp Duties Act (No 52)	
1955	Gaming Amendment Act (No 96)	
1956	Electoral Act (No 107)	
1957	Stamp Duties Amendment Act (No 77)	
1959	Gaming Amendment Act (No 65)	
1959	Appropriation Act (No 47)	legalised Housie
1959	New Plymouth Recreation and Racecourse Reserve Act (No 13)	
1960	Gaming Amendment Act (No 63)	
1961	Gaming Amendment Act (No 82)	
1961	Licensing Trusts Amendment Act (No 136)	
1961	Stamp Duties Amendment Act (No 55)	
1961	Crimes Act (No 43)	
1962	Gaming Amendment Act (No 114)	established Board of Control to determine policy for the distribution of profits (comprising the Minister of Internal Affairs, Prime Minister, Leader of Opposition and 3 people appointed by the Governor-General), distribution committees established
1962	Cook Islands Amendment Act (No 40)	
1962	Sale of Liquor Act (No 139)	
1963	Gaming Amendment Act (No 28)	
1963	Queen Elizabeth the Second Arts Council of NZ (No 54)	
1964	Appropriation Act (No 120)	
1964	Gaming Amendment Act (No 53)	
1965	Building Societies Act	
1965	Gaming Amendment Act (No 85)	
1965	Stamp Duties Amendment Act (No 21)	
1967	Gaming Amendment Act (No 39)	
1967	Stamp Duties Amendment Act (No 8)	
1967	Rating Act (No 123)	
1967	Stamp Duties Amendment Act (No 8)	
1968	Gaming Amendment Act 1968 (No 2)	
1968	Gaming Amendment Act (No 2)	
1968	Gaming Amendment Act No 2 (No 141)	
1968	Gaming Amendment Act (No 2)	
1968	Counties Amendment Act (No 124)	
1968	Municipal Corporations Amendment Act (No 123)	
1969	Reserves and other Lands Disposal Act (No 131)	
1970	Gaming Amendment Act (No 64)	
1970	Age of Majority Act (No 137)	
1970	Gaming Amendment Act (No 64)	
1970	Rating Amendment Act (No 119)	
1971-1992	Gaming Duties Act by Parliamentary Counsel	
1971-1994	Gaming & Lotteries Act by Parliamentary Counsel	
1971-1996	Racing Acts by Parliamentary Counsel	
1971	Gaming Duties Act (no 34)	
1971	Racing Act (No 155)	
1971	Gaming Amendment Act (No 70)	
1971	Gaming Duties Amendment Act (No 34)	
1971	Racing Act (No 155)	
1971	Municipal Corporations Amendment Act (No 62)	
1971	Counties Amendment Act (No 63)	
1972	Gaming Amendment Act (No 62)	
1974	Queen Elizabeth the Second Arts Council of NZ (No 67)	
1974	Racing Amendment Act (No 115)	
1976	Gaming Duties Amendment Act (No 16)	
1977	Gambling & Lotteries Act (No. 84)	established NZ Lotteries Board
1977	Reserves Act 1977 (No 66)	administers rules for Instant Kiwi, Keno, Lotto, Bingo etc
1977	Racing Amendment Act (No 99)	
1977	Gaming and Lotteries Act (No 84)	
1977	Seddon Shield Districts Trotting Jackpot Empowering Act - Private (No 2)	
1977	Higher Salaries Commission Act (No 110)	
1977	Finance Act (No 75)	
1978	NZ Film Commission Act	
1978	The Gaming and Lotteries (licensed Promoters) Regulations 1978, Amendment No. 5	
1979	Gaming and Lotteries Amendment Act (No 90)	
1979	Racing Amendment Act (No 105)	
1980	Racing Amendment Act (No 55)	
1980	Gaming and Lotteries Amendment Act (No 112)	
1980	Building Societies Amendment Act (No 92)	
1980	Higher Salaries Commission Amendment Act (No 31)	
1981	Boxing and Wrestling Act	
1981	Casino Control (Applications and Hours) Regulations	
1981	Gaming and Lotteries Amendment Act (No 70)	
1982	Gaming and Lotteries Amendment Act (No 73)	
1982	Sale of Liquor Amendment Act (No 98)	
1983	Gaming and Lotteries Amendment Act (No 75)	
1983	Racing Amendment Act (No 131)	
1983	Trustee Banks Act (No 116)	
1984	Finance Act (No 21)	
1985	Goods and Services Tax Act (No 141)	
1986	Gaming Duties Amendment Act (No 47)	
1986	Racing Amendment Act (No 68)	
1987	Gaming & Lotteries Act (No 2)	
1987	Conservation Act	
1987	Gaming and Lotteries Amendment Act (No 76)	introduced Lotto, NZ Lotteries Commission, levy to fund Compulsive Gambling Society
1987	Gaming and Lotteries Amendment Act (No 143)	
1987	Recreation and Sport Act (No 13)	

Year	Act	Purpose
1987	Building Societies Amendment Act (No 175)	
1988	Racing Amendment Act	
1988	Gaming and Lotteries Amendment Act (No 186)	licensing of EGMs
1988	Securities Amendment Act (No 234)	
1988	Trustee Amendment Act (No 119)	
1988	Taxation (Simplification and Other Remedial Matters) (No 101)	
1988	The Gaming machines (Licence Fees) Regulations 1988	
1989	Sale of Liquor Act (No 63)	
1989	Gaming and Lotteries Amendment Act (No 118)	
1989	Racing Amendment Act No 2 (No 93)	
1990	Casino Control Act (No 62)	licensing of Casinos
1990	Finance No 2 Act (No 73)	
1991	Gaming & Lotteries Act (No 2)	
1991	Gaming Duties Amendment Act (No 148)	
1991	Gaming and Lotteries Amendment Act (No 101)	Instant Kiwi (Instant Game) Rules
1991	Gaming and Lotteries Amendment Act (No 89)	
1991	The Gaming Machines (Licence Fees) Regulations 1991	
1991	Kumeu District Agricultural and Horticultural Society Act (No 1)	
1991	Judicature Amendment Act (No 60)	
1991	Casino Control (Applications and Hours) Regulations	
1992	Gaming and Lotteries (Licence Fees) Regulations 1992	
1992	Gaming Duties Amendment Act (No 93)	
1992	Racing Amendment Act (No 41)	
1992	Gaming and Lotteries Amendment Act (No 120)	Instant Kiwi (Prize Competition) Rules, terminated Golden Kiwi
1992	Goods and Services Amendment Act No 2 (No 116)	
1993	Gaming and Lotteries Prizes Notice	
1994	Gaming & Lotteries Act (No 2)	
1994	Gaming & Lotteries Amendment Act (No 34)	Keno Rules
1994	Arts Council of NZ Toi Aotearoa Act	
1994	Casino Control (Certificates of Approval and Warrants) Regulations	
1994	Arts Council of NZ Toi Aotearoa Act (No 19)	
1994	Gaming and Lotteries Amendment Act No 2 (No 149)	
1994	Tax Administration Act (No 166)	
1994	Countrywide Banking Corporation Limited Act (No 1)	
1995	Racing Amendment Act (No 78)	
1995	Racing Amendment Act No 2 (No 81)	
1995	Tax Administration Amendment Act (No 24)	
1995	Gaming Duties Amendment Act (No 93)	
1996	Gaming Duties Amendment Act	
1996	Gaming & Lotteries Act (No 2)	
1996	Gaming & Lotteries Amendment Act	Bingo Rules
1996	Fisheries Act	
1996	Gaming Duties Amendment Act (No 61)	
1996	Gaming and Lotteries Amendment Act (No 125)	
1996	Gaming and Lotteries Amendment Act No 2 (No 158)	
1996	Tax Administration Amendment Act (No 56)	
1996	Financial Transactions Reporting Act (No 9)	
1996	Gaming Duties Amendment Act (No 61)	
1997	Casino Control (Moratorium) Amendment Act	
1997	Securities Amendment Act (No 54)	
1997	Gaming and Lotteries (Licence Fees) Regulations 1997	
1997	Gamint and Lotteries (Problem Gambling Levy) Regulations 1997	
1997	Trans-Tasman Mutual Recognition Act (No 60)	
1997	Taxation (Remedial Provisions) Act (No 175)	
1998	Gaming and Lotteries (Problem Gambling Levy) Regulations 1998	
1998	District Courts Amendment Act (No 76)	
1998	Maritime Transport Amendment Act (No 2) (No 116)	
1999	Stamp Duties Abolition Act (No 61)	
1999	Gaming Amendment Act (No 70)	
1999	Gaming and Lotteries (Problem Gambling Levy) Regulations 1999	
1999	Taxation (Accrual Rules and other remedial Matters) Act (No 59)	
1999	New Plymouth Recreation and Racecourse Reserve Act (No 2)	
2000	Racing Amendment Act	
2000	Casino Control (Moratorium Extension) Amendment Act	
2000	Gaming & Lotteries Amendment Act	
2000	Gaming and Lotteries Amendment Act (No 46)	disestablished Compulsive Gambling Society, introduced Problem Gambling Foundation of NZ
2000	Gaming and Lotteries (Problem Gambling Levy) Regulations 2000	
2001	Gaming and Lotteries (Licence Fees) Amendment Regulations 2001	
2001	Human Rights Amendment Act (No 96)	
2001	Taxation (Taxpayer Assessment and Miscellaneous Provisions) Act (No 85)	
2001	Taxation (Beneficiary Income of Minors, Services-Related Payments and Remedial Matters) (No 4)	
2001	Gaming and Lotteries (Problem Gambling Levy) Regulations 2001	
2002	Sports & Recreation NZ Act	
2002	Sports & Recreation NZ Act (No 38)	
2002	Appropriation (2001/02) Supplementary Estimates Act (No 18)	
2002	Appropriation (2002/03 Supplementary Estimates) Act (No 41)	
2002	Taxation (Relief, Refunds and Miscellaneous Provisions) Act (No 32)	
2002	Gaming and Lotteries (problem Gambling Levy) Regulations 2002	
2003	Gambling Act (No 51)	Gambling Commission established, repealed Casino Control Act 1990, Gaming & Lotteries Act 1977
2003	Gambling Act Commencement Order (SR 2003/384)	
2003	Gaming and Lotteries (Licence Fees) Amendment Regulations 2003	
2003	Racing Act	
2003	Appropriation (2003/04) Estimates Act (No 42)	
2003	Appropriation (2002/03 Supplementary Estimates) Act (No 25)	
2003	Taxation (GST, Trans-Tasman Imputation and Miscellaneous Provisions) Act (No 122)	
2003	Land Transport (Unauthorised Street and Drag Racing) Amendment Act (No 11)	
2004	Appropriation (2003/04) Supplementary Estimates Act (No 53)	
2004	Appropriation (2004/05) Estimates Act (No 73)	
2004	Crown Entities Act (No 39)	
2004	Gambling (Harm Prevention and Minimisation) Regulations	
2004	Gambling (Problem Gambling Levy) Regulations 2004 (No. 275)	
2004	Gambling (Class 4 Net Proceeds) Regulations, 2004	
2004	Gambling (Fees and Revocations) Regulations 2004	
2004	Gambling (Forms) Regulations 2004	
2004	Gambling (Infringement Notices) Regulations 2004	
2004	Gambling Act (Casino Gambling Equipment) Minimum Standards 2004	
2004	Gambling Act (Class 4 Gambling Equipment) Minimum Standards 2004	
2004	Gambling Act (Game of Chance) Game Rules 2004	
2004	Gambling Act (Housie) Game Rules 2004	

Year	Act	Purpose
2004	Gambling Act (Instant Games) Game Rules 2004	
2004	Gambling Act (Lottery) Game Rules 2004	
2004	Gambling Act (Prize Competition) Game Rules 2004	
2005	Charities Act (No 39)	
2005	Gambling Amendment Act (No 2)	
2005	Gambling Amendment Act (No 35)	
2005	Gaming Amendment Act No 2 (No 104)	
2005	Racing Amendment Act	
2005	Gambling (Prohibited Property) Regulations 2005	
2005	Gambling (Licensed Promoters) Regulations 2005	
2005	Appropriation (2004/05) Supplementary Estimates Act (No 75)	
2005	Appropriation (2005/06 Estimates) Act (No 85)	
2006	Racing Amendment Act	
2006	Gambling Act Game Rules (Class 4) Game Rules 2006	
2006	Gambling (Class 4 Banking) Regulations (SR 2006/40): regulation 4	
2006	Gambling (Class 4 Net Proceeds) Regulations 2004	
2006	Appropriation (2005/06) Supplementary Estimates Act (No 21)	
2006	Taxation (Depreciation, Payment Dates Alignment, FBT and Miscellaneous Provisions (No 3)	
2006	Gambling (Electronic Monitoring Fees) Regulations 2006	
2006	Gambling Infringement Notices) Amendment Regulations 2006	
2007	Racing Amendment Act	
2007	Appropriation (2006/07) Supplementary Estimates Act (No 22)	
2007	Racing Amendment Act (No 74)	
2007	Gambling Amendment Act	
2007	Gambling (Problem Gambling Levy) Regulations 2007 (No 106)	
2007	Gambling (Fees) Regulations 2007	
2008	Gambling Amendment Act (August)	
2008	Gambling Amendment Act (October)	
2010	Gambling Amendment Act	
2010	Gambling (Problem Gambling Levy) Regulations 2010 (No 113)	
2011	Gambling Amendment Act	
2012	Gambling Amendment Act	
2013	Gambling Amendment Act (1 July)	
2013	Gambling (Problem Gambling Levy) Regulations 2013	
2013	Gambling Amendment Act (18 July)	

Appendix 3: Establishment of Racing Tracks & Clubs

5 January 1841	Epsom Racecourse, Auckland 1st anniversary	1890	Taupo
January 1841	Wellington Racecourse, 1st anniversary	1891	Raglan
20 October 1842	Petone Beach	1891	Beaumont
3 February 1845	Stoke, Nelson 1st anniversary	1891	Stratford
1842	Hutt Park, Wellington	1891	Pahiatua
1842	Burnham Water, Wellington - 1st Grandstand	1891	Wyndham
28 December 1848	Whanganui	1897	Rotorua
23 March 1849	Dunedin, 1st anniversary	1910	Whangarei
16 December 1851	Hagley Park, Canterbury 1st anniversary	1912	Banks Peninsula
1854	West Coast	1914	Dargaville
1854	Taranaki Province	1915	Waipa
1854	Foxton	1919	Counties
1 January 1857	Hawkes Bay	1920	Matamata
1857	Rangitikei	1932	Rotorua-BoP
1860	Otago	1877	Paeroa
1864	Wairarapa	1877	Reefton
1865	Wellington	1877	Ohinemuri
1866	Westland	1878	Ashburton
1867	Greymouth Jockey Club	1879	Fielding
1868	Thames Jockey Club	1880	Manawatu
1869	Tapanui	1880	Marlborough
1870	South Waikato	1880	Te Aroha
1870	Poverty Bay	1880	Waikouaiti
1872	Masterton	1882	Kurow
1872	Pakuranga	1882	Egmont
1873	Bay of Plenty Jockey Club	1882	Woodville
1873	Tauranga-BoP	1884	Levin
1873	Waikato	1884	Geraldine
1874	Auckland	1884	Waipukurau
1874	Hawkes Bay	1885	Central Otago
1874	Taranaki	1885	Invercargill
1875	Winton Jockey Club	1886	Otaki-Māori
1875	Hororata	1886	Riverton
1875	North Canterbury	1886	Marton
1875	Timaru	1887	Kumara
1875	Southland	1887	Southland
1876	Waimate	1889	Avondale
1877	Paeroa	1889	Gore
1877	Reefton	1890	Taupo
1877	Ohinemuri	1891	Raglan
1878	Ashburton	1891	Beaumont
1879	Fielding	1891	Stratford
1880	Manawatu	1891	Pahiatua
1880	Marlborough	1891	Wyndham
1880	Te Aroha	1897	Rotorua
1880	Waikouaiti	1910	Whangarei
1882	Kurow	1912	Banks Peninsula
1882	Egmont	1914	Dargaville
1882	Woodville	1915	Waipa
1884	Levin	1919	Counties
1884	Geraldine	1920	Matamata
1884	Waipukurau	1932	Rotorua-BoP
1885	Central Otago	1947	Taumarunui
1885	Invercargill	1958	Whakatane
1886	Otaki-Māori	1994	Cambridge
1886	Riverton	2005	Canterbury
1886	Marton	2007	South Canterbury
1887	Kumara		
1887	Southland		
1889	Avondale		
1889	Gore		

Appendix 4: Diagnostic Interview Schedule for Pathological Gambling, DSM III, IV & 5, 1980-2013

	DSM-III (1980)	DSM-III- R (1987)	DSM-IV (1994)	DSM-5 (2013)
A. Gambling compromises, disrupts, or damages family, personal and vocational pursuits, as indicated by at least 3 of the following:	✓			
Maladaptive gambling behaviour, as indicated by at least 4 of the following:		✓		
Persistent and recurrent maladaptive gambling behaviour, as indicated by 5 or more of the following:			✓	
Persistent and recurrent problematic gambling behavior leading to clinically significant impairment or distress as indicated by 4 or more of the following:				✓
preoccupation Frequent preoccupation with gambling or with obtaining money to gamble		✓		
Is preoccupied with gambling (e.g. preoccupied with reliving past gambling experiences, handicapping or planning next venture, or thinking of ways to get money with which to gamble)			✓	
Is often preoccupied with gambling (e.g. persistent thoughts of reliving past experiences, handicapping or planning next venture, thinking of ways to get money with which to gamble)				✓
tolerance A need to increase the size or frequency of bets to achieve the desired excitement		✓		
Needs to gamble with increasing amounts of money in order to achieve the desired excitement			✓	✓
withdrawal symptoms Restlessness or irritability if unable to gamble		✓		
Is restless or irritable when attempting to cut down or stop gambling			✓	✓
escape Often gambles when feeling distressed (e.g., helpless, guilty, anxious, depressed).				✓
Gambles as a way of escaping from problems or relieving a dysphoric mood (e.g. feelings of helplessness, guilt, anxiety, depression)			✓	
chasing of losses Repeated loss of money by gambling and returning another day to win back losses ('chasing')		✓		
After losing money gambling, often returns another day to get even ('chasing' one's losses)			✓	✓
lying to family Inability to account for loss of money or to produce evidence of winning money, if this is claimed	✓			
Lies to family members, therapists, or others to conceal the extent of involvement with gambling			✓	
Lies to conceal the extent of involvement with gambling				✓
loss of control Repeated efforts to reduce or stop gambling		✓		
Frequent gambling of large amounts of money or over a longer period of time than intended				✓
Has repeated unsuccessful efforts to control, cut back or stop gambling			✓	
illegal acts Default on debts or other financial responsibilities	✓			
Arrest for forgery, fraud, embezzlement or income tax evasion because of attempts to obtain money for gambling	✓			
Has committed illegal acts such as forgery, fraud, theft or embezzlement to finance gambling			✓	
Borrowing of money from illegal sources (loan sharks)	✓			
Frequent gambling when expected to meet social or occupational obligations		✓		
risk significant relationship Loss of work because of absenteeism to pursue gambling activity	✓			
Disrupted family or spouse relationship because of gambling	✓			
Sacrifice of some important social, occupational, or recreational activity to gamble		✓		
Continuation of gambling despite inability to pay mounting debts, or despite other significant social, occupational, or legal problems that the person knows to be exacerbated by gambling		✓		
Has jeopardised or lost a significant relationship, job or educational or career opportunity because of gambling			✓	✓
bail out Necessity for another person to provide money to relieve a desperate financial situation	✓			
Relies on others to provide money to relieve a desperate financial situation caused by gambling			✓	✓
B. The gambling is not due to Antisocial Personality Disorder	✓	✓		
The gambling is not better explained by a manic episode			✓	✓

Appendix 5: SOGS-R Problem Gambling Screen

Area	Question/Indicator	ever	in the past 6 months
chasing losses	When you participate in gambling activities, how often do you go back another day to win back money you have lost?		
lying	Have you claimed to be winning money gambling when in fact you lost? Have you ever hidden betting slips, lottery tickets, gambling money, IOUs or other signs of betting or gambling from your spouse, children or other important people in your life?		
preoccupation	Do you spend either more time or more money gambling than you intend?		
criticism	Have people criticized your gambling?		
feelings of guilt	Have you felt guilty about the way you gamble, or what happens when you gamble?		
loss of control	Have you ever felt that you would like to stop betting money on gambling but you didn't think you could?		
negative effects on health	Have you had arguments with the people you live with about money, that centred on your gambling?		
risk significant relationship	Have you missed time from work or school or study due to gambling?		
bail out/borrowing	Have you used the following as a source of money for gambling or to pay gambling debts? <ul style="list-style-type: none"> borrowed from household money borrowed from spouse/partner borrowed from relatives or in-laws loans from banks, loan companies cash withdrawals on credit cards loans from loan sharks cashed in stocks, bonds etc sold personal or family property borrowed from cheque account by writing bad cheques 		
problem recognition	Do you feel that you have a problem with gambling?		

Appendix 6: NZHS 2002/03 Problem Gambling Screen

Area	In the last 12 months	yes	no
negative effects on health	Have you ever felt worried or depressed after playing any of those games?		
criticism	Has anyone been worried or concerned enough to ask you about your gambling?		
borrowing	Have you ever gone into debt or borrowed money or had your credit card owing, from money spent on gambling?		
problem recognition	(a) Do you feel that you have ever had a problem with gambling? (b) Have you had a problem with gambling in the last 12 months		
lying	Have you said you were winning from gambling when in fact you lost?		
loss of control	Have you felt you would like to stop gambling but didn't think that you could?		
feelings of guilt	Have you felt guilty or bad for doing wrong because of your gambling?		
chasing losses	Have you felt at any time, the need to bet more and more money?		
risk significant relationship	Have you had to lie to people important to you about how much you gambled?		

Appendix 7: Problem Gambling Severity Index (PGSI)

Area	In the last 12 months	never	sometimes	most of the time	always
loss of control	How often have you bet more than you could really afford to lose?	0	1	2	3
motivation	Have you needed to gamble with larger amounts of money to get the same feeling of excitement?	0	1	2	3
chasing	How often have you gone back another day to try to win back the money you lost?	0	1	2	3
borrowing	How often have you borrowed money or sold anything to get money to gamble?	0	1	2	3
problem recognition	How often have you felt that you might have a problem with gambling?	0	1	2	3
criticism	How often have people criticised your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?	0	1	2	3
feelings of guilt	How often have you felt guilty about the way you gamble or what happens when you gamble?	0	1	2	3
negative effects on health	How often has gambling caused you any health problems, including stress or anxiety?	0	1	2	3
financial problems	How often has your gambling caused any financial problems for you or your household?	0	1	2	3

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