Table 1: Risk factors

<table>
<tr><th colspan="3">AGENT – Gambling exposure</th></tr>
<tr><td colspan="2">Modifiable Risk Factors</td><td>Non-Modifiable Risk Factors</td></tr>
<tr><td>Risk Factor</td><td>How modified?</td><td>Risk Factor</td></tr>
<tr><td>Exposure to continuous forms of gambling, e.g.
- EGMs
- Casino table games</td><td>Legislation
- Host responsibilities
- Responsible gambling features (RGFs)</td><td rowspan="4"></td></tr>
<tr><td>Exposure through occupation, e.g.
- Casino employees</td><td rowspan="3">Increase awareness and knowledge</td></tr>
<tr><td>Exposure through distance to venue, e.g.
- To EGM venue/casino</td></tr>
<tr><td>Familial exposure, e.g.
- Family members with problem gambling
- Early onset of gambling participation
- Early introduction to gambling by family</td></tr>
<tr><th colspan="3">ENVIRONMENT – Physical, social, cultural setting</th></tr>
<tr><td colspan="2">Modifiable Risk Factors</td><td>Non-Modifiable Risk Factors</td></tr>
<tr><td>Risk Factor</td><td>How modified?</td><td>Risk Factor</td></tr>
<tr><td>Increased accessibility and availability to gambling, e.g.
- Location of gambling outlets
- Outlet settings (social, internet etc)
- Opening times</td><td rowspan="2">Legislation</td><td rowspan="4">- Male gender
- Youthfulness
- Single marital status
- Low educational status
- Ethnicity
- Migrant status
- Low socio-economic status</td></tr>
<tr><td>Gambling technologies, e.g.
- Internet/interactive television
- Telephone
- Debit/credit card transaction</td></tr>
<tr><td>Attitudinal change (general public), e.g.
- Awareness/knowledge of problem gambling
- Concern about problem gambling
- Views on gambling</td><td rowspan="3">Increase awareness and knowledge</td></tr>
<tr><td>Cultural factors/acculturative stress, e.g.
- Cultural reasons for gambling
- Stress on migrants</td></tr>
<tr><td>Familial factors
- Intergenerational aspects</td><td></td></tr>
<tr><th colspan="3">HOST – Individual Factors</th></tr>
<tr><td colspan="2">Modifiable Risk Factors</td><td>Non-Modifiable Risk Factors</td></tr>
<tr><td>Risk Factor</td><td>How modified?</td><td>Risk Factor</td></tr>
<tr><td>Physical health (various problems)</td><td rowspan="2">Increase awareness and knowledge</td><td rowspan="2">- Biological factors
- Temperament and personality</td></tr>
<tr><td>Cognitions, e.g.
- Cognitive distortions (such as perceived level of skill involved)</td></tr>
<tr><td>Substance misuse comorbid with gambling, e.g.
- Alcohol and smoking</td><td>Legislation, e.g.
- Smoking bans</td><td></td></tr>
</table>

3.3.5 Prospective studies

The validity of theoretical frameworks that propose developmental pathways for sub-types of problem gamblers is dependent on future research. In particular, the need for prospective studies to clarify the role and importance of risk factors in the development of problem gambling is highlighted throughout this review. Ideally, these studies would follow representative population samples for re-assessment over time, commencing before the onset of problem gambling and allowing for examinations of subsequent transitions between the phases of non-problem and problem gambling.

A few studies have prospectively examined gambling and problem gambling from childhood to adolescence (Slutske, Jackson, & Sher, 2003; Vitaro, Wanner, Ladouceur, Brendgen, & Tremblay, 2004; Winters, Stinchfield, Botzet, & Anderson, 2002; Winters, Stinchfield, & Kim, 1995). The first study of this type was conducted on adolescents from Minnesota, U.S. by Winters, Stinchfield & Kim (1995). Over an 18-month period, these authors found an increase in preferences for legal gambling activities (such as EGMs and lotteries) and a decrease in preferences for informal and unregulated gambling (such as cards and games of personal skill).

A subsequent five-year review found no significant changes in the numbers of participants that engaged in infrequent and regular gambling. However, the proportion of participants reporting sub-clinical problems (at-risk gamblers) did increase (Winters et al., 2002). These authors also identified a range of risk factors among young people that were associated with subsequent adult gambling and problem gambling. Risk factors associated with gambling included early onset of gambling, whilst risk factors for at-risk adult gambling and problem gambling included early at-risk and problem gambling, prior substance misuse and delinquency, male gender, parental problem gambling and poor school performance.

A more recent study by Slutske, Jackson & Sher (2003) examined the issue of natural recovery amongst university students over an 11-year period. The authors found that whilst overall prevalence did not change (due to new cases balancing out recoveries) problem gambling was highly transient during late adolescence and early adulthood. Males also experienced more problems than females and engaged more in unregulated and illegal forms of gambling. As mentioned earlier in the current review, the increased introduction and accessibility of EGMs resulted in decreased gender differences.

The most recent prospective study in Montreal, Canada was conducted by Vitaro et al (2004). A large sample of boys (n = 903) aged between 11 and 17 years were recruited from an ongoing study that began whilst they were in kindergarten. Therefore a number of relevant measures were available from early childhood. In that study, three groups of measures were used: (1) 'Low gamblers' (minimal gambling involvement from age 11 to 17 years), (2) 'Chronic high gamblers' (gambling participation had started by age 11 and continued to increase over the years), and (3) 'Late onset gamblers' (a late gambling onset after 13 years but rapidly increasing levels of participation).

Each of these groups differed on a number of measures during childhood and early adolescence. For example, 'chronic high gamblers' were more impulsive, uninhibited

and prone to risk taking whilst 'late onset gamblers' consistently scored between 'chronic' and 'low' gamblers. These findings indicate that a range of theoretical understandings is required to account for the range of adolescent pathways to gambling and problem gambling (Vitaro et al., 2004).

In addition to the prospective studies mentioned that have followed participants from childhood to adulthood, a small number of prospective studies have also been conducted that identify a certain consistency in natural recovery over time (Abbott, Williams & Volberg, 1999, 2004; Shaffer & Hall, 2002; Wiebe, Cox & Falkowski-Ham, 2003; Wiebe, Single & Falkowski-Ham, 2001) and transition periods into and out of regular non-problem and problem gambling (Schrans et al., 2000). For example, in a prospective sample of problem and non-problem gamblers, Abbott, Williams & Volberg (2004) identified that while a significant minority of 1991 problem gamblers had developed more serious problems at follow-up in 1998, the majority had become non-problematic.

In summary, recent prospective studies have provided an important dimension to problem gambling research that until now has been lacking. They have predominantly provided an insight into the transitory nature of problem gambling and some of the findings have been consistent with Blaszczynski & Nower's (2002) pathways model of problem development (see Section 3.4.2). However, it must also be acknowledged that these studies continue to be narrow in scope, generally involve highly selective samples and are limited by various conceptual and methodological deficiencies. Future prospective studies must consider the full range of probable risk factors and determine how they individually and interactively contribute to the onset and development of problem gambling (Abbott et al., 2004).

3.4 Gambling behaviours and attitudes/perceptions towards gambling

3.4.1 Historical context and current forms of gambling

Legal gambling in New Zealand throughout the 1970s and most of the 1980s was mainly limited to betting on horse and dog races and the Golden Kiwi (a paper ticket state lottery). Many people also participated in housie (bingo), charitable raffles, casino evenings, prize competitions and a small variety of alternative forms of gambling, both legal and illegal (Abbott, 2001b).

During the mid-1980s, legal gambling activities expanded and by 1988 included electronic gaming machines (EGMs)[13]. Instant Kiwi (an instant scratch lottery) was added in 1989 (Reid & Searle, 1996).

Today, in addition to the forms of gambling described above, gambling activities in New Zealand include Lotto, Lotto Strike, Powerball, Keno and Instant Kiwi. Race and sports betting are also available within various outlets such as stand-alone agencies, terminals in pubs and clubs, several telephone betting centres, interactive television and via an internet site. Telephone competitions are available through 0900 numbers and texting and, as noted earlier, the internet provides a wide variety of gambling activities[14]. New Zealand also has six licensed casinos[15], Christchurch Casino, Sky City Casino (Auckland), Sky City Casino (Hamilton), Dunedin Casino, Steamer Wharf Casino (Queenstown) and Sky Alpine Queenstown Casino. These establishments currently offer different types of table games plus gaming machines (Department of Internal Affairs, 2004).

Gambling has increasingly become a recreational activity for many New Zealanders. However, gambling problems are of particular concern in this country because of the recent gambling proliferation that has seen the introduction of continuous forms of gambling[16] such as EGMs that are reported to be associated with an increased risk of gambling problems[17] (Chetwynd, 1997; Volberg, 1996). Currently, there are approximately 21,846 EGMs in pubs, bars and clubs throughout New Zealand (Department of Internal Affairs, 2005b). In 2003, there were 25,221 EGMs, thus indicating that this figure has reduced significantly as a result of the Gambling Act 2003 (Department of Internal Affairs, 2005c).

Gambling and problem gambling

The major national sources of information regarding gambling and problem gambling in New Zealand are the 1991 and 1999 National Prevalence Surveys (Abbott & Volberg, 1991, 2000). The latter included a representative sample of 6,542 New Zealanders aged 18 years and over. It found that 86% of New Zealand adults had

[13] Prior to EGMs being legalised in hotels and clubs in 1988, approximately 8,000 were already illegally in operation (Reid & Searle, 1996).

[14] In 2000, 0900 telephone games, casinos and internet-based gambling were considered socially undesirable (Amey, 2001).

[15] New Zealand's first casino opened in 1994.

[16] A continuous form of gambling is where the time between stake and outcome is rapid and can be repeated at a high frequency.

[17] As the number of EGMs in New Zealand has increased, so too has the recognition of this gambling form as a socially undesirable activity (Amey, 2001).

participated in at least one form of gambling during the previous six months. This participation rate is high by international standards. In addition, it was estimated that approximately 10% of New Zealand adults are 'regular continuous gamblers'[18] who participate weekly or more often in one or more forms of gambling such as EGMs, race betting or casino table games where winnings can be readily re-invested.

The study also identified that people who reported participating regularly in continuous forms of gambling were significantly more likely to be classified as problem gamblers. Thus 26% of the gamblers who participated regularly on EGMs (outside casinos) and 18% of regular race bet gamblers were considered to be, or have been, problem gamblers. In addition, 19% and 13% respectively, had experienced gambling problems during the previous six months. Problem gamblers were also more likely to report that they preferred playing EGMs (over 70%) or betting on horse and dog races (over 8%) than other forms of gambling (Abbott & Volberg, 2000).

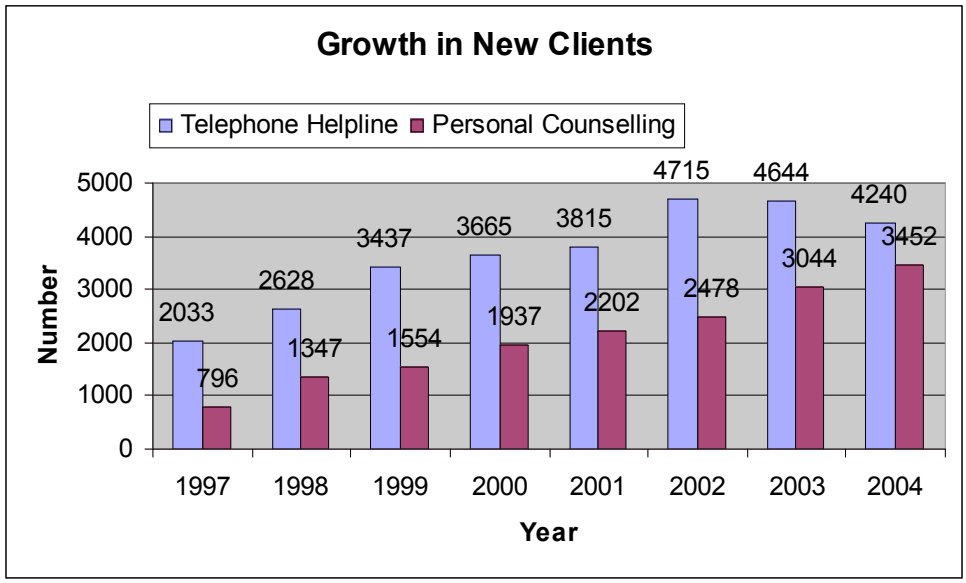
Every five years since 1985, the Department of Internal Affairs has also conducted national surveys on adult participation and attitudes toward gambling (Amey, 2001; Christoffel, 1992; Reid & Searle, 1996; Wither, 1987). These surveys consistently identify steady increases in the proportion of the population who strongly agree that there is a problem in New Zealand with people being heavily involved in gambling. Interestingly, Pacific peoples were the least likely population group to agree that there is a problem with gambling (35%, compared with 51% Maori and 41% general population) despite the high prevalence estimates of problem gambling from the national prevalence surveys (discussed previously) (Amey, 2001).

In addition, increasing numbers of people have become more opinionated on problem gambling. For example, in 1985, 20% of people reported that they did not know if there was a problem, compared with only 4% in 2000 (Amey, 2001).

Another source of information on problem gambling in New Zealand is the 'Problem Gambling Counselling in New Zealand Statistics' that were supplied annually by the Problem Gambling Committee from 1997 to 2003 and will be supplied in future by the Ministry of Health. This information is divided into clients using the national telephone helpline (Gambling Helpline) and those using face-to-face personal counselling. During 2004, the total number of new clients using personal counselling services was 3,452, up 13.4% from the previous year. New callers to the helpline numbered 4,240, which is an 8.7% decrease from the previous year (Ministry of Health, 2005c). Figure 1 (overleaf) presents the changes over the last six years.

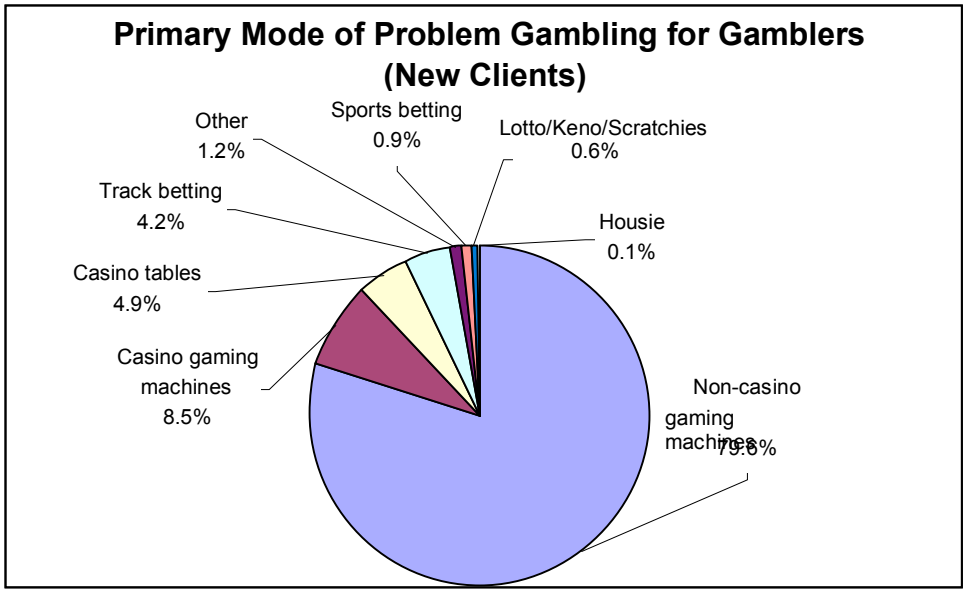
[18] This figure reduced from approximately 18% in 1991 (Abbott, 2001b).

Figure 1. Number of new clients using telephone helpline and personal counselling services in New Zealand *(Source: Ministry of Health, 2005c).*



In terms of the type of gambling, 83.3% of new helpline clients and 79.7% of new personal counselling clients identified EGMs outside casinos as their main mode of gambling. This rises to 90.6% and 88.2% respectively when casino machines are included[19]. The pie chart in Figure 2 presents the personal counselling figures.

Figure 2. Primary mode of gambling for new personal counselling clients in New Zealand for 2003 *(Source: Ministry of Health, 2005c).*



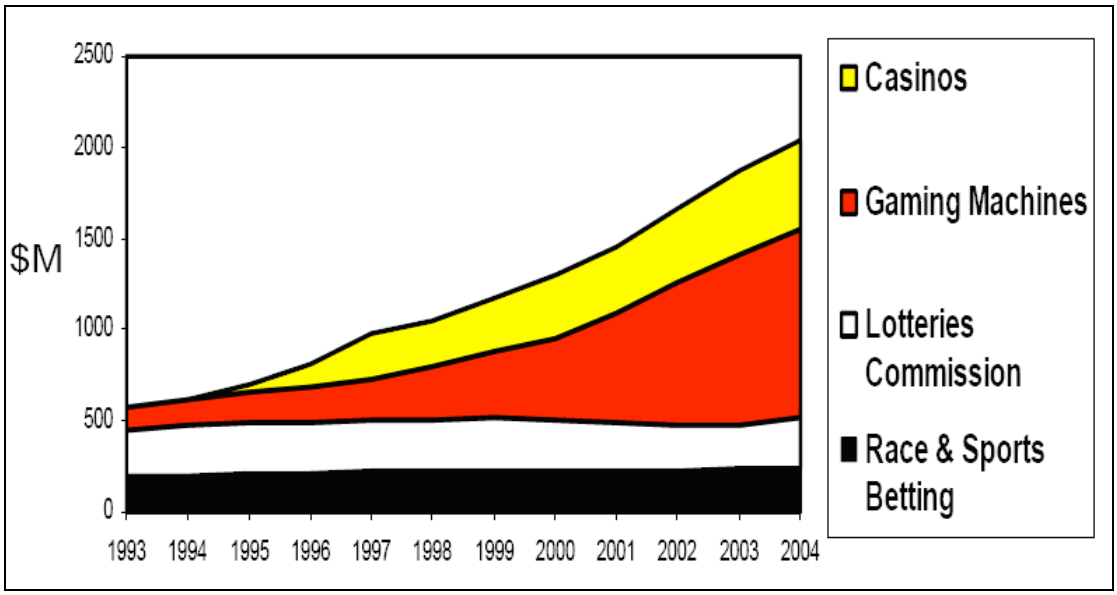
[19] Interestingly, since 1997, there has been a consistent increase in the percentage of people receiving face-to-face counselling in New Zealand who report EGMs (casino and non-casino) as their primary mode of gambling.

In terms of gender, the rates for women presenting for help have risen sharply and they now comprise approximately half those using the helpline service and 43% accessing personal counselling services. There is also a growing perception (based on informal observation and helpline calls) that women, in particular Maori and Pacific women, are increasingly having problems associated with EGMs.

Expenditure

The rapid globalisation of gambling has seen escalating international trends in gambling frequency, intensity and consumption. In New Zealand, gambling expenditure (money lost[20]) increased from almost $0.5 billion in 1991 to approximately $2.0 billion in 2004 (Department of Internal Affairs, 2004). Abbott et al (2004) suggest that these increases are consistent throughout Australia, Canada and several Western European countries. This proliferation in gambling consumption is strongly associated with increased accessibility and availability of continuous forms of gambling such as casinos and electronic gaming machines. Gambling expenditure on EGMs has risen to over half the total gambling expenditure not only in New Zealand but also in the Netherlands and Australia. The rise in New Zealand's expenditure by mode of gambling from 1993 to 2004 is represented in Figure 3. Non-casino gaming machines accounted for $1035 million of this figure, increasing from $941 million in 2003. EGMs in pubs, bars and clubs account for approximately 51% of New Zealand's total gambling losses (Department of Internal Affairs, 2005a).

Figure 3. Actual expenditure (loss) by mode in New Zealand 1993-2004 (Department of Internal Affairs, 2005d)



[20] Figures here are reported as expenditure, meaning the amount spent minus winnings. Gross turnover (including winnings) is often used and tends to be five to ten times the expenditure depending on the average rate of return (Adams et al., 2004).

Legislation

Prior to the 1980s, legalised gambling in New Zealand was confined to specific forms of gambling. During the recent past, the availability of new gambling forms has changed the profile of gambling in this country.

Gambling in New Zealand prior to 2003 was regulated by three different statutes: The Racing Act 1971, The Gaming and Lotteries Act 1977[21] and The Casino Control Act 1990. This legislation had very different objectives, treated gambling providers in different ways and required different levels of regulation that did not correspond to the posited risks to players and the community. Within this gambling regime, no Government agency was responsible for the prevention and treatment of problem gambling. Despite this there was an increasing public concern in regard to the growth of casino and non-casino EGMs, the increased risk of problem gambling and also the non-effective distribution of money from gaming machines to the community.

The Government response to this has been the Gambling Act 2003, which was passed into law in September 2003. This Act is intended to incorporate a 'public health approach' to gambling policy (Ministry of Health, 2002). It is also a major review and update of the legislation controlling all forms of gambling.[22] The Act has specific purposes which are:

- To control the growth of gambling
- To prevent and minimise the harm caused by gambling, including problem gambling
- To authorise some gambling and prohibit the rest
- To facilitate responsible gambling
- To ensure integrity and fairness of games
- To limit opportunities for crime or dishonesty
- To ensure that money from gambling benefits the community
- To facilitate community involvement in decisions about the provision of gambling[23]

It also introduces much stricter controls on gambling. These include a ban on new casinos and on the expansion of gambling at existing casinos, reductions in the numbers of gaming machines allowed in many pubs and clubs, community involvement in deciding on territorial authority gambling venue policies, more in-depth suitability checking of individuals applying for gambling licences, and tougher auditing and reporting requirements to ensure that money intended for the community actually gets to the community. EGMs in pubs and clubs continue to be licensed as a form of community fund-raising only.

[21] This Act assumed that gambling would be confined to a limited range of activities and was based on the gambling technologies of the 1970's. It was inadequate in terms of providing for flexibility on new technologies or different gambling types.

[22] Whilst the Gambling Act is comprehensive, the racing industry and race betting and sports betting are largely regulated under the Racing Act 2003. However, the Gambling Act did bring the Racing Act regulatory regime broadly into line with the regulatory regime in the Gambling Act. For example, Schedule 8 of the Gambling Act amended the Racing Act to require local authorities to adopt a policy for new TAB venues. These requirements broadly parallel the requirements in the Gambling Act relating to Class 4 venues.

[23] Section 3 - Purpose.

3.4.2 Why people gamble

Theoretical frameworks
There is a significant body of theoretical literature which has focused primarily on exploring reasons why people gamble. Raylu & Oei (2002), Griffiths & Delfabbro (2002), and Dickerson, Haw & Shepherd (2003) among others critically examine these theories and contend that although the majority have some merit, deficiencies exist.

Several motivational theories have been implicated as playing a role in the development and maintenance of gambling and problem gambling; however, as yet the aetiology of problem gambling still remains unclear.

A sociological perspective on gambling generally implies that problem gambling is a behaviour indicative of one's inability to cope with the larger society (Griffiths & Delfabbro, 2002). A familial perspective inclusive of social learning theory, assumes that individuals learn, model and maintain behaviours that are observable and reinforced (Raylu & Oei, 2002). Biological factors and biologically based theories suggest that particular physiological conditions or tendencies influence problem gambling (Griffiths & Delfabbro, 2002). A broad psychological perspective encompasses personality, cognitions, psychological states and psychological conditioning theories as motivations to gamble. Personality traits such as sensation seeking and impulsivity are assumed to be dispositional characteristics that may act as risk factors for gambling or problem gambling development. Cognitions, irrational thinking and erroneous beliefs about gambling, as well as impaired control are also identified as motivational influences (Griffiths & Delfabbro, 2002). Additional motivational influences include psychological states such as anxiety, stress and depression (Dickerson et al., 2003; Raylu & Oei, 2002). The psychological perspective also suggests that classical and operant conditioning play an important role in the development and maintenance of problem gambling (Griffiths & Delfabbro, 2002).

Given the extent and variation of theoretical constructs, Griffiths & Delfabbro (2002) suggest that gambling is a complex activity, which is unlikely to be explained in any single theory. These authors argue that an eclectic model is required to address both the individual and contextual factors that are associated with gambling behaviours. They further argue that the underlying motivations and broad social and cultural factors antecedent to one's gambling exposure and development must be acknowledged and incorporated into treatment and prevention programmes.

In line with this view, Raylu & Oei (2002) contend that certain cultural factors play an important role in the initiation and maintenance of gambling and that current motivational theories do not sufficiently explain the differences associated with gambling and problem gambling between different cultural groups. These authors also assert that the majority of theoretical models for gambling focus on problem gambling in treatment settings rather than the wide spectrum of gambling-related problems in the general population.

In support of Griffiths & Delfabbro (2002) and Raylu & Oei (2002), Abbott et al (2004) claim that no single theoretical model is able to address the extensive range of agent (exposure to gambling activities), environmental (physical, social and cultural context

in which the host lives and gambling occurs) and host factors (the person with the problem) relative to problem gambling development, maintenance and cessation.

To date, although requiring empirical testing, the pathways model by Blaszczynski & Nower (2002) is the most comprehensive framework available. The pathways model attempts to integrate biological, personality, development, cognitive, learning theory and environmental factors that are described in the literature into a coherent theoretical framework. It proposes three pathways, each of which is defined by specific vulnerability factors, demographic features and causal processes. These pathways are: (1) behaviourally conditioned problem gamblers, (2) emotionally vulnerable problem gamblers, and (3) antisocial, impulsivist problem gamblers.

Behavioural conditioning which is common to all problem gamblers contributes to higher levels of gambling participation and cognitive distortions concerning the probability of winning. This includes erroneous beliefs about skill and control being associated with specific activities. Losing streaks are more likely to occur and some regular gamblers are likely to chase losses. This typically contributes to additional losses, debt and other behaviours and consequences that define problem and pathological gambling. A gambler may enter this subgroup of behaviourally conditioned problem gamblers at any age. Many experience high levels of anxiety, depression and alcohol misuse as a consequence of problem gambling. However, in contrast to pathways (2) and (3) it is proposed that people in this group fluctuate between heavy and problem gambling, readily seek and comply with treatment, display low levels of psychological disorder following treatment and post-intervention may achieve sustained control over their gambling (Blaszczynski & Nower, 2002).

'Emotional vulnerability' is characterised by disturbed family and personal histories, poor coping and problem-solving skills, affective instability due both to biological and psychosocial deficits and later onset of gambling. Gambling is considered to be particularly attractive to people in this group because it can temporarily reduce negative emotional states and meet specific psychological needs. 'Emotionally vulnerable' problem gamblers differ from behaviourally conditioned gamblers on the basis of increased levels of psychopathology especially depression, anxiety and alcohol dependence. These individuals are less likely to return to non-problem gambling and are more resistant to changing their problem gambling behaviour (Blaszczynski & Nower, 2002).

'Antisocial impulsivist' problem gamblers, the third group in the schema, are characterised by a biological vulnerability toward impulsivity, early onset, attentional deficits, antisocial traits and poor response to treatment. This vulnerability is underpinned by dysfunctional neurological structures and functions and dysregulation of neurotransmitter systems. This group is also reluctant to seek treatment and has poor compliance and outcomes (Blaszczynski & Nower, 2002).

Reasons for gambling

General population gambling literature within New Zealand and Australia highlights some of the reasons for gambling as: to win money, to socialise with others, to escape, to cope with stress, to relieve boredom, for excitement/challenge, for fun/entertainment,

to support worthy causes[24], a hobby/habit, curiosity and to exercise skill or accumulate knowledge (Abbott, 2001b; Abbott & Volberg, 2000; Abbott, Williams & Volberg, 1999; Amey, 2001; Gambling Research Panel, 2004; Griffiths & Delfabbro, 2002; Productivity Commission, 1999; Reid & Searle, 1996).

In 1999, Abbott & Volberg noted a number of differences in the reasons for gambling between regular non-continuous and continuous gamblers, and males and females. Regular non-continuous gamblers were more likely to report gambling to win money and less likely to report socialising. Regular continuous gamblers were more likely to report gambling for entertainment/fun, for excitement/challenge, to socialise or because it is a hobby or habit. Males more frequently than females reported gambling to socialise rather than to support a good cause.

Gender differences have been noted in a number of studies (Hraba & Lee, 1996; Mark & Lesieur, 1992; Morrison, 2004; Perese & Faleafa, 2000; Potenza et al., 2001; Tepperman & Korn, 2004). Potenza et al (2001) report that male gamblers in their study were more likely to thrill-seek and compete on risk-taking gambling activities for large wins as a form of ego enhancement, whereas females more often reported gambling as a means of escape from distressing problems. In line with this view, Morrison (2004) describes some Maori women's perceptions that gambling can act as a means of escape from overwhelming personal problems and as a way to relieve and manage stress that is associated with their lives and work. Additionally, in a small sample of Samoan people in Auckland, Perese (2000) highlights that females reported being attracted to the time-out and relaxation that gambling provided. In contrast to Abbott & Volberg's (1991) findings socialising was a dominant reason for Samoan women to gamble, particularly older women since they reported fewer social activities available to them. Socialising was also commonly perceived as a reason why Tongan women participated in gambling activities (Guttenbeil-Po'uhila et al., 2004). Alternatively, Perese (2000) highlights that Samoan males reported being attracted to the idea of 'easy money'. Each of these reasons was discussed in relation to gender role socialisation, culture and tradition.

A recent study by Tse et al (2004) examined gambling behaviours across four different population groups in New Zealand (New Zealand European/Pakeha, Maori, Pacific and Asian populations). In the qualitative component of this report, the authors found that despite the consistency of the aforementioned reasons to gamble across groups, noticeable differences existed in terms of the specific and dominant reasons that emerged within each group.

For example, the New Zealand European/Pakeha group generally reported gambling for money and/or as a form of coping with stress and boredom. Family, peers and advertising were noted to influence participation. In comparison, Maori participants frequently discussed gambling for socio-economic reasons, for money to meet their living requirements. The availability of gambling activities within venues commonly used for celebrations and within pubs and clubs was considered to influence gambling participation. Pacific peoples generally noted gambling for money to help their family and pay bills. The increased availability of gambling activities within areas populated

[24] Consistently since 1985, people have been in favour of gambling activities being run to fund worthy causes (Amey, 2001).

by Pacific peoples and exposure to Western standards of living were considered by some to influence gambling participation. Asian participants commonly reported gambling for money to provide or supplement income. Acculturation issues for many recent migrants as well as the attractiveness of gambling venues were noted to influence gambling participation.

In addition, some groups also highlighted the influence of unique cultural features and practices on reasons for gambling. For example, it was noted that gambling activities on some *Marae* were considered social events within the Maori community. The early exposure of children to gambling through *whanau* (extended family) was considered to instigate inter-generational gambling-related impacts amongst this population. Amongst Pacific participants, it was commonly noted that some people gamble for money to help pay *fa'alavelave* (a Samoan term for the traditional system of ceremonial exchange). Gambling was considered a way to adhere to traditional and familial obligations. This is a consistent finding amongst studies conducted on the Samoan (Perese & Faleafa, 2000), Tongan (Guttenbeil-Po'uhila et al., 2004) and Pacific (Bellringer et al., 2005) communities. Asian participants noted that as a consequence of the immigration requirement of cash investment, many migrants have access to cash upon arriving in New Zealand. This cash availability was considered to influence gambling participation.

A similar study by Tepperman & Korn (2004) investigated the gambling behaviours across six ethnic groups in Canada: Aboriginal, British Isles, Caribbean, Chinese, Latin American and Russian. In exploring how and why people from these different ethnocultural groups engage in gambling behaviours, the authors found that different historical gambling contexts existed between the groups. Some groups reported a long history of gambling, others discussed gambling as an activity introduced by Western cultures. The study also found that specific and dominant reasons for gambling emerged within each group. For example, Aboriginal participants like the indigenous Maori population discussed in Tse et al (2004), most commonly noted gambling to escape from poverty. British participants identified the need for excitement and to relieve stress as reasons to gamble. Socialising was commonly noted by Caribbean respondents. Chinese participants discussed gambling as a recreational activity and a form of entertainment to combat boredom. Participating in particular forms of gambling such as casino games were considered symbols of distinction. Latin American participants generally noted gambling as a means of making money; however, this behaviour was also associated with cultural displays of masculinity (machismo).

Tse et al (2004) and Tepperman & Korn (2004) acknowledge that these studies only provide an insight into the range of cultural differences that influence reasons for gambling. In-depth analysis is required. Despite this, these findings do confirm the arguments made earlier by Griffiths & Delfabbro (2002) and Raylu & Oei (2002) that motivational theories must acknowledge, explore and explain the influence of cultural variables on the initiation and maintenance of gambling. The differential influences on reasons for gambling amongst different ethnic groups must also be acknowledged in a social marketing approach to gambling, particularly within message content and visual displays.

The previous discussion has considered the reasons why people gamble, in general. A recent study in Victoria, Australia has looked at the gambling motivations for problem gamblers. In that study, one third of the problem gamblers identified that they gambled as a way to cope with stress and that it became a factor in the development of their gambling problems. One quarter of the problem gamblers identified that they gambled due to boredom (nothing else to do), 22% indicated that they gambled because of relationship difficulties and 19% gambled as a social activity. The only gender difference was that more females than males (40% and 22% respectively) gambled as a way of coping with stress. Interestingly, only eight percent of loved ones indicated that relationship difficulties contributed to the gambling compared with 22% of problem gamblers (Gambling Research Panel, 2004).

Like the various motivational theories that have been implicated as playing a role in the development and maintenance of gambling and problem gambling, this section highlights a number of different reasons related to why people gamble. Which factor is, or combinations of factors are, least/most responsible for the onset of problem gambling remain unclear. However, a number of risk and protective factors known to be associated with and reduce/enhance the likelihood of developing problem gambling have previously been discussed in Section 3.3.

3.5 Theories and models of behaviour change

The importance of theory-based public health interventions has been emphasised in a number of studies (Borland, 1999). The United States National Cancer Institute (1995) suggests that those public health programmes which are most likely to succeed are those based on a clear understanding of health behaviours and their environmental context. There are a number of significant theories and models that underpin the practice of health promotion.

Theories differ from models in that theories are sets of interrelated concepts, definitions and propositions that present a systematic view of events or situations by specifying relations among variables, in order to explain and predict the events or situations (National Cancer Institute, 1995). Although theories are abstract in nature they provide a boundary to work within and, therefore, act as a useful health promotion tool. Models in health promotion act as subclasses of theories, providing a plan for investigating and/ or addressing a phenomenon. They do not attempt to explain the processes underlying learning. Instead, models provide the vehicle for applying theories.

Theories and models can help throughout the planning, implementation and evaluation stages of a public health or social marketing intervention. Theories enable understanding of the nature and dynamics of health behaviour, the processes for changing the behaviour and the effects of external influences on the behaviour.

3.5.1 Cognitive-behavioural theories

Models of health behaviour at the individual and interpersonal levels are usually described as cognitive-behavioural theories. These theories see behaviour as being mediated through cognitions (i.e. what we know and think, affects how we act) and view knowledge as necessary but not sufficient, to produce behavioural change (National Cancer Institute, 1995).

3.5.2 Individual models and theory

Stages of Change Model

DiClemente & Proschaska, who at the time were studying how people who smoked were able to give up their habits, developed the Stages of Change Model (SCM) in the late 1970s and early 1980s (DiClemente & Proschaska, 1982). More recently the SCM has been applied to a broad range of behaviours including weight loss, injury prevention and overcoming alcohol and drug problems. The SCM addresses an individual's readiness to change or attempt to change towards healthy behaviours. In this model behaviour change is conceptualised as a process rather than an event, with individuals seen as having a range of motivation levels. These motivation levels result in a continuum of stages of peoples' readiness and willingness to change their behaviour. Interventions, which are matched to the individual's time and stage of change are seen to be the most effective way of changing behaviours. The SCM is a circular model in which people enter and exit at any stage and often may recycle. The model has six distinct stages: pre-contemplation, contemplation, preparation, action, maintenance and relapse. In each of these stages, a person has to tackle a different set of issues and tasks that relate to changing behaviour.

Table 2. Stages of Change Model

Concept	Definition	Application
Pre-contemplation	Unaware of problem	Increase awareness about the problem - risks and benefits
Contemplation	Thinking about change in the near future	Motivate, encourage to make specific plans
Preparation	Making a plan to change in the very near future (less than one month)	Assist in developing concrete action plans, setting gradual goals
Action	Practicing new behaviour (three to six months)	Assist with feedback, problem solving, social support, reinforcement
Maintenance	Continued commitment to sustaining new behaviour (six months to five years)	Assist in coping reminders, finding alternatives, avoiding relapses
Relapse	Resumption of old behaviours	Evaluate trigger for relapse, re-assess motivation and barriers, plan stronger coping strategies

Health Belief Model

The Health Belief Model (HBM) was first developed in the 1950s by Hochbaum, Rosenstock, and Kegels (Hochbaum, 1958) who were social psychologists working in the United States Public Health Service. The HBM is a psychological model that attempts to explain and predict health behaviours. This model addresses a person's perceptions to the threat of a health problem and their accompanying appraisal of a recommended behaviour for preventing or managing the problem.

According to Borland (1999), the perceived severity of a health problem and the perceived susceptibility to that problem come together to form one source of motivation for a person to take action (this is the perceived threat). He suggests that the perceived benefits of an action and the perceived barriers (costs of this action) are weighted as some form of decisional balance and with the perceived threat, collectively determine a person's behaviour.

The HBM consists of four main constructs, which represent the perceived health threat, and the net benefits which account for peoples' readiness to act. The constructs are: perceived susceptibility, perceived severity, perceived benefits and perceived barriers. More recently the concept of cues to action which activates a person's readiness to act and the concept of self-efficacy or one's confidence in the ability to successfully perform an action, have been added to the HBM.

Table 3. The Health Belief Model Constructs (Source: National Cancer Institute, 1995)

Concept	Definition	Application
Perceived susceptibility	One's opinion of the chances of getting a condition	Define the at-risk population, the risk levels, the personal risk and heighten perceived susceptibility
Perceived severity	One's opinion of how serious a condition is and what the consequences are of getting it	Specify consequences of the risk and condition
Perceived benefits	One's belief in the efficacy of the advised action to reduce risk or seriousness of impact	Define action to take, how, where, when and clarify the positive effects to be expected
Perceived barriers	One's opinion of the tangible and psychological costs of the advised action	Identify and reduce barriers through reassurance, incentives and assistance
Cues to action	Strategies to activate readiness	Provide how-to information, promote awareness and give reminders
Self efficacy	Confidence in one's ability to take action	Provide training and guidance in performing an action

In the past the HBM has been applied to a broad range of health behaviours and subject populations. The HBM was initially applied to preventative health, which included health promotion and risk. The second area that the HBM has been applied to is that of sick role behaviours, which refers to compliance with recommended medical regimens and the use of clinics and physicians.

Consumer Information Processing Model

The Consumer Information Processing Model (CIP) grew out of studies on human problem solving and information processing (Bettman, 1979). Although the CIP was not developed specifically to study health-related behaviour it has many useful applications in the health arena. Information is a common tool for health education and is often an essential foundation for health decisions. Although information is necessary, on its own it is not sufficient to encourage healthy behaviours.

The assumption that the CIP makes is that individuals are limited in how much information they can process. So in order to increase the usability of information, they combine bits of information into 'chunks' and create decision rules known as heuristics, to make choices faster and more easily.

Table 4. Consumer Information Processing Model (Source: National Cancer Institute, 1995)

Concept	Definition	Application
Information processing capacity	Individual limitations in the amount of information that a person can acquire, use and remember	Choose the most important and useful points to communicate, either orally or in print materials
Information search	Process of acquiring and evaluating information; affected by motivation, attention and perception	Provide information which takes little effort to obtain, draws consumers attention and is clear
Decision rules/heuristics	Rules of thumb, developed and used to help consumers select among alternatives	Learn key ways to synthesise information in ways that have meaning and appeal for your audience
Consumption and learning	Internal feedback based on outcome choices and for use in future decisions	Keep in mind that people have probably made related choices in the past and are not empty vessels
Information environment	Amount, location, format, readability and processability of relevant information	Design information tailored to the audience; place it conveniently for use

Theory of Reasoned Action and the Theory of Planned Behaviour

The Theory of Reasoned Action (TRA) was first developed in 1967 (Fishbein, 1967) and was later revised and expanded by Ajzen & Fishbein (1980). During the 1980s, the Theory of Planned Behaviour (TPB) was added to the existing model of reasoned action (Ajzen, 1985). According to these combined theories it is believed that the stronger a person's intention to perform a particular behaviour, the more successful they are expected to be in performing it (McCormack-Brown, 1999). People's intentions are a function of salient beliefs and/or information about the likelihood that performing a particular behaviour will lead to a specific outcome. The TRA and TPB theories state that intentions are a function of two basic determinants; attitudes towards a particular behaviour and subjective norms of a particular behaviour.

In relation to health education, the TRA/TPB is useful in predicting and understanding healthy and unhealthy intentions and behaviours and the outcomes of these behaviours. The five main constructs of the combined TRA and the TPB theories are (McCormack-Brown, 1999):

> *Behaviour:* The behaviour is the transmission of intention or perceived behavioural control into action.
>
> *Behavioural intention*: This is an indication of how hard people are willing to try and how much an effort they are planning to exert, in order to perform a particular behaviour. This aspect is influenced by the person's attitude towards

performing a particular behaviour and the perceived social pressure; this is known as the subjective norm and the perceived behavioural control.

Attitude: A person's attitude is the first determinant of their behavioural intention. It is the degree to which a person has a favourable or unfavourable evaluation of the behaviour in question.

Subjective norm: This is considered to be the second predictor of behavioural intention and is the perceived influence of social pressure (normative beliefs) to perform or not to perform a particular behaviour. The subjective norm is weighted by the individual's motivation to comply with their perceived expectations (motivation to comply).

Perceived behavioural control: This is the third precursor of behavioural intention. This construct is defined as the individual's belief concerning how easy or difficult it will be to perform the behaviour. It often reflects actual behavioural control.

The TRA/TPB theory is limited by the fact that personality and demographic variables are not taken into consideration and it is assumed that perceived behavioural control predicts actual behaviour control, which is not always the case. Unconscious motives are also not considered in this model as the theory assumes that all humans are able to make rational systematic decisions. However, in reality not all people have volitional control of being able to make the behaviour actually happen. It is believed that the more control a person has over being able to perform the behaviour (or the more resources they have to make the decision to perform the behaviour), the better prediction one could make about a person actually performing the behaviour.

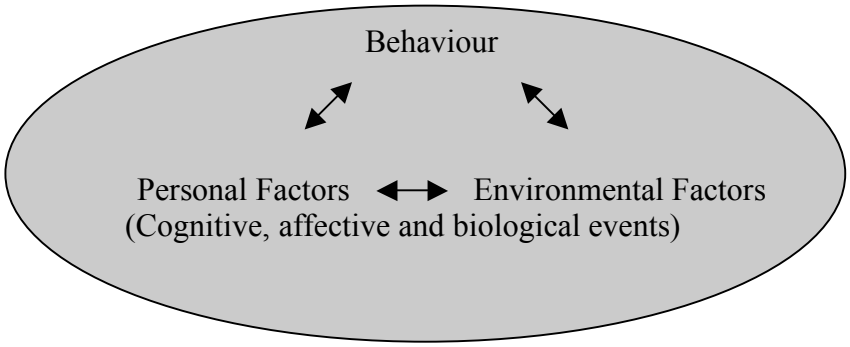
3.5.3 Interpersonal theories and models

Social Cognitive Theory/Social Learning Theory

In 1941 Miller & Dollard proposed the Theory of Social Learning (Miller & Dollard, 1941). Bandura & Walters (1963) broadened this Social Learning Theory by adding the principles of observational learning and vicarious reinforcement. Bandura (1977) further extended this theory by providing his concept of self-efficacy. Today the Social Learning Theory is better known as the Social Cognitive Theory (SCT).

The basic premise of the SCT is that people learn not only from their own experiences but also by observing the actions of others and the results of those actions. Human behaviour in the SCT is explained in terms of a three-way dynamic reciprocal theory in which personal factors, environmental influences and behaviour continually interact.

Figure 4. Conceptual Model of the Social Cognitive Theory (Source: Pajares, 2002)



Concepts and processes of the SCT come from cognitive, behaviouristic and emotional models of behaviour change, making the SCT a complex model, which involves many constructs. The first of these concepts - reciprocal determinism is when the environment shapes, maintains and constrains people's behaviour. However, as people are not passive in this process they also create and change their environments. The second concept in the SCT is symbolising capability, which maintains that most external influences affect behaviour through cognitive processes. The final concept of the SCT - vicarious capability refers to the human ability to learn not only from direct experience but also from the observation of others.

Reciprocal determinism does not imply that all reciprocal interactions are of equal strength; this theory recognises that some sources of influence are stronger than others and these influences do not all occur simultaneously. The person-behaviour interaction involves bidirectional influences of one's thoughts, emotions, biological properties and one's actions (Bandura, 1977, 1986, 1989). For example, a person's expectations, beliefs, self-perceptions, goals and intentions give shape and direction to their behaviour.

A bidirectional interaction also occurs between the environment and personal characteristics (Bandura, 1977, 1986, 1989). In this process, human expectations, beliefs and cognitive competencies are developed and modified by social influences and physical structures within the environment. The final interaction in the SCT occurs between behaviour and the environment, in which Bandura contends that people are both products and producers of their own environment (Bandura, 1977, 1986, 1989). Based on learned human preferences and competencies, humans select with whom they interact and the activities in which they participate. Human behaviour can also influence a person's environment, for example an aggressive person may create a hostile environment. Table 5 overleaf shows the main concepts of the SCT.

Table 5. Social Cognitive Theory (Source: National Cancer Institute, 1995)

Concept	Definition	Application
Reciprocal determinism	Behaviour changes result from interaction between person and environment; change is bidirectional	Involve the individual and relevant others; work to change the environment, if warranted
Behavioural capability	Knowledge and skills to influence behaviour	Provide information and training about action
Expectations	Beliefs about likely results of action	Incorporate information about likely results of action in advice
Self-efficacy	Confidence in ability to take action and persist in action	Point out strengths; use persuasion and encouragement; approach behaviour change in small steps
Observational learning	Beliefs based on observing others like self and/or visible physical results	Point out others' experiences, physical changes, identify role models to emulate
Reinforcement	Responses to a person's behaviour that increase or decrease the chances of recurrence	Provide incentives, rewards, praise, encourage self-reward, decrease possibility of negative responses that deter positive changes

3.5.4 Community level models

Designing health promotion initiatives to serve communities and targeted populations rather than individuals is at the heart of public health (National Cancer Institute, 1995). Community level models allow an understanding of how communities and certain populations can be motivated to adopt alternative health behaviours. Community level models also provide frameworks for understanding how social systems function and change (National Cancer Institute, 1995).

Diffusion of Innovation Theory

Rogers developed one of the better known theoretical approaches to diffusion of innovation (Rogers, 1983). The Diffusion of Innovation Theory addresses how new ideas, products and social practices spread within a society or from one society to another. This theory is helpful when determining the adoption of specific behaviours and when deciding which components will require additional effort if diffusion is to occur (Sanson-Fisher, 2004). Diffusion is the process by which an idea is communicated through certain channels over time among members of a social system. It is a special type of communication concerned with the spread of messages that are perceived as new ideas. Four main elements make up these new ideas: innovation, communication channels, time and the social system.

Innovation

An innovation is an idea, practice or object that is perceived as new by an individual or a society (Rogers & Scott, 1997). There are five elements that will determine whether diffusion of a new activity will occur: relative advantage, compatibility, complexity, trialability and observability.

Relative advantage is the degree to which an innovation is perceived as better than the idea, practice, programme or products that it will replace. To apply this theory in health promotion the unique benefits need to be pointed out to the consumer. *Compatibility* is how consistent the innovation is with existing values, past experiences and the needs of the potential adopters. To use this concept in health promotion the idea needs to be tailored for the intended audiences' values, norms or situations. *Complexity* is how difficult the idea is to understand or use. Programmes, ideas or products must be uncomplicated and easy to understand and use. *Trialability* is the extent to which the innovation may be trialled and modified. Lastly *observability* is the degree to which the results of the innovation are visible to others; this requires feedback or publicity of the results.

Communication channels

Communication is the process by which people create and share information with one another in order to reach a mutual understanding of a topic. Diffusion theories view communication as a two-way process, rather than one of merely persuading an audience to take action. Information can be communicated through different ways such as mass media, lectures, videos or research publications.

Time

The decision-making process takes time. The first stage in this process is when researchers acquire knowledge, which should be shared through awareness-raising activities. The next stage is when policies are formulated, which involves consultation with decision makers. The third stage involves implementing the innovation and may involve training and technical assistance. Finally the innovation is incorporated into the daily activity of the person or social system.

Social system

Organisations are complex and layered social systems composed of resources, members, roles, exchanges and unique cultures. Members of social systems may be individuals, informal groups, organisations or subsystems. Therefore, organisational change is best promoted by working at multiple levels within the organisation. People who adopt an innovation early are instrumental in getting an innovation to the point of critical mass which is the point when enough individuals have adopted an innovation to make it the norm.

Community Organisation Model

The Community Organisation Model (COM) has its roots in theories of ecological and social system perspectives and social support and networks. Community organisation emphasises active participation and the development of communities that can better evaluate and solve health and social problems. The COM provides processes for community groups to help identify problems and common goals, mobilise resources and develop and implement strategies for reaching their goals (National Cancer

Institute, 1995). The COM does not use a single unified model although there are several key concepts, which are central to different approaches.

Table 6. Community Organisation Model (Source: National Cancer Institute, 1995)

Concept	Definition	Application
Empowerment	Process of gaining mastery and power over oneself/ one's community, to produce change	Give individuals and communities tools and responsibility for making decisions that affect them
Community competence	Community's ability to engage in effective problem solving	Work with the community to identify problems; create consensus and reach goals
Participation and relevance	Learners should be active participants and work should start where the people are	Help the community to set goals within the context of pre-existing goals and encourage active participation
Issue selection	Identifying winnable, simple, specific concerns as a focus of action	Assist the community in examining how they can communicate their concerns and whether success is likely
Critical consciousness	Develop an understanding of root causes of problems	Guide consideration of health concerns in broad perspective of social problems

The starting point for the COM is with the community. The community participates throughout the process and is able to build capacity skills, resources and leadership. From this, critical consciousness is developed in which the change favours the powerless. Once a community is at this level they are able to use advocacy to help advance social and public policy initiatives.

An important step in changing public policy is creating the environment in which change can take place. In public health this often means examining social and political environments and inequities that need attention along with health concerns. Media advocacy can be used as a resource for advancing a social or public policy initiative. Advocacy is an important and often essential part of social action because the media focuses public concern, which spurs public action.

3.5.5 Models in different ethnic cultures

Different cultures may view health quite differently from each other; therefore, this should be borne in mind when planning any health promotion or social marketing approach. In New Zealand, the people most at-risk of developing gambling-related problems are Pacific people, Maori and Asians. This review of cultural models will focus on health models for Pacific peoples and Maori. To date there are no formal Asian models or theories of health specifically for Asians (there is a model of the

uprooted tree). Models of health are available for Pacific peoples and Maori but there are no formal health theories for these ethnicities.

Pacific Model of Health

In 1984, the Fonofale Model of Health was proposed by Pulotu-Endemann (Pulotu-Endemann, 2001) and has since been further developed by the Mental Health Commission (2001). The Fonofale Model takes a holistic approach towards health (Crawley, Pulotu-Endemann & Stanley-Findlay, 1995) and is based on the representation of a house (fale). The model incorporates values and beliefs from members of the major New Zealand Pacific cultures, with the most important values being family, culture and spirituality (Mental Health Commission, 2001).

In the Fonofale Model, the fale is encapsulated in a cocoon that contains dimensions of the physical environment, time and context (Mental Health Commission, 2001; Anae et al., 2002). The roof of the house represents culture (which includes the culture of New Zealand-born Pacific people) and the foundation represents the family. The posts (pou) which hold up the house represent the spiritual, physical, mental and 'other' dimensions. These aspects are seen as continuous, connecting the culture and the family and interact with one other (Henare & Ehrhardt, 2004).

Maori Models of Health

There are a variety of health models for Maori. Three of the better-known models are: Te Whare Tapa Wha, Te Pae Mahutonga and Te Wheke.

Te Whare Tapa Wha Model

The Maori philosophy towards health is based on a holistic health model. Te Whare Tapa Wha is a model of Maori health developed by Mason Durie in consultation with Maori (Durie, 1994). This model, similar to the Pacific Fonofale Model, compares health to the four walls of a house, with all four walls being necessary to ensure strength and symmetry, although each wall represents a different dimension. The first wall of the house known as taha wairua is generally felt by Maori to be the most essential requirement for health. Taha wairua implies the capacity to have faith and to be able to understand the links between the human situation and the environment. Without a spiritual awareness an individual can be considered to be lacking in wellbeing and therefore prone to ill health. Wairua also refers to one's relationship with the environment, with people or with heritage.

Taha hinengaro, the second wall of the house, is concerned with the expression of thoughts and feelings. Maori may be more impressed with unspoken signals, eye movement, bland expressions and in some cases regard words as superfluous, even demeaning (Durie, 1994). Communication through emotions is important and more meaningful than the exchange of words and is valued just as much. Healthy thinking for Maori is about relationships. The individual whose first thought is about putting themselves, their personal ambitions and their needs first, without recognising the impact that it may have on others is thought to be unhealthy.

The third wall of the house, known as taha tinana, is related to the health of the body, with certain parts of the body, in particular the head, being regarded as special/tapu. There is a clear separation between sacred and common, for instance the head is

regarded as tapu; therefore, Maori do not pat each other on the head. Personal space is also taken into account and body language is considered an important feature to note. Maori tend to have minimal eye contact and respect each other's space in formal situations. It is also important to keep food and utensils away from the body.

The fourth and final wall to the house is known as taha whanau. This wall is concerned with family, which is the prime support system, providing care and nurturance, not only in physical terms but culturally and emotionally. Maori maintain that ill health in an individual is a reflection on the family. The second dimension of taha whanau relates to identity and sense of purpose, with the goal here being interdependence rather than independence.

Underlying Te Whare Tapa Wha is the consistent theme of integration, with boundaries between personal and family identity often blurred. Maori health perspectives such as Te Whare Tapa Wha provide a necessary framework when working with Maori and should be considered in any public health approach.

Te Pae Mahutonga

Te Pae Mahutonga is the name for the constellation of stars popularly referred to as the Southern Cross. This group of stars has long been used as a navigational aid and is closely associated with the discovery of Aotearoa/New Zealand. The constellation contains four central stars arranged in the form of a cross and two stars arranged in a straight line, which point towards the cross - the pointers. The four central stars can be used to represent the four key tasks of health promotion: mauriora, waiora, toiora and te oranga, while the two pointers represent nga manukura and te mana whakahaere, as discussed below.

Mauriora refers to cultural identity, with the goal of health promotion to promote security of identity, inner strength and vitality (Durie, 1999). This requires the facilitation of Maori entry into the Maori world - access to economic resources (land, forests, fisheries), access to cultural institutions (marae), access to Maori language, access to social resources and access to societal domains in which cultural expression is facilitated and not hindered.

Waiora is linked to the external world and to a spiritual element that connects human wellness with cosmic, terrestrial and water environments (Durie, 1999). Health promotion must take into account the nature and quality of the interaction between people and the surrounding environment.

Toiora, as distinct from mauriora and waiora, depends on personal behaviour (Durie, 1999). However, it would be an over-simplification to suggest that everyone has the same degree of choice regarding the avoidance of risks. Risks are the highest where poverty is the greatest. Risks are increased if risk-taking behaviour is the norm within a whanau or community. Key areas to consider here are: harm minimisation, targeted interventions, risk management, cultural relevance and positive development.

Te Oranga. Wellbeing in this context is dependent on the terms under which people participate in society and on the confidence with which they can access good health services, school, sport or recreation of their choice. While access is one issue, decision-

making and a sense of ownership is another. In the health promotion context Maori need to be able to participate in the economy, education, employment, decision-making and knowledge of society.

Nga Manukura. Leadership in health promotion should reflect a combination of skills and a range of influences (Durie, 1999). Leadership for health promotion needs to reflect community leadership, health leadership, tribal leadership, communication and alliances between groups and leaders.

Te Mana Whakahaere. Communities must be able to demonstrate a level of autonomy and self-determination in improving their own health if they are to make headway. Autonomy is reflected in the participation people have in health promotion and their control over it, it is also evident in the unique aspiration of a community. Therefore, the promotion of health requires the promotion of autonomy, control, recognition of aspirations, relevant processes, sensible measures and self-governance.

Te Wheke

Te Wheke was conceptualised by Rose Pere in 1984 when he presented at hui Whakaoranga (Pere, 1984). Te Wheke or the octopus model is used to define family health. The head of the octopus represents te whanau, or the family, the eyes represent the total wellbeing of the individual and family (waiora) and each of the eight tentacles represent a specific dimension of health. These eight dimensions of health are seen to be: wairuatanga (spirituality), taha tinana (physical wellbeing), hinengaro (the mind), the whanaungatanga (the extended family), mana ake (the uniqueness of each individual and family), mauri (life force), ha a koro ma a kui ma (the breath of life from our forebears) and whatumanawa (the open and healthy expression of emotion). The eight tentacles of the octopus in Te Wheke are interwoven, which represents the close relationship of each of these dimensions of health.

3.5.6 Theories and minimising gambling harm

To date almost nothing has been written on social marketing or public health approaches to minimise gambling harm, therefore, no appropriate theories and models have been identified to underpin such an approach (can we say this?). In Canada (Byrne et al., 2004) one prevention media campaign used to prevent problem gambling amongst youth, was based on the Social Diffusion Model, described here as the Diffusion of Innovation Theory. This theory delineates changes in public norms, which lead to behaviour changes in particular populations.

Although no known behaviour change theories or models have been used to minimise gambling harm at a population level, behaviour change theories and models have been applied to a wide range of health behaviours such as: smoking cessation, initiation and prevention, injury prevention, alcohol and drug addictions, nutrition and physical activity and sun safety (Byrne et al., 2004). These public health areas have often used a range of theories and models to better explain the health behaviours and bring about change. As with other areas of public health and social marketing, there are currently no single models or theories that cover all aspects, which will address minimising gambling harm. The development of a unifying model that considers social, personal, economic, environmental, biological and physiological influences that may influence social behaviour should be considered.

3.6 Indicators for behaviour change

Prevention programmes targeted at the general population or high risk groups are commonly recommended by a number of professionals as a means of counteracting the development of social, psychological or physical health problems. These programmes, designed to increase awareness, encourage help-seeking and influence attitudinal change and behaviour modification are anticipated to reduce social costs and increase well-being and quality of life (Ladouceur, Vezina, Jacques & Ferland, 2000).

Social marketing campaigns are sometimes utilised to achieve these attitudinal and behavioural changes. These often rely on the use of mass media channels such as advertisements (television or radio), posters, brochures, bill-boards and workshops. However, social marketing is more than mass media advertising. As noted in Section 3.1, the processes involved in such a campaign include supplying information to promote informed decision-making, identifying the needs of specific groups of people, and offering programmes or services that will effectively meet these needs. Regardless of the components used, pre- and post-evaluative measures are required.

As Byrne, Dickson, Derevensky & Gupta (2004) note, there is no standardised measure to determine the effectiveness of a social marketing campaign. Behavioural change, although difficult to achieve is considered a major determinant of success. However, focusing only on this measure may result in conservative campaign outcomes, particularly since alternative aspects such as changes in awareness, knowledge or attitudes may be overlooked.

Section 3.2 highlights that only a small number of social marketing, public awareness campaigns and prevention programmes related to gambling exist and few of these have been evaluated for efficacy and effectiveness. However, from those that have been evaluated, we gain an insight into and important information on measures of success such as raising awareness and behavioural change (increased help-seeking behaviour).

3.6.1 Raising awareness

The earliest evaluated public awareness campaign previously noted by Ladouceur et al (2000) (see Section 3.2) found that a brochure on gambling effectively increased knowledge about gambling amongst the general population. This brochure displayed gambling information that was assessed for relevance and accessibility to the population prior to distribution.

In addition to a cartoon illustration, the overall content included new information about problem gambling[25], at-risk behaviours[26] and information on specialised help services. The brochure was positively received and contributed to raising awareness amongst participants in the study. The authors conclude that an evaluation of preventative material is required before being implemented into programmes, campaigns and resources.

[25] "96% of the population have already gambled in their lifetime and some individuals have developed an addiction to gambling (representing 13,000 adolescents and 117,000 adults…)."
[26] The ten DSM-IV criteria were listed as signs and symptoms indicative of a gambling problem.

More recently, Najavits, Grymala & George (2003) described an Indiana, U.S. state-wide advertising campaign which used the slogan 'Play Smart. Don't bet more than you can lose'. This was advertised on the radio (to nine areas), billboards (placed on major highways), brochures, posters and in newspapers throughout the state. In addition, press conferences and town hall meetings were held.

Despite this campaign's low level of exposure and limited impact, it was identified that billboards and slogans had the strongest influence on increasing the awareness of problem gambling. Additionally, of those who had seen the advertisements, many reported that it increased their knowledge of problem gambling. The authors conclude that advertising does hold promise in educating the public about problem gambling but more effective means of dispersing these messages is required. In addition, future advertising campaigns may benefit from more targeted messages as well as the use of more powerful forms of communication such as television advertisements.

Ladouceur et al (2004) describe the impact of an awareness programme 'As luck would have it' in Quebec, Canada. This programme targeted VLT operators as a means of influencing those who gambled to excess. It included a two-hour awareness promotion workshop to inform retailers about excessive gambling. As well as role plays, a 12-minute video was shown that illustrated recommended ways to approach excessive gamblers in order to offer a flyer detailing gambling information. The findings indicate that attendance at the workshop was perceived to have increased levels of awareness regarding excessive gambling and when to approach excessive gamblers. In addition, six months later, those who attended the workshop reported that they had approached an excessive gambler significantly more often than the retailers who had not attended the workshop. This suggests that increasing awareness plays a role in influencing behavioural interventions.

A small number of social marketing approaches, public awareness campaigns and prevention programmes have also targeted youthful populations. Gaboury & Ladouceur (1993) suggest that programmes that disperse explicit messages and information over an extended number of sessions (e.g. 15 sessions) are potentially effective in increasing knowledge and changing the attitudes of young people toward gambling. These authors further contend that an increase in realistic knowledge about gambling can be followed by positive changes in gambling behaviour.

Ferland, Ladouceur & Vitaro's (2002) use of a video to deliver gambling information amongst students positively increased knowledge and modified erroneous beliefs about gambling. The authors note that the most effective intervention to reduce misconceptions about gambling was the use of a video in conjunction with a lecture and presentation of information and activities.

3.6.2 Behavioural change

This sub-section will discuss the influence of social marketing approaches on behaviour change in the context of increased numbers of people seeking treatment for gambling-related problems.

Increased number of people seeking treatment

The evaluation by Jackson, Thomas, Thomason & Ho (2002) of a three phase[27] state-wide community education campaign in Victoria, Australia identified that 43% of the community were aware of support services for problem gamblers prior to the onset of Phase I. When assessed six months after Phase III concluded, this had increased to 71%. In addition, dramatic and immediate increases in the number of telephone calls to the gambling helpline (G-Line) were noted during the television and radio advertising phases (I and II) of the campaign. Many callers cited television as a source of referral.

Problem gambling messages such as 'Gambling rule #1: if it's no longer fun walk away' and 'If you have a gambling problem in your life call G-Line toll free' resulted in the highest rates of recall (76%) by participants. The pamphlet message 'If gambling is a problem in your life, talk about it' also resulted in high rates of recognition and recall. In comparison, phrases such as 'Gaming - more than a game' and 'Bet with your head, not over it' had lower rates of recall (20% and 22% respectively). Although a number of slogans and catch phrases were utilised, those that displayed brevity, simplicity and ease of application were commended by Jackson et al (2002). In addition, it is anticipated that incorporating the service provider logo into the design of brochures, pamphlets and flyers will serve to cognitively reinforce and promote the name and image of particular services. The authors conclude the need for diversity within community education strategies to ensure that the needs of sub-cultures and communities are addressed. Additionally, these must be cohesive enough to warrant the continuous promotion and advertising of primary problem gambling support services.

In 2001, Phase One of a new $6 million (AUD) advertising and communications campaign to reduce problem gambling in Victoria resulted in a 70% increase in the number of calls to the problem gambling helpline and a 118% increase in face-to-face clients. This campaign utilised information on at-risk behaviours, self-assessment information for problem gambling and information on specialised treatment, counselling and support services. It was targeted at middle-aged married men and women (Victoria Department of Human Services, 2001).

The second wave of the campaign consisted of multi-lingual (Arabic, Italian, Greek, Vietnamese, Turkish, Spanish, Cantonese and Mandarin) press/radio advertisements, brochures, education kits and self-help information. These resources were targeted at older and younger people (Victoria Department of Human Services, 2001). In 2003, despite pending evaluative measures of this campaign, a review was conducted on the effectiveness of gambling harm minimisation measures. This included a review on the number of signs and the messages contained in the entire range of responsible gambling advertisements, signs, brochures, tickets and proposed contact cards (Cox & Parry, 2004). Subsequent to this, the Department's 2003-2004 Annual Report stated that mass media advertising, website development, public and media relations, market research

[27] Phase One: Multi-lingual (English, Arabic, Vietnamese, Cantonese and Macedonian) radio, newspaper and billboard advertisements
Phase Two: 14-week television advertisements (consisting of two advertisements)
Phase Three: 30-week radio and television advertisements (same two advertisements as Phase Two).

and in-venue gambling advertising programmes will continue to be funded (Victoria Department of Human Services, 2004).

At the Symposium in Toronto, Canada (2004), Olynik describes a study designed to track responsible gambling advertising. Phase One included a print, radio and television campaign which informed the general public not to lose perspective of their gambling behaviour. The Addictions Foundation of Manitoba (AFM) helpline was also constantly promoted. This campaign was considered a soft approach since it utilised fictitious, humorous (but serious) scenarios. The advertisements which were well received were also reported as having a major influence on the increased number of calls to the AFM helpline. In comparison, Phase Two used a hard hitting television and radio campaign targeting males aged 18 to 24 years. Television advertisements were noted as having the most effective impact on message recall.

3.6.3 Reductions in adverse behaviour

Despite the evidence that social marketing approaches have influenced attitudinal change and the number of people seeking help for gambling-related problems, there remains no information on the impact of these campaigns on reducing the incidence or prevalence of problem gambling in any community, particularly amongst those who do not present at treatment services. Studies on alcohol and smoking provide a useful insight into the influence of social marketing approaches on the prevalence of these adverse behaviours.

Alcohol

In a presentation on the effectiveness of alcohol promotion via mass media in New Zealand, Hill (2004) suggests that social marketing campaigns alone appear to be ineffective. In contrast, social marketing campaigns that have been promoted in conjunction with policy/law enforcement, policy change, legal restrictions and government decision-making are considered to have a much greater impact on behaviour change. Hill also suggests the need for social marketing campaigns to restructure environments as well as individuals and populations. These views are supported within a systematic review that explored the effectiveness of mass media campaigns on reducing drinking and driving and alcohol-involved crashes (Elder et al., 2004). Elder et al (2004) found that on the premise of particular conditions, social marketing campaigns were effective in reducing alcohol-impaired driving and alcohol-related crashes. These conditions specify that social marketing campaigns should be carefully planned, well executed, attain sufficient public exposure and be implemented in conjunction with other ongoing prevention activities such as high visibility and enforcement.

Byrne et al (2004) report that social marketing campaigns targeting youthful populations in Oklahoma, U.S. have also identified the effectiveness of legal sanctions combined with the media on reducing the number of alcohol-related accidents involving youth. Additionally, in Mexico, these strategies have been associated with reduced night-time alcohol-related car crashes among youth aged 16 to 20 years as well as a reduction in underage drinkers crossing the U.S.-Mexico border.

Elder et al (2004) also contend that social marketing campaigns cannot be effective unless the target audience is exposed to, attends to, and comprehends the message. In

line with this view, other effective campaigns have utilised de-normalisation messages as a strategy to target erroneous beliefs and misperceptions about the social norms surrounding alcohol and drinking behaviours. Byrne et al (2004) exemplify this in a campaign deployed amongst Rowan University students in New Jersey, U.S. that aimed to change either the prevalence of student drinking, awareness of social norms surrounding drinking, or both. This campaign included messages such as 'Surveys show that 63% of Rowan students choose not to drink excessively' and was found to be associated with increases in public perceptions of drinking norms and decreases in heavy drinking.

Tobacco

Goldman & Glantz (1998) have identified that media campaigns can be effective in influencing smokers' decisions to quit smoking. However, the most effective social marketing campaigns have utilised second-hand smoke and industry manipulation strategies to de-normalise smoking, de-legitimise the tobacco industry and reduce cigarette consumption. Industry manipulation strategies are intended to expose the perceived 'predatory practices' of the industry that are designed to entice new users, sell more cigarettes and make more money.

Given that most adult populations are likely to be aware of the adverse social and physical consequences of their smoking, Goldman & Glantz imply that industry manipulation messages are likely to succeed since they enable people to redirect their feelings of guilt over their own smoking toward anger and resentment at the tobacco industry and its desire to profit from a deadly product. In contrast, messages targeting youthful populations are likely to succeed since they inform youth of the industry's calculated attempts to manipulate them, which thus implies they are not acting as independently as they may wish. In light of this, smoking is, therefore, reported as becoming an attention-getting and emotional issue and the tobacco industry as the enemy.

Byrne et al (2004) also highlight that messages underlining industry manipulation are successful in changing young people's smoking beliefs, behaviours or both. Additionally, many youth studies identify that in contrast to resisting parental views or education about health risks, young people are most influenced by 'in your face', hard hitting television advertising, particularly in relation to how the tobacco industry might manipulate them into smoking (Goldman & Glantz, 1998; Hill, 2004; Lantz et al., 2000).

Goldman & Glantz (1998) further suggest that second-hand smoke advertisements contribute to increasing awareness. Additionally, these authors as well as Byrne et al (2004) have found that messages focusing on health effects and the de-normalisation of smoking (by exploring the dangerous effects on others) are effective amongst adult and youth populations. Additionally, they are most effective when used in conjunction with the more powerful industry manipulation strategies.

In line with this view, Lantz et al (2000) contend that single campaigns for youth are unlikely to change behaviour and suggest the need for multi-year campaigns that utilise strong components of social marketing and rigorous evaluation. These authors conclude that a number of strategies warranting attention must be coordinated to

effectively influence behaviour change. These strategies include aggressive media campaigns[28], teen smoking cessation programmes, social environment changes[29], community interventions and increasing cigarette prices.

In regard to targeting particular groups, the Ministry of Health (2001a) explores a number of tobacco control interventions considered useful for specific populations. For example, effective programmes for Maori are considered to be those with a Maori focus (particularly those run by Maori for Maori). Additionally, effective interventions, programmes and mass media campaigns for Pacific peoples are those that involve Pacific peoples throughout all stages of development, implementation and delivery.

3.6.4 Conclusion

In light of these views, a social marketing approach for gambling in New Zealand could now be considered timely since social marketing approaches can be successful and since gambling regulations continue to be enforced as requirements of the Gambling Act 2003. In addition, the Department of Internal Affairs has prepared a fact sheet and recently taken a road-show out to gaming machine societies and pub and club venues to educate them about their new problem gambling awareness responsibilities which take effect from 1 October 2005. The fact sheet includes commonly accepted indicators of problems with gambling and is part of an education campaign that will be followed up with compliance auditing and, if necessary, enforcement actions (Department of Internal Affairs, 2003d).

At this time, a social marketing gambling approach should consider and/or incorporate elements of host responsibility requirements (including the policing and regulation of these), as well considering the current climate in terms of gambling industry marketing approaches. In addition, a social marketing campaign would incorporate features that target the needs of differential levels of gamblers and problem gamblers (see Section 3.2) as well as Maori, Pacific, Asian and youth populations. This complex barrage of campaign interventions would require a range of appropriate evaluations.

3.6.5 Tabulated summary of indicators for behaviour change

The evaluated studies/research discussed in the preceding pages have led to the indicators for behavioural change tabulated (Table 7) overleaf. The table details reference to the *evaluated* evidence (the study/research project), the tool utilised to cause the behaviour change, the findings of the study and in the final column, the indicator for behaviour change. The table is split into three sections reflecting the type of indicator: 1) increased awareness and knowledge regarding gambling and problem gambling, 2) increased awareness of treatment services and in help-seeking behaviour, and 3) reduction in levels of gambling and problem gambling and reductions in gambling-related costs (from studies in other fields such as alcohol and tobacco). These indicators for behaviour change are those which would be monitored in any social marketing approach that addresses the modifiable risk factors detailed previously in Table 2 (Section 3.3.4).

[28] i.e. hard hitting state sponsored anti-tobacco campaigns (Lantz et al., 2000).

[29] One problem with targeted prevention strategies is that a single programme cannot always or perhaps even often prevent smoking if the environment surrounding the child encourages tobacco use (Lantz et al., 2000).

Table 7. Summary of indicators for behaviour change

Study	Tools	Findings	Indicator for Behaviour Change
Ladouceur et al (2000)	Brochure on gambling	- Brochure contributed to raising awareness - Evaluation of preventative material is required before wider implementation into programmes, campaigns and resources	Increased knowledge on gambling and problem gambling
Najavits, Grymala & George (2003)	A state-wide advertising campaign using the slogan 'Play Smart. Don't bet more than you can lose'	- Slogans can effectively increase awareness of problem gambling (a form of de-stigmatising negative connotations) - Advertising campaigns may benefit more from targeted messages - Advertising campaigns may benefit more from the use of powerful forms of media communication	Increased knowledge on gambling and problem gambling
Ladouceur et al (2004)	2 hour awareness promotion workshop with VLT operators (role-plays and 12-minute video)	- Workshop influenced increased levels of understanding about problem gambling and when to approach problem gamblers	Increased behavioural interventions at gambling venues
Gaboury & Ladouceur (1993) Ferland, Ladouceur & Vitaro (2002) Lantz et al (2000)	Youth programmes conducted over an extended number of sessions Use of a video to deliver gambling information as well as lectures/presentations Use of multi-year campaigns and evaluations	- Increased knowledge on gambling and problem gambling - Attitudinal change toward gambling and problem gambling - Most effective intervention was the use of a video in conjunction with lectures/presentations	Increased knowledge on gambling and problem gambling Attitudinal change toward gambling and problem gambling
Jackson, Thomas, Thomason & Ho (2002)	Three phase state-wide community education campaign (utilised problem gambling messages, slogans, catch phrases and service provider logos)	- Incorporating service provider logos into the design of resources can cognitively reinforce and promote particular services - Slogans displaying brevity, simplicity and ease are most effective - Community education strategies must be diverse to ensure the needs of sub-cultures are addressed	Increased awareness of support services for problem gamblers Immediate increases in the number of calls to the gambling helpline
Olynik (2004)	A print, radio and television campaign	- Television advertisements were most effective on message recall.	Increased numbers of calls to the gambling helpline.
Elder et al (2004) Goldman & Glantz (1998)	Alcohol promotion via mass media Media campaigns to influence smokers decisions to quit smoking	- Alcohol campaigns have utilised de-normalisation messages to target erroneous beliefs and misperceptions about the social norms surrounding alcohol and drinking behaviours - These have been effective in increasing the public perception of drinking norms and decreasing heavy drinking - Effective social marketing campaigns have utilised second-hand smoke and industry manipulation strategies to de-normalise smoking	Reduction in levels of participation in continuous forms of gambling. Decreased gambling – related costs (e.g. crime, employment, finances, relationships).

3.7 Marketing strategies and competition with a social marketing approach

In contrast to Section 3.6 which notes the importance of utilising de-normalising messages as part of a social marketing campaign for gambling in New Zealand, this section explores marketing strategies that may contribute to the normalisation of gambling behaviour in this country as well as the competition to a social marketing approach to gambling in New Zealand.

Although there is a paucity of information on the marketing of gambling in New Zealand, the alcohol industry provides an insight into marketing strategies that are useful in maintaining or increasing the purchase of the product, attracting new customers and improving market shares. These include advertising, sponsorship of sports, cultural and social events, on-licence point-of-sale promotions (such as 'happy hours'), merchandising (such as the sale of branded clothing) and new products (like 'alcopops') (Ministry of Health, 2001a).

Some of these strategies have been utilised with the marketing of gambling, particularly advertising and sponsorship of sports events. However, an additional marketing approach unique to gambling includes community benefits received from gambling profits. The New Zealand Gaming Survey identified that the majority of adults (94%) who report having gambled at some time recall advertising for gambling activities. Lotto advertising was the most common (82%), followed by TAB (43%), TeleBingo (29%), Daily Keno (26%), horse and dog racing (24%), casinos (21%), Instant Kiwi (20%) and other sports betting (18%) (Abbott, 2001b). The importance placed on commercial marketing to promote these gambling activities is evidenced within the gambling sector media spend (see Appendix 2).

3.7.1 Advertising

Gambling marketing strategies in New Zealand, like alcohol marketing, utilise advertising as a prominent channel of communication. In regard to alcohol, despite frequent health promotion advertising on television and radio[30], there are disproportionately more commercial messages promoting this product (Hill, 2004). Comparatively, gambling health promotion advertising (such as radio advertisements for the gambling helpline) receives far less exposure than commercial messages to promote gambling. In contrast to alcohol advertising (Nield, 2001), there are no legal statutes and/or policies that support free broadcasting for gambling and fewer organisations are required to provide health-promoting advertisements.

Normalising behaviour

Dyall (2004b) suggests that the common advertising of gambling in New Zealand 'as a way to achieve your dreams' is a strategy utilised by the New Zealand Lotteries Commission and local casinos, to promote their gambling products and increase sales. This frequent marketing of gambling as a recreational, social and legitimate activity is

[30] Free broadcasting time is provided for alcohol health promotion advertising as part of the 1992 deal that allowed alcohol brand advertising on television after 9 pm. Anti-drink-drive advertisements are made by the Land Transport Safety Authority, which is funded from petrol taxes. Moderate drinking campaigns are made by the Alcohol Advisory Council (ALAC), which is funded from a two percent levy on alcohol.

considered to influence the normalisation of gambling behaviour, to impact on health and well-being and one's ability to maintain control (Dyall, 2004a).

Howland (1994) also implies that the accessibility and availability of particular forms of gambling such as Lotto in supermarkets, malls and bookshops contributes to the normalisation of gambling. This association between gambling and such venues is considered to encourage and reinforce participation in what appears to be a normalised activity and Kiwi ideal, since everyone has a chance of winning.

Dyall (2004b) and Howland (1994) provide an insight into the role of marketing strategies and the normalisation of gambling, however, further research is required to investigate this.

Targeting populations

Gambling advertising strategies that target vulnerable populations is considered comparable with the tobacco and alcohol industries (Adams, 2004). Dyall (2004b) implies that in the Department of Internal Affairs report 'Gaming reform in New Zealand: Towards a new legislative framework' (Department of Internal Affairs, 2001a), advertising by the New Zealand Lotteries Commission is noted as having targeted Maori and Pacific populations.

Amey (2001) reports an association between participation in gambling activities and recall in gambling advertising amongst the general population in New Zealand[31]. However, in line with the latter view detailed in the previous paragraph, a number of studies emphasise that advertising is commonly considered to have a major influence on gambling participation amongst Maori and Pacific (Samoan and Tongan) populations (Dyall, 2004b; Guttenbeil-Po'uhila et al., 2004; Perese & Faleafa, 2000). Tse et al (2004) suggest the need for a policy review on the advertising of gambling products and contend that this should consider whether certain at-risk groups have been targeted at a disproportionate level. Additionally, Dyall (2004b) contends that the impact of gambling advertising and marketing strategies, especially Lotto, on different population groups must be addressed.

Aside from ethnic populations, Woollard & Gregory (2002) provide a report on how to encourage people who are smokers to continue gambling in a non-smoking environment. The authors suggest a number of interventions, inclusive of advertising, that target smokers. These interventions include training staff to keep people at the machines playing continuously (e.g. advertising and offering free tea/coffee/snacks, congratulating players after each win), incentives and promotions (publicly announce winnings, frequently offering complementary meals, drinks, accommodation and transport, distributing meal vouchers two hours prior to lunchtime), entertainment (advertise the provision of crèche facilities and entertainment) and financial services (lending facilities, personal cheque cashing, position ATM and smoking facility within

[31] The majority of participants (n=1,329) could remember seeing or hearing some form of gambling advertising in the last 12 months. Of those who had seen advertisements, most recalled Lotteries Commission-funded adverts, especially those advertising Lotto. The number of people who recalled Lotto advertising was also practically identical to the number of people who played the game. Those who recalled Daily Keno and TeleBingo advertising was considerably higher than the number who had actually participated (Amey, 2001).

view of the poker machines, replicate surroundings of gambling room in smoking room).

Sponsorship and advertising

Another gambling advertising strategy is the sponsorship of sports events, whereby the gambling provider, product or logo is advertised in such places as sports uniforms, billboards and/or posters. One example of this is the 2005 New Zealand Lotteries sponsorship agreement with the Vodafone Warriors. This agreement ensures that Keno, a New Zealand Lotteries game played twice daily, is seen as one of the main franchise sponsors of the National Rugby League. The deal gives Keno strong visible exposure through the display of its logo on the back of the players' shorts. Keno signage is also displayed at Ericsson Stadium and promotions on Warriors' games are available to Keno players and Lotto retailers (New Zealand Lotteries Commission Press Release, 2005).

Another example is SkyCity's sponsorship of the New Zealand Special Olympics team. In April 2005, SkyCity sponsored and organised the Special Olympics Street Appeal. Celebrities and a number of volunteers and special Olympians were involved in raising money to send local athletes to the Special Olympics New Zealand and Asia Pacific Games in Christchurch in November/December 2005. Additional proceeds from other fundraising events such as the SkyCity Starlight Symphony and the Sky Tower Vertical Challenge have previously been donated to Special Olympics New Zealand (SkyCity Auckland, 2005). In addition, SkyCity sponsors Auckland rugby and is a major sponsor of the Auckland National Provincial Championship rugby team and a key sponsor of the Auckland Blues and the SkyCity Cheer Team. It also sponsored the V8 Super Car Championship series and Propecia Rally in New Zealand, and is the official after-match home of the Vodafone Warriors league team (SkyCity Auckland, 2005).

The New Zealand Racing Board also supports sporting bodies such as soccer and rugby from a sports bodies levy[32]. For example, funds received by Soccer New Zealand assisted in the planning of overseas development and sending teams to international competitions. Rugby League funds are used to purchase text books and interactive CD's at the Academy of Excellence camps and to support the Junior Kiwi team (New Zealand Racing Board, 2004).

Advertising can be conducted in conjunction with sales promotion schemes. The promotion of commercial products including gambling is authorised by section 18 of the Gambling Act 2003. Section 18 specifies that only manufacturers, distributors, wholesalers and retailers can run sales promotion schemes such as a prize competition or lottery to promote the sale of goods and services. Examples of this are the 2005 Non-Cash Prize Promotion for Keno and Lotto's 2004 Ford Falcon XR8 promotion (New Zealand Lotteries Commission Press Release, 2004; New Zealand Lottery Media Release, 2005).

[32] Whilst this can be considered a form of advertising of the New Zealand Racing Board's products through 'sponsorship' it is actually payment to the relevant sporting body of 'royalties' for permitting the New Zealand Racing Board to conduct sports betting on that sport's activities. They consist of a percentage of sports betting turnover on that sport's activities. The minimum percentages are mandated in Section 57 of the Racing Act 2003 but by agreement the percentages can be higher than the statutory minimum.

In 2005, players who purchased a Keno ticket between 19 June and 9 July could win one of 20 Warriors support packs (consisting of a Sony 32" FD Trinitron widescreen WEGA TV, a one year Sky digital subscription and a signed Warriors jersey) (New Zealand Lottery Media Release, 2005). In 2004, customers who purchased a Triple Dip between 27 June and 10 July were entitled to be entered into the draw to win one of 10 limited edition Ford Falcon XR8s (complete with an All Blacks signature, the All Blacks logo and a personalised All Blacks number plate) (New Zealand Lotteries Commission Press Release, 2004).

Community benefits

In 2001, a review of gambling in New Zealand illustrated that the purpose of gambling activities in this country was to benefit the community. The New Zealand Lotteries Commission, which was established under the Gaming and Lotteries Act 1977 was described as a government agency that provides and promotes gambling. It was also noted as existing to raise funds for allocation to the Lottery Grants Board, to charitable and community purposes (through a number of distribution committees[33]) and to support certain statutory bodies such as the Hillary Commission for Sport, Fitness and Leisure, Creative New Zealand, and the New Zealand Film Commission (Department of Internal Affairs, 2001a). Additional bodies supported by proceeds from gambling include Sport and Recreation New Zealand (SPARC), Barnados, Kidney Kids and New Zealand Historic Places Trust (New Zealand Lotteries Commission, 2005).

SkyCity also distributes funds to a number of community agencies around New Zealand. For example, in Auckland, these agencies include Starship Foundation, Kidz First Children's Hospital, The NZ Breast Cancer Foundation, Bays North Harbour Parents Centre, Chinese Language Foundation, Forrest Hill School, Hearing Dogs for Deaf People, Kumarani Productions, Parkinsonism Society, Ronald McDonald House and The Auckland Zoo Charitable Trust (SkyCity Auckland, 2005).

Gaming machine societies also distribute proceeds amongst community organisations in New Zealand. Funds from the six major societies[34] are reported to account for approximately 60% of all expenditure on non-casino EGMs and 50% of all non-casino EGM sites in New Zealand (Grant & Simonsen, 2003). In an investigation on where the community benefit funds from the six major gaming machine societies are distributed, Grant & Simonsen (2003) found that between 48% and 62% of all available funding in regions throughout New Zealand went to the sport/physical activities sector.

In the context of marketing strategies, the gambling industry commonly focuses only on the positive aspects of gambling such as community benefits. These are frequently portrayed within advertising and media messages. Examples of this are a media release entitled 'NZ Lotteries Celebrates Funding Boost for New Zealand Communities' (New

[33] In 2004, community funds were distributed amongst the following sectors: Environment and heritage, general, health research, individuals with disabilities, Marae heritage and facilities, Minister's discretionary fund, Pacific Islander provider development, problem gambling, seniors, welfare, youth (New Zealand Lotteries Commission, 2004).

[34] NZ Community Trust, Pub Charity, Lion Foundation, Southern Trust, Scottwood Trust and Community Grants Foundation.

Zealand Lotteries Commission Media Release, 2005) and the airing of community organisations that have received lottery funding, during weekly Lotto draws.

Media expenditure

Although the gambling sector media expenditure highlights the importance placed on commercial marketing to promote gambling (see Appendix 2), it is important to note at this point that the figures represented are rate-card figures[35] and are gross overestimates of the actual expenditure (possibly 40% higher) since they are ballpark figures only[36].

Each year since 2000, the expenditure on advertising New Zealand Lotteries gambling products has been the largest, with Lotto alone making up approximately 50% of the sector's annual expenditure. The rate-card expenditure for Lotto increased from $13,297,594 in 2000 to $19,446,782 (NZD) in 2004. The 2004 figure had increased by 3% from 2003. Other Lotteries products such as Instant Kiwi, Keno and TeleBingo also have considerable media expenditure but unlike Lotto, the expenditure fluctuated over the five-year period. However, overall, the public's expenditure on New Zealand Lotteries gambling products has generally declined over the last five years (Department of Internal Affairs, 2004)[37].

In contrast to increased rate-card expenditure on Lotto, Instant Kiwi, Keno and Telebingo and despite continuous advertising on the New Zealand Racing Channel, the TAB (horse and sports betting) drastically decreased its expenditure from $4,094,210 in 2000 to $1,484,192 (NZD) in 2004. Irrespective of this reduction, racing has had slight increases in player expenditure over the same period (Department of Internal Affairs, 2004).

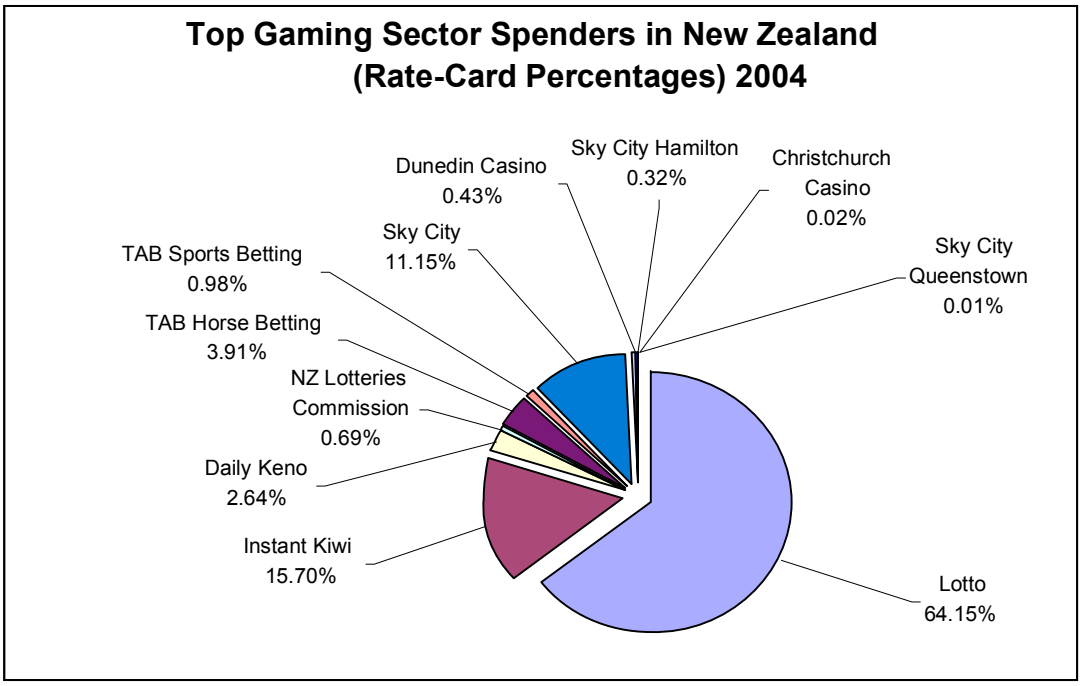
The casinos in New Zealand also make up a large proportion of media expenditure. In particular, the rate-card expenditure for SkyCity is consistently larger than that for the Christchurch, Dunedin, Queenstown and Hamilton casinos. Additionally, SkyCity remains one of the top spenders each year, whilst the other casinos have reduced their expenditure. Whether this relates to differences in population size or whether the multi-cultural environment in Auckland calls for more targeted marketing campaigns requires further investigation.

It is interesting to note at this point that there is no rate-card figure for non-casino EGMs (i.e. non-casino EGM venues do not advertise in the media), yet over half of the gambling expenditure in 2004 ($1035 million NZD) are attributable to this form of gambling.

Rate-card figures for 2004 are shown in Figure 5 overleaf.

[35] Rate-card figures refer to the average cost for media advertising.
[36] In reality the gambling sector will receive a large discount on the rate-card figure due to the extensive use of media as a form of advertising.
[37] Although gambling expenditure in 2004 ($282 million NZD) had risen from the 2003 player losses ($239 million NZD), this figures represent a statistical irregularity since the 2004 expenditure was largely influenced by 3 large power ball jackpots.

Figure 5. Top gaming sector media spenders in New Zealand (rate-card figures) 2004



3.7.2 Gambling Act regulations

Despite the broad range of marketing strategies that promote gambling, the Gambling Act 2003 includes a number of regulations specific to class 4 gambling that have begun to address this. These regulations specify that:

- From 1 October 2005, advertising relating to a gaming machine jackpot cannot be audible or visible to persons from outside a venue
- From 1 October 2005, gaming machine jackpot branding cannot be published through any advertising medium
- From 18 March 2005, only the six licensed casinos may use in their branding the word 'casino' or any other word or get-up that gives the impression that the venue is a casino and accessible to the public

3.7.3 The competition

In addition to the gambling industries' marketing campaigns, there are several other issues that will compete for the general public's attention to a social marketing approach to gambling. These will include individual behavioural factors, such as risk and protective factors, as well as attitudes and perceptions towards gambling, problem gambling and help-seeking (discussed earlier in this report). In addition, any concurrent public health or social marketing approaches in other or similar areas would also vie for the public's attention and could enhance or reduce effectiveness of a social marketing approach to gambling.

Given that communities actually benefit from gambling proceeds, for example through community grants from electronic gambling machine trusts and via the Lotteries Grants Board, any social marketing approach to gambling in New Zealand would also need to consider the impact on, and public response of, communities. For example, how would individual communities respond if a grant they relied on diminished due to a reduction

in gambling participation/problem gambling as a direct consequence of the social marketing approach?

3.8 Services for preventing and minimising gambling harm in New Zealand

New Zealand provides a number of services that are committed to ensuring that assistance is provided to people with gambling problems, including their family/ whanau. This section describes a number of gambling helpline, face-to-face, public health and research services in this country.

3.8.1 Telephone services

Gambling Helpline
The Gambling Helpline in New Zealand is a national specialist helpline for people who have, or are affected by, gambling problems. This service provides crisis and brief interventions and ongoing motivational support as well as referrals to other specialist agencies (refer to face-to-face counselling). It is often the first port of call for people seeking help for gambling problems or for information about problem gambling. In addition to the main helpline and specialist Gambling Debt Helpline, it also has services available that are specific to Maori, Pacific and youth populations. Services are provided by telephone, Email or on-line (a 'talking point' peer support forum is hosted on its website).

The Gambling Helpline is integral to the integrated continuing care programme. This programme means that clients who have completed treatment at a Ministry of Health funded face-to-face counselling service provider will receive regular follow-up calls from the Helpline (if agreed by the client). The follow-up calls are made at 1, 3, 6, 12 and 18 months after the completion of therapy. The purpose of the calls is to collect brief outcome measures and provide ongoing motivational support.

The advertising and marketing of this service includes television, radio and telephone directories advertisements. Some small scale print media advertising is also undertaken usually comprising editorial plus an associated advertisement. The inclusion of contact details at the end of television and radio stories and news items in newspapers and magazines sometimes occurs, however, this depends on the producers of the item. The Gambling Helpline also issues regular press releases to highlight problem gambling and its services. As well as its main website and youth website, the organisation produces self-help resources that are available on request and at service provider organisations. These are often displayed at public meetings and events and are available to the general public in venues such as Citizens' Advice Bureaux.

3.8.2 Face-to-face counselling, training and information services
A number of face-to-face counselling, training and information services are available throughout New Zealand. The services listed below are found in The Manual on New Zealand Gambling Treatment Services which was funded by the Problem Gambling Committee. Many of these are funded by the Ministry of Health for seeing problem gambling clients. The face-to-face organisations tend to work independently of each other but liaise with the Gambling Helpline, especially in terms of referrals and integrated continuing care.

Abacus Counselling and Training Services Ltd
A counselling and training organisation specialising in training to address problem gambling and its relationship to other addictions and mental health. This service also provides training around other health-related activities. It is available in Auckland, Wellington and Christchurch.

Best Care Whakapai Hauora
Best Care Whakapai Hauora is iwi-based and a leading provider of health and disability support services in the Palmerston North District. It provides generic addiction services which include health promotion and gambling counselling services.

Hapai Te Hauora Tapui Ltd
Hapai Te Hauora Ltd is a regional Maori Public Provider. This service coordinates and delivers a range of health promotion messages and events in the Tamaki Makaurau rohe (Auckland Area). It is committed to the development of positive messages by Maori for Maori.

Hapai Te Hauora Ltd has a contract to coordinate gambling projects in the Manukau area as part of a community action project. It also has an ongoing relationship and commitment to working together with PacifiCare Trust on gambling projects in South Auckland.

This service has been involved in gambling research, the production of gambling resources (such as the Te Ngira Gambling and Public Health Workplan), and working alongside other gambling service providers (particularly in the formation of community action groups in areas where problem gambling is of particular concern) and other organisations such as the Manukau City Council.

Hapai Te Hauora Ltd also houses a Maori women's gambling issues support group.

Hauora Waikato
Hauora Waikato provides confidential counselling, support and information for individuals, couples and families whose lives have been affected by gambling, within the Hamilton and South Auckland regions.

He Oranga Pounamu
He Oranga Pounamu Charitable Trust provides gambling services within the Christchurch region. The establishment of this service was initiated by Ngai Tahu Development Corporation as a vehicle for organising and integrating health and social services. It's three primary activities are to provide leadership to the health and social service sectors within Ngai Tahu rohe by establishing a Treaty based relationship with the Crown entities and funding agencies, to establish participation in the governance and management of health and social service resources in the Ngai Tahu rohe and to engage in prioritisation and planning of health and social services for Maori in the Ngai Tahu rohe linked to identified local needs.

Matawhaura Oranga Counselling Service
Matawhaura Oranga Counselling Service provides free counselling and education for individuals and/or families affected by gambling in Rotorua.

Nga Manga Puriri
Nga Manga Puriri provides gambling services in the Whangarei region. It is a collective of individuals, whanau, hapu and iwi, community health and social service groups engaged in the kaupapa of promoting wellness throughout Tai Tokerau. The main aims of Nga Manga Puriri are to reduce alcohol and drug related harm and to address mental health issues in communities.

Ngati Porou Hauora
Ngati Porou Hauora offers primary health, disabilities support services and secondary care to the community. It also offers gambling services to those within the Te Puia Springs region.

Niu Development: National Pacific Gambling Project
Niu Development Inc. holds the contract for the National Pacific Gambling Project. This project works with Pacific people to identify priority needs and culturally responsive strategies for minimising gambling harm. It supports existing and new Pacific providers and works within a public health approach to reduce Pacific gambling harm. The project provides community programmes and education within the Auckland, Wellington and Christchurch areas.

Odyssey House
Odyssey House provides a range of counselling services (therapy groups, one-to-one counselling, couples counselling and family therapy) and education programmes to assist those suffering from problems that are associated with substance abuse and addiction. This includes a gamblers' programme.

Pacific Peoples Addiction Services
Pacific Peoples Addiction Services provide holistic counselling in the areas of alcohol, drugs and gambling. There is, however, only one counsellor who sees problem gambling clients. This service works with individuals, groups, couples, families and youth. It also provides a number of educational and awareness programmes.

PacifiCare Trust
PacifiCare Trust is a Pacific non-governmental organisation health service in Auckland. It provides education programmes and counselling in the areas of mental health, gambling, alcohol and drugs. This service assists Pacific peoples to manage their gambling concerns within their own communities. There is, however, only one counsellor who sees problem gambling clients. PacifiCare Trust also promotes empowerment and robust collaborative community and key provider networks.

Problem Gambling Foundation (PGF)
PGF is the largest problem gambling counselling service in New Zealand. Its mission is to eliminate harm caused by gambling by providing counselling and support for individuals and families. PGF provides free and confidential services at 38 clinics throughout the country. These services are also available in prisons and for police diversion schemes. Counselling is provided by a range of clinicians with specialist training. Multi-skilled practitioners include psychologists, social workers, psychotherapists, psychiatric nurses and occupational therapists. In addition, the Asian

service team (Auckland and Christchurch) provides counselling in three Asian languages and operates a helpline as well as providing face-to-face counselling.

PGF also has a public health branch that focuses on community development and health promotion. This team provides programmes and presentations to community groups to strengthen their resilience to problem gambling and to raise awareness and eliminate harm from problem gambling. It also supports community action groups throughout New Zealand.

In addition, PGF has developed a wide range of resources (mainstream, Maori, Asian and Pacific) that have been widely distributed to the public at meetings, presentations, conferences and community events. The organisation has also hosted a number of gambling conferences.

Taumata Hauora
Taumata Hauora Trust is a Maori Development Organisation that develops, purchases, integrates and coordinates public, personal and primary health services in the Whanganui, Rangitikei and South Taranaki regions.

Te Kahui Hauora Trust
Te Kahui Hauora Trust is a legal entity that coordinates and delivers selected services and contracts (such as the provision of gambling services in the Rotorua area) on behalf of Te Mana Hauora O Te Arawa.

Te Rangihaeata Oranga
Te Rangihaeata Oranga provides a range of interventions, education, advocacy, assessment and treatment services for those in the Hawes Bay area who have a problem with gambling and other related issues.

Te Runanga o Kirikiriroa
Te Runanga o Kirikiriroa is a charitable trust that is dedicated to improving the holistic wellbeing of Maori and Pacific Island people in Kirikiriroa (Hamilton region). Its research and development unit is involved in a project on the reduction of gambling harm.

Te Runanga o Toa Rangatira
Te Runanga o Toa Rangatira provides Rangataua Mauriora, a kaupapa Maori Alcohol and Drug service that assists and supports rangatahi and their whanau. It also provides problem gambling counselling services in the Wellington region.

The Salvation Army Oasis Centre, Te Ope Whakaora, Treatment for problem gambling
The Oasis Centre is the second largest National service provider in New Zealand. It offers free consultation and rehabilitation programmes for problem gamblers, partners of gamblers and affected family members throughout the country. Programmes provided within the Centre are also available in prisons and as part of police diversion schemes.

The Oasis Centre also provides chaplaincy services for individual spiritual direction and recovery fellowship. In addition, it supports the Oasis women's group, a mixed gender gamblers support group, education groups and a Maori women's group.

The Oasis Centre also offers advice and information and refers people to specialist services and self-help groups (such as Gamblers Anonymous and GamAnon). This service has also developed gambling resources.

Tui Ora
Tui Ora is an integrated health service organisation committed to enhancing health and wellbeing. The concept of integrated services includes the value of Tikanga and the principles of Partnership, Quality and Excellence. Tui Ora provides gambling services in the New Plymouth region.

Whakawhanaungatanga Trust
Whakawhanaungatanga Trust is a community organisation that provides problem gambling support services in the South Auckland region. These services are targeted to Maori and Pacific peoples.

Wai Health Addiction Services
Wai Health is one of the largest providers of health services to Maori in New Zealand. This service provides free outpatient counselling for people in Auckland who have, or are affected by, issues to do with gambling.

Wairarapa Addiction Services
The Wairarapa Alcohol and Drug Addiction Service, based in Masterton, is a free, confidential community service to assist people who have concerns about their own or someone else's alcohol, drug or gambling use.

Woodlands Trust
The Woodlands Centre Charitable Trust is a national treatment provider for problem drinkers and problem gamblers.

3.8.3 Self help groups

Gamblers Anonymous
Gamblers Anonymous is a fellowship support group for ex- and reforming gamblers who have in common the desire to stop gambling and the will to help others do the same. Meetings are frequently held around New Zealand and are based on a 12-step programme. Referrals to this service can be made through the Gambling Helpline.

GamAnon
GamAnon is a support group for the spouse, family or close friends of problem gamblers. It aims to help members understand problem gambling and learn new and appropriate methods of dealing with the gambler. It is intended that throughout this process, members will also learn a better way of life for themselves. Referrals to this service can be made through the Gambling Helpline.

3.8.4 Alcohol and Drug organisations

There are a number of alcohol and drug organisations in New Zealand that are concerned with the comorbidity of alcohol and drugs with problem gambling. Listed below are alcohol and drug services in the Auckland region that screen for problem gambling. These services liaise with problem gambling service providers to arrange appropriate treatment for clients with a comorbid gambling problem.

Community Alcohol and Drugs Services (CADS)

CADS offers a free service, funded through the Waitemata District Health Board, to people in the Auckland region wanting to solve an alcohol- or drug-related question, issue or problem. It provides counselling, support, education and training, and has available Maori, Pacific and youth workers. This service also has a dual diagnosis branch that aims to improve the health and quality of life of people who have been adversely affected by mental illness or gambling and substance use.

Higher Ground Rehabilitation Trust

Higher Ground Rehabilitation Trust in Auckland provides alcohol, drug and mental health services. Gambling is included amongst the screening process. It also offers community programmes, counselling services and rehabilitation services.

3.8.5 *Research centres*

Centre for Gambling Studies

The Centre for Gambling Studies is located within the School of Population Health at the University of Auckland. This service aims to undertake research to minimise harm from gambling and promote community well-being. It provides research and consultancy and training services.

Gambling Research Centre

The Gambling Research Centre is located within the National Institute for Public Health and Mental Health Research at the Auckland University of Technology. It conducts research that informs gambling policy and professional practice in public education, population health and primary and secondary health care. It also aims to improve New Zealanders' understanding of how gambling affects society. The Centre has also hosted a number of international gambling conferences as well as the international Think Tank on Presenting Gambling Populations and First Contact Services which fosters and coordinates international cooperation in gambling research.

Paton-Simpson and Associates Ltd (PSAL)

PSAL manages all national data collection, analysis and reporting for the gambling treatment sector on behalf of the Ministry of Health.

3.8.6 Regulatory Agency roles

Under the Gambling Act 2003, the responsibility of regulating gambling in New Zealand is shared between the Department of Internal Affairs and the Ministry of Health.

Department of Internal Affairs

The Department of Internal Affairs (2005a) provides a clear description of its responsibilities under the Gambling Act 2003. These functions are to:

- Provide advice to Government on gambling policy
- License class 3 and 4 gambling (mainly large-scale lotteries and gaming machines)
- Set game rules and equipment standards for all licensed gambling
- Set minimum operating standards for casinos
- Monitor and ensure compliance with the Gambling Act, regulations, licence conditions, game rules and standards
- Provide public information and education

The Gambling Commission

The Gambling Commission is an independent statutory decision-making body established under the Gambling Act 2003. With the powers of a Commission Inquiry, the role of this body is to:

- Set licence conditions for casinos
- Consider applications for the renewal of casino venue licences when they expire (the first expires in 2019)
- Decide whether to suspend or cancel a casino operator's or venue licence
- Consider casino venue agreements (and changes to venue agreements) between casino operator's or venue licence holders
- Consider applications for casino operators' licences
- Consider and decide appeals against Department of Internal Affairs' decisions relating to class 3 and class 4 gambling licences and licensed promoters' licences
- Consider and decide appeals relating to Department of Internal Affairs' decisions on Minimum Operating Standards
- Consider and decide appeals on decisions by the Department of Internal Affairs on Certificates of Approval for casino employees
- Consider and decide appeals on decisions by the Department of Internal Affairs on associated persons in casinos
- Consider and deal with complaints about the Department of Internal Affairs' handling of complaints about class 4 gambling
- Have an independent role in the problem gambling levy setting process
- Advise the Minister on all matters relating to Gambling Commission functions

Ministry of Health

The Ministry of Health is responsible for the funding and coordination of problem gambling services (Department of Internal Affairs, 2005a; Ministry of Health, 2005a). It assumed this role on 1 July 2004 from the Problem Gambling Committee. The role of the Ministry is also to develop an integrated problem gambling strategy within a health framework which includes:

- Measures to promote public health by preventing and minimising the harm from gambling
- Services to treat and assist problem gamblers and their families and whanau
- Independent scientific research associated with gambling
- Evaluation

4 Conclusion

The HSC has three overall project objectives, which are to:

- Promote increased knowledge, responsible choices and community participation in relation to gambling issues and the minimisation and/or resolution of gambling harms.
- Protect all groups from gambling-related harms, including refinement of approaches for population groups, through responsible gambling policies, community support programmes and public safety approaches.
- Prevent gambling-related harms through public awareness, early identification of problems and provision of information, counselling and other interventions.

The purpose of this literature review was to ascertain the likely effectiveness of social marketing objectives and approaches, and behaviour change indicators, to prevent and minimise gambling harm. The review found that previous social marketing efforts have been successful in reaching population groups and improving behavioural outcomes across a range of public health intervention areas. It was also found that social marketing approaches are most effective when conducted in a climate that is supported by legislation and policy.

New Zealand has adopted a public health approach to gambling and this should be borne in mind in the conduct of any social marketing approach. As New Zealand is a multicultural society with an indigenous population, this is also an important element for consideration as any approaches targeted to the general population or to specific population groups should acknowledge differences in culture and behaviours. There are several models for behaviour change, that may be useful for adaptation to suit this context.

The HSC will be conducting a behaviour change indicators survey subsequent to this report. It is hoped that this report may complement that survey.

Finally, it is important that any social marketing approach is seen to be effective and to have the desired outcomes as opposed to producing unwanted negative outcomes (e.g. leading to increased gambling and problem gambling). To that end, it will be important that any social marketing approaches incorporate pre- and post-evaluative measures for their effectiveness. It will also be important to review and update the approaches on a regular basis (e.g. every three to five years) to ensure that new modes of gambling and behaviours are appropriately targeted. Any social marketing approaches taken must also bear in mind the competition for the population's attention (as discussed in Section 3.7.3) to ensure that the potential for behavioural change is maximised.

The objectives of a social marketing approach to gambling will be to reduce the risk factors for the development of problem gambling by altering the behaviours and attitudes of those people at risk of developing problematic gambling. In Table 1 (Section 3.3.4), risk factors for the development of problem gambling were tabulated as either modifiable (through a social marketing approach) or non-modifiable. For those risk factors in the former category, they were modifiable through one of two means - either through legislative changes or through changes in people's attitudes, for example

by their increased awareness and knowledge around gambling and problem gambling. As a social marketing approach can only hope to affect modifiable risk factors, those are the areas that will inform the focus of a public health and social marketing approach. Table 7 (Section 3.6.5) detailed indicators for behavioural change and the tools used to bring about that change, based on evaluated studies.

Social marketing strategies often rely on the use of mass media channels such as advertisements (television or radio), posters, brochures, bill boards, workshops etc. However, social marketing is more than mass media advertising. As noted in Section 3.1, the key principles and practices for social marketing include:

Behaviour change focus

Fundamental concepts
- Consumer orientation
- Exchange concept

Overarching principles
- Consumer value (use of the marketing mix)
- Selectivity and concentration (market segmentation)
- Differential advantage (competition)

Defining features
- Use of market research
- Integrated approach to implementation
- Monitoring and influencing environmental forces

It is also recommended that social marketing applied to the New Zealand context considers the three principles derived from the Treaty of Waitangi and referred to in the Government's Maori Health Strategy, He Korowai Oranga including:

- Partnership - working together with iwi, hapu, whanau and Maori communities to develop strategies for Maori health gain and appropriate health and disability services.
- Participation - involving Maori at all levels of the sector, in decision-making, planning, development and delivery of health and disability services.
- Protection - working to ensure that Maori have at least the same level of health as non-Maori and safe-guarding Maori cultural concepts, values and practices.

This report identifies that a social marketing approach for gambling in New Zealand is timely since gambling regulations continue to be enforced as a requirement of the Gambling Act 2003.

4.1 Limitations to this review

Particularly in terms of public health literature and literature on risk and protective factors, this review was not exhaustive as other thorough international reviews have previously been performed and published. This review tried to focus on a New Zealand

perspective, drawing on international literature for additional support (or otherwise) and clarification. The purpose of this review was to inform a problem gambling social marketing approach in New Zealand and this context was borne in mind throughout the review.

The main limitation to the present review was methodological - our ability to find unpublished studies, studies published in less prominent journals and 'local' research within the timeframe of the project. Pertaining to this, some of the literature that was reviewed related to preliminary studies of small sample size that may not be representative examples of the New Zealand context as a whole. The authors of this report do not make any claims as to the credibility or robustness of these studies.

Finally, with no published outcomes of national social marketing approaches for problem gambling (apparently) available the development of a national public health and social marketing approach will be based on the limited evidence at hand.

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APPENDIX 1:
Abbreviations used in the review

AGA	American Gaming Association
AFM	Addictions Foundation of Manitoba
AIGR	Australian Institute for Gambling Research
ATM	Automated Teller Machine
AUT	Auckland University of Technology
CADS	Community Alcohol and Drugs Services
CEGFLO	Community Education and Gaming Facility Liaison Officer
CIP	Consumer Information Processing Model
COM	Community Organisation Model
DIA	Department of Internal Affairs
EFTPOS	Electronic Transfer of Funds at Point of Sale
EGM	Electronic Gaming Machine
GCA	Global Cash Access
HBM	Health Belief Model
HSC	Health Sponsorship Council
NCGM	Non-Casino Gaming Machine
NPGAW	National Problem Gambling Awareness Week
PGF	Problem Gambling Foundation of New Zealand
PSA	Public Service Announcement
RGF	Responsible Gambling Feature
SCM	Stages of Change Model
SCT	Social Cognitive Theory
SMNEC	Social Marketing National Excellence Collaborative
SOGS	South Oaks Gambling Screen
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
VLT	Video Lottery Terminal

APPENDIX 2:
Top gaming sector spenders in New Zealand (rate-card figures) 2004

Product	Spend	% difference from 2000	% difference from previous year
Lotto	$ 19,446,782	46	3
Instant Kiwi	$ 4,758,194	-23	50
Daily Keno	$ 799,075	-45	21
NZ Lotteries Commission	$ 210,260	-58	na
TAB Horse Betting	$ 1,185,984	-38	-11
TAB Sports Betting	$ 298,208	-86	-63
Sky City	$ 3,378,803	-17	-11
Dunedin Casino	$ 130,816	-58	-12
Sky City Hamilton	$ 96,070	na	na
Christchurch Casino	$ 7,317	-95	-80
Sky City Queenstown	$ 4,202	-65	3
Total	$ 30,315,711		

na Not applicable