

Psychological Aspects of

# GAMBLING BEHAVIOUR

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## **Executive Summary**

Gambling, the act of staking money or some other item of value on the outcome of an event determined by chance, is an accepted leisure pursuit enjoyed by the majority of adult Australians. For a smaller proportion of professional or regular gamblers, it is seen as a means or hope of obtaining additional income. While certain religious groups ban it or regard it as sinful, gambling can be regarded as inherently a morally neutral activity being neither good nor bad in itself.

Recently, public concern has been expressed over the potential negative social and welfare impact of gambling on community members following legislation which has permitted its expansion and the introduction of new forms of gambling in all Australian states. This paper reviews the psychological literature on gambling, the impact of recent social policy changes and the effect of excessive gambling on segments of the population.

There is no comprehensive theory explaining gambling behaviour but most researchers agree that the bulk of participants are motivated by a desire to win money, to gain some enjoyment or for excitement. Most hope to win but expect to lose.

There is a social and political infrastructure in existence which actively supports and promotes gambling. Media promotion has a significant influence on shaping child and adolescent perceptions toward gambling. Advertising glamorises gambling and entices people to participate by giving the misleading impression that winning is frequently possible and/or that the majority of players are winners. While occasional wins are possible, the reality is that odds invariably favour the 'house' and that most people lose in the long run.

How many people gamble is governed by the availability and ease of access to gambling facilities. The greater the number of participants at any point in time, the greater is the number of people placed at risk of developing gambling problems. It is recognised that the uncontrolled expansion of gambling is likely to lead to possible financial and psychological difficulties among some community members who gamble excessively. Psychological difficulties are characterised by serious levels of depression and suicidal ideation, agitation and possible substance abuse. High rates of marital and familial distress are commonly present. The cost to society is reflected in loss of productivity, loss of employment and the cost of criminal activities committed to support habitual gambling behaviours.

In respect of treatment, there is a number of effective psychological interventions that can be applied to assist gamblers to regain control over their behaviour and to provide guidance for their partners in dealing with the stresses incurred by excessive gambling.

## **Summary of Key Recommendations**

### **A: Primary Prevention**

1. Research into the social and psychological conditions which lead to increases in the number of people who gamble and the factors contributing to loss of control over gambling behaviour is encouraged. Psychologists should adopt a neutral stance toward gambling as a moral issue and in so doing, promote the concept of gambling as a form of entertainment rather than a means of deriving income, and advocate controlled patterns of gambling behaviour rather than argue for its outright prohibition. Given the relationship between availability of gambling outlets and the number of problem gamblers, a moratorium should be imposed on further gambling expansion.
2. Psychologists should play an active role in educating the public on the problems of excessive gambling and the availability of services through media comments and the production and dissemination of educational material.
3. Governments, the gaming and racing industry, and welfare organisations should take cooperative action to promote responsible gambling behaviour within the community through education and harm minimisation programs. Education programs should be directed towards improving the public's understanding of probability and randomisation so that the true odds of winning and losing can be fully realised.
4. Gambling advertisements should not promote the erroneous belief that most people win when gambling but should include accurate information on the relevant odds of winning and the percentage return to participants. The social and entertainment value of gambling rather than the economic aspect of gambling should be emphasised.
5. Signs cautioning against the dangers of excessive gambling should be clearly and openly displayed in areas where gambling takes place and information on the availability of psychological assistance and counselling services should be freely advertised and made available to gamblers and their family members.
6. Psychologists should provide educational material to community members highlighting early recognition of signs of problem gambling

### **Secondary Prevention**

1. Cost-effective intervention programs should be made readily available for people displaying early signs of problem gambling.
2. Psychological counselling and support services for 'problem gamblers' and their families operated by appropriately trained staff should be promoted.

3. Psychologists should conduct professional staff training for health professionals in private and community settings who may work with people adversely affected by gambling.
4. Psychologists with expertise should provide high quality training programs to clinical and counselling psychologists to enhance competency. Training programs ideally should be included within postgraduate Clinical and Counselling Master and Doctor of Psychology degree level courses.
5. Prevalence studies and needs analyses should be carried out to determine the extent and nature of gambling within socially and culturally diverse groups including indigenous communities. Bilingual counsellors must be trained to offer appropriate culturally relevant interventions within ethnic communities.
6. Psychologists have the skills required to conduct research into patterns of gambling, reasons why people gamble, and gender and age differences in gambling to obtain a better understanding and to provide more effective treatment options for people who go on to develop problematic gambling behaviours.

### **Tertiary Prevention**

1. There is a need for psychologists to carry out controlled treatment outcome studies to develop 'best practice' approaches in the management of problem gambling.
2. Problem gamblers should have access to demonstrated cost-effective treatment interventions, either in individual or group settings.
3. The partners and families of problem gamblers should have access to psychological assistance in helping them to deal with the impact of excessive gambling on the family.
4. Psychologists should co-operate with psychiatrists in establishing residential programs for seriously disturbed gamblers who may pose a suicide risk or who suffer serious comorbid psychological and psychiatric conditions.
5. Psychologists in rural areas should be trained in recognising and treating problem gamblers.

6. Demographic characteristics of gamblers should be systematically evaluated in order to tailor interventions for specific subgroups.
7. The judiciary should be made aware of the relationship between gambling and criminal offences committed to support habitual gambling behaviour. Psychological rehabilitation programs should be recommended for offenders in addition to any penalty imposed by the courts.

## **Introduction**

Gambling holds a prominent position in Australian culture and is a leisure activity that most adults participate in and enjoy at some level (Dickerson, Allcock, Blaszczyński, Nicholls, Williams, & Maddern, 1996 a). Gambling involves the staking of money or items of value on the outcome of an uncertain event that is determined by chance. Four types of activities are generally included in the definition: gaming, which is the exchange of an item of value according to the outcome of a game (e.g., cards, roulette and electronic gaming devices); betting where wagers are placed on the outcome of a race or sporting event; lotteries where distribution of money occurs by random draw; and speculation, investing money in business ventures, insurance or stock market activities. Over the last two decades changes in the economic and political climate have seen a rapid growth in the gaming industry with legislation allowing for the introduction of new forms and the expansion of existing forms of gambling in all States of Australia. This has resulted in greater availability of and access to multiple forms of gambling in the community than ever before. In addition to traditional gambling pursuits of horse, greyhound and trotting wagering, purchase of lottery tickets and poker machine play, people are now able to participate in table games at casinos, electronic gaming devices such as video-draw poker and keno, and a wider variety of numbers gambling including instant scratch lotteries, lotto and sports pool betting. Technological advances also raise the possibility of off-shore gambling using Internet computer programs with particular implications for underage and adolescent gambling (Australian Council of Social Services, 1997). An analysis of the social and political conditions which have led to the provision of greater opportunities for gambling and the exploitation of these opportunities by increased numbers of Australians is beyond the scope of this paper but deserves serious attention.

The net effect of these social changes is to expose more people to the opportunity for gambling and consequently to place them at risk for developing problems as a result. The potential for financial problems is seen in the amount of money invested in gambling; the Australian-wide gambling turnover is approximately \$61 billion representing 2.8% of household disposable income, a rise from 1.7% in 1984/85 (McMillen, 1996). In two independent surveys in Victoria and New South Wales (Victorian Casino and Gaming Authority, 1995; Dickerson, Boreham, & Harley, 1995), 5% of the adult population reported spending more than 25% of their income on gambling. Overall, 12-13% of taxation revenue in all States is generated from gambling taxation revenue.

It is argued by some Australians that gambling represents a legitimate source of entertainment, a source of revenue for public, private and charitable organisations which can be directed toward the benefit of the community in general or its members through the provision of facilities and sporting activities, an opportunity for employment either directly in the gambling industry or its supporting infrastructure, and as a tourist attraction. Balanced against this is the criticism that gambling represents a regressive financial burden on low socio-economic groups which effectively leads to an iniquitous redistribution of resources away from low income earners to the wealthier classes. Concern is also expressed by welfare organisations which report increased demand for financial assistance and family counselling because of gambling.

There is further recognition of the apparent harm and cost to society produced by individuals who exhibit impaired control over their gambling behaviour and who, as a consequence, experience severe negative personal and social consequences resulting in emotional and psychological distress.

Consequently, in view of the increasing proportion of the Australian population who participate in gambling activities, and with increased frequency, it is important to gain an understanding of the psychology of gambling, its cost-benefit to society and the impact that gambling to excess, i.e., consistently losing more money than one can afford, has on the welfare and psychological health of gamblers themselves, their families and the community generally.

It is important to appreciate that while some religious groups regard gambling to be morally wrong, the prevailing view is that in and of itself, gambling is a neutral activity. It is not a social or ethical problem in its own right but becomes so only when its extent and repercussions are associated with severe detrimental effects upon society or its individual members. Problem gambling is defined as a chronic failure to resist gambling impulses that results in disruption or damage to several areas of a person's social, vocational, familial or financial functioning.

The purpose of this paper is to outline current psychological understanding of gambling, its role as a leisure pursuit, its economic net worth to society, potential welfare costs to segments of the community, the impact of excessive gambling and identification of special at-risk groups within the population who may be particularly vulnerable to the effects of gambling. Issues related to public education and awareness, competency standards in the provision of psychological rehabilitation, and best practice in the provision of psychological service delivery are discussed.

## **What activities can be included under the definition of ‘gambling’?**

Gambling is an abstract construct, the boundaries of which are elastic and arbitrarily defined by social convention within a given cultural context and period. Although, as the British Royal Commission on Gambling (Royal Commission on Gambling, 1978) remarked, “almost everybody knows intuitively what gambling is”, a precise operational definition is difficult. However, there is general agreement that several core elements are essential before any activity can be considered to be gambling: that there is an agreement between at least two parties (one of which may be an organisation), to exchange an item of value (not necessarily limited to money) on the basis of the outcome of an uncertain event (risk) and where participation is voluntary.

To this may be added an additional component covering motivation; that is, that participants are driven to risk items of value in order to obtain some subjective utility (gain or profit) or to induce a state of positive excitement or emotional arousal.

Some activities clearly encompass all these elements but are not regarded as gambling by a general, but not unanimous, consensus. For example, many do not consider taking out an insurance policy or stock-market dealings to fall within the ambit of gambling, although in the last two centuries there were periods when these were regarded as falling within the domain of gambling activity. It is now argued that business activities rely on the application of economic skill and acumen and therefore should be excluded. Otherwise, the limits of gambling becomes so broad that the term becomes virtually meaningless.

For purposes of our paper, gambling refers to the placements of bets or wagers on casino table games, two-up, electronic gaming devices allowing cash payments or prizes, horse, greyhound and trotting races, lotteries, lotto and scratch lotteries, bingo, sports betting, sporting pools, ‘chocolate wheels’, so-called ethnic ‘coffee-shop’ card games, and raffles. Bets or wagers may be placed personally or remotely through the medium of the Internet given that technological advances have now made it possible to access on and off shore gambling facilities interactively from home using personal computers linked to the world-wide Internet.

## The extent of gambling as an accepted leisure pursuit

Gambling is promoted as an important leisure activity for many Australians. There is a substantial community and industry infrastructure in place to support gambling in all its levels and aspects: print and visual media promotion through coverage of events, advertising providing a positive image, legislation permitting some forms of gambling but restricting others, and employment in the manufacturing, service and leisure industries and administration.

Epidemiological data suggest that 80% to 90% of adults gamble at one time or other in their lives (Dickerson, et al., 1996 a; Volberg & Steadman, 1988). However, the degree to which people gamble varies considerably along a continuum, making it difficult to define precisely what is meant by social, regular, heavy or problem gambling. Level of expenditure and time spent are in themselves inadequate criteria because they are relative to each person's available leisure time and disposable income, factors which are found to vary enormously across socioeconomic classes.

Estimates, however, suggest that about 20% of men and women do not gamble, 40% gamble regularly once per week or more, 20% gamble monthly and 20% less often (Dickerson et al., 1996 a). About 0.5% to 1.6% are said to gamble excessively or suffer problem gambling habits. *Excessive gambling* is used to describe a level of gambling expenditure that is considered to be higher than can be reasonably afforded relative to the individual's available disposable income and as a result produces financial strain. A subjective sense of impaired control is not a necessary attribute. For example, some gamblers may choose to spend, rather than save, disposable income because of their level of enjoyment derived from gambling. Such choices, of course, may still be unacceptable to spouses or partners who consider the behaviour as excessive. *Problem gambling* habits refer to a repeated pattern of behaviour that leads to the emergence of actual problems beyond mere financial strain; this includes marital conflict, accumulated debts, borrowings, and impairment in other areas of social and vocational functioning.

Australian gambling has successively evolved from a period of prohibition to liberalisation and then to market stimulation and competition (McMillen, 1996). The explanation for the prominent role played by gambling in Australian culture is believed to involve a number of factors. The colonisation of Australia, especially by English emigration, involved risky decisions at the personal level. Establishing a new life in the colonies would attract risk-oriented rather than risk-averse individuals, especially in relation to the Gold Rush period in the nineteenth century. Descriptions of social life revealed gambling to be rife on the gold fields.

Further, gambling was incorporated into our non-puritanical cultural heritage by legislation in ways that did not occur in Europe and North America until later in the twentieth century. In the 1920s, gambling gained respectability through its close association with the funding of

welfare projects and subsequently prospered under the liberal attitudes of successive governments. Australian innovations such as the totalisator gave an added impetus to the growth of gambling. Finally, Australian literature paints Australians with an image of benign 'larrikinism', a healthy disregard for authority, and as gamblers, for example, Frank Hardy's 'Power without Glory' (1950) and 'The Four-legged Lottery' (1958), and C.J. Dennis' 'A Sentimental Bloke' (1915).

The introduction of registered clubs as an alternative venue to the male-oriented hotels for females to socialise in, was a further important development in the introduction of poker machines in NSW in the mid 1950s. Legislation has now permitted the extension of poker-machines to all States except Western Australia.

In contemporary times, social changes and economic trends have made gambling more attractive to the private sector market forces (McMillen, 1996). New technology has provided an infrastructure to make gambling a more widespread and commercially viable industry.

## **Gender and gambling**

Despite evidence which suggests significant gender differences in relation to risk-taking, levels of confidence in choice and preferred forms of gambling (Bruce & Johnson, 1994), women have not been traditionally included in research into social and problem gambling (Mark & Lesieur, 1992). The uncritical assumption generally held is that factors relevant to males apply equally to females (Mark & Lesieur, 1992). The emphasis has been on men and gambling forms such as horse or dog racing. Since the expansion of electronic gaming devices into many states and the increase in the number of gaming licenses granted to hotels, Returned Servicemen's Leagues (R.S.Ls) and shopping centres, more men and women have started gambling socially. Gender differences may occur with respect to regular gambling and type of gambling selected. Approximately 17% of regular TAB punters in the ACT are female. Data show that approximately 40% of men and 35% of women report a weekly gambling habit (Dickerson et al., 1996 a). In the 1980s clinical studies on problem gamblers seeking treatment reported male:female ratios in the vicinity of 9:1 (Blaszczynski & McConaghy, 1986) whereas more recent figures indicate a more equitable ratio of 3:1 (Lesieur & Blume, 1991).

Involvement according to gender depends heavily on the type of gambling considered. Men are much more likely to be involved in continuous forms of gambling, such as TAB and video draw-poker machines, while females are much more likely to play non-continuous forms such as lotto and bingo. Males and females are equally likely to play electronic gaming machines (EGMs). In general, females tend to participate in only one preferred form of gambling over a given time whereas men are often involved in more than one activity at one time. However,

overall there are minimal gender differences in terms of frequency, amount wagered or leisure time spent gambling (Hraba & Lee, 1996).

Previously, research on problem gambling has not attempted to identify gender differences in motivation to gamble. However, Loughnan, Pierce and Sagris (1996) compared men and women who presented for problem gambling counselling using the G-MAP (an 85-item questionnaire measuring people's motivation to gamble) and found differences in motivation predisposing them to problem gambling. Women reported gambling to escape from life's worries and men reported gambling to try to make extra money.

For a majority of the population gambling can be a recreational activity. For some, gambling can open up a new doorway into a new-found independence and self-determination. Unfortunately this quest for independence can often be misguided. If gambling is used as a tool for expression of anger, frustration, regaining control, escapism or mischievous behaviour then the likelihood of gambling 'responsibly' or 'socially' decreases. When this occurs one can get caught up in developing a gambling problem or habit because gambling then becomes a routine and eventually, as the amount lost accumulates, one can get caught up in chasing losses thus engaging in a vicious cycle. Further research is required to determine if gender differences in the use of gambling as a medium for the expression of emotional needs or escapism exist.

There are proportionately fewer female than male problem gamblers consulting self-help and hospital treatment programs for problem gambling although this difference is diminishing. There is a greater proportion of females reporting problems where national or state-wide counselling services exist such as in New Zealand and Victoria. Female problem gamblers have a tendency to limit their involvement to EGMs and Keno but show a comparable propensity to lose control as males and develop equally serious consequences from excessive gambling. More females than males complain of the effect of problem gambling on their families.

Gaming venues in particular appear to serve a specific purpose for most women who report frequenting them. The setting provides a safe, non-threatening and entertaining outing for women, where they can attend on their own or in mixed company and at most hours of the day. Hotels have deliberately changed their predominantly male-oriented culture and physical environment to make it more attractive, appealing and acceptable to females. Casinos are marketed as more glamorous and sophisticated venues for both males and females. Previously most women had been constrained by distance, accessibility, inability to go places on their own and societal/gender role expectations. Women can now attend gambling venues with a lessened sense of public disapproval and personal fear to engage in an activity which has been marketed as providing everything from an alternative revenue raising route to an avenue through which to escape life's worries. Distance no longer figures as an obstruction because gaming venues are numerous and placed in close proximity to most suburban residential areas. Accessibility is also no longer as restricted as it was previously because most gaming venues are open from 9.00 a.m. to 3.00 a.m., if not 24 hours. With the expansion and

successful marketing of gambling, more women are entering previously male dominated domains.

## **Age and gambling**

Current legislation restricts gambling to adults aged 18 years and over. No data are available on Australian rates of under-age participation in gambling. Overseas data have demonstrated that underage and adolescent gambling is more common than generally recognised and is an area of distinct concern. Surveys reveal that 24% to 40% of school-aged children and adolescents admit to gambling weekly, with the suggestion offered by some researchers that these figures are gradually rising over time (see Derevensky, Gupta, & Della Cioppa, 1996). In addition, 5% to 6% of school aged adolescents meet threshold criteria for pathological gambling on psychometric screens derived from the American Psychiatric Association's Diagnostic and Statistical Manual for Mental Disorders third and fourth editions (A.P.A., 1994; 1987) (Lesieur & Blume, 1987; Ladouceur & Mireault, 1988). Preliminary findings suggest that gambling behaviour may be linked to delinquent behaviour and poor academic performance although the direction of causality is obscure (Ladouceur & Mireault, 1988). Given the finding that 1% of adults manifest problem gambling behaviours, the higher figure for adolescents suggests that many adolescents who exhibit features of problem gambling in youth are able to cease gambling by their own volition when they reach adulthood. More research exploring the natural history of problem gambling is needed.

In describing age in relationship to gambling, it must be recognised that most data are based on selected Canadian or American school samples or on clinical populations. Consideration must be given to the likelihood that clinical populations differ from general school and community samples. Moreover, psychological instruments and diagnostic criteria used to measure prevalence rates in the United States tend to indicate much higher rates of pathological gamblers than in Australia, raising questions over the validity of extrapolating overseas findings to the Australian context. As a consequence, there is a need to recognise the limitation of generalising such findings to a varied population grouping. Nevertheless, some general observations can be offered.

For many forms of gambling, level of involvement is age related. Casino gamblers are relatively younger and lottery players relatively older (Dickerson et al., 1996 a). Despite legal restrictions limiting gambling to a minimum of 18 years of age, data suggest that many adolescent gamblers and in particular the majority of gamblers seeking treatment commence gambling around age 12 to 15 years (Blaszczynski & McConaghy, 1986; Blaszczynski & Steel, 1996; Govoni, Rupicich, & Frisch, 1996).

There is evidence to suggest that in the United Kingdom (Brown, 1989) and Canada (Ladouceur & Dube, 1995) at least, adolescents who participate in arcade type games are at higher risk for developing problem gambling habits compared to adolescents who do not play such gaming devices. Some researchers (Gupta & Derevensky, 1996) argue that

video/computer games have certain attributes, such as excitement, intermittent reinforcement and skills development, which are equally found in gambling. In support, their study (Gupta & Derevensky, 1996 ) showed that, among school aged video/computer players those with high as compared to low frequency involvement displayed different risk-taking strategies under gambling conditions. These authors concluded that video/computer game play may act as a precursor for subsequent participation in gambling.

Role modelling may be influential in increasing the acceptability of gambling as a leisure pursuit and thus predisposing children to participate in gambling in the first instance or at an earlier age than otherwise. This phenomenon is magnified through the effect of mass media advertisements which glamorise gambling, in particular the sophistication of casino gaming, and portraying it as a form of family entertainment. Family days, free admission for children and child amusement facilities are designed to make it easier from a child care perspective to allow gambling parents to attend venues. According to industry sources in Britain, the government sponsored National Lottery advertising has been very effective in stimulating demand. The live lottery draw shown in peak television viewing times rated as the second most popular television program among 10 to 15 year olds and 38% watched it weekly (Newman, 1996).

Part of the potential problem with this is that it exposes children to the exciting atmosphere of gambling and therefore may increase the probability that they will eventually become gamblers themselves at an earlier age than otherwise. No studies evaluating the impact of media advertising on gambling participation rates among children and adults are available. Extrapolating from data on tobacco and alcohol advertising it can be reasonably argued that the likelihood of a powerful effect exists.

As noted above, the vast majority of problem gamblers commence their activities before the age of 20 years, some as early as 8 to 12 years of age. It is important therefore that attention be given to the provision of accurate information on the nature and role of gambling in society, probability theory and the odds of winning to allow children the opportunity to make proper informed choices regarding their participation in gambling. Where choices to participate are made, appropriate role modelling of gambling is needed so that children will develop responsible attitudes and behaviours which will allow them to participate with minimal risk for the development of problems. Encouragement of children, adolescents and adults to choose not to gamble as one option, and role modelling of how to gamble within limits for those who choose to gamble, are essential preventative strategies.

## **Issues of social and cultural diversity in relation to gambling**

### **Religion and gambling**

### **Socioeconomic status**

With respect to ethnicity, stereotypes of gambling involvement exist, but there is relatively little evidence to support or reject these views. Media reports suggest that some culturally and socially distinct groups exhibit an affinity toward gambling or toward specific types of gambling activity and underscore the potential for some of these groups to be at greater risk for the development of gambling related welfare and social problems. Reference in Sydney newspapers (Sydney Morning Herald, July 1997) to the infiltration of Korean criminals into the Sydney casino scene, loan sharking and forced prostitution of women to repay such loans is an illustrative example.

Anecdotal descriptions, observational accounts and media reports suggest that certain ethnic groups, in particular those from Mediterranean countries and South East Asia, are over-represented within the general population of gamblers. Asian communities, especially Chinese, are believed to be heavily involved in gambling, but what little evidence exists suggests that involvement levels depend heavily on the type of gambling, with casino table games attracting relatively larger numbers of ethnically Asian gamblers than slot machines. In its study of youth and Internet gambling, the Australian Council of Social Services (1997) observed that Indo-Chinese and Chinese youths in contrast to other youths from non-English speaking backgrounds showed a preference for gaming activity. It is not clear whether this observation can be generalised to include other forms of gambling. Further, it is important to note the diversity of Asian cultures, each differing in their inclinations to gamble.

Welfare workers argue that a hidden pool of problem gamblers exists within these ethnic populations. Unsupported suggestions of high per capita gambling expenditure by ethnic groups and the potential cultural role of gambling in their country of origin reinforce this belief. Anecdotal reports from community based health professionals have noted a high frequency of problem gambling behaviours among male forced-refugee immigrants who are unemployed, disaffected and alienated (personal discussions with bi-lingual Arabic and Indo Chinese counsellors in the South Western Sydney Area Health Service - A.B.).

Two preliminary surveys, one in Queensland and the other in NSW (Dickerson, Allcock, Blaszczyński, Nicholls, Williams, & Maddern, 1996b; Holden, Dickerson, Boreham, & Harley, 1995) have reported results which suggest that the prevalence of problem gambling amongst indigenous Australians is as much as 15 times greater than for the general Australian population. This figure is consistent with the estimated prevalence of problem gambling among indigenous American Indians and Maori and Pacific Islander groups (Abbott & Volberg, 1992).

However, other than these preliminary surveys and clinical anecdotal reports, to date there are no epidemiological or other empirical data in the literature upon which an informed statement can be made regarding the extent of gambling and problem gambling within ethnic populations residing in Australia. It may be that the problem has been exaggerated due to the visibility of Asians and other social, cultural and indigenous groups participating in casino table games and coffee lounge card games; or that the size of the problem is underestimated given the reluctance of problem gamblers from certain ethnic groups and their families to access mainstream therapists.

### **Religion and gambling**

It has been argued that religious affiliation is an important determinant of gambling involvement, with Catholics more involved than Protestants. While this claim has some support historically, the evidence that this remains an important factor is slight. Certain religions such as Islam, Jehovah's Witnesses and Seventh Day Adventists forbid gambling as immoral.

### **Socioeconomic status**

Sociologically, it has been argued that gambling plays an important role in maintaining the economic structure of a society. Gambling offers members of the working class a perceived opportunity for immediate wealth and source of hope, even if misplaced, for upward social mobility. The available evidence suggests that involvement in some forms of gambling is associated with socioeconomic class (Victorian Casino and Gaming Authority, 1995).

Those who can financially least afford to gamble are the ones who are most likely to develop problem gambling through their habits. Thus gambling has the potential to exert a regressive economic effect in a redistribution of wealth from the poorer to richer sectors of society.

## **Forms of gambling associated with problems**

Not all forms of gambling lead to or are associated with problem gambling. The most popular form of gambling in Australia, based on weekly involvement and self-reported interest, is Lotto. Results from surveys indicate that between 30% to 40% of adult Australians play Lotto as a weekly habit (Dickerson et al., 1996 a) with few if any manifesting signs of associated problems.

Although patterns differ across European and American countries, in Australia most problem gamblers report participation in poker machines, betting on horse-racing, video-draw poker and casino gaming.

## **The psychology of gambling**

### **Gambling and conditioning**

### **Gambling and cognitive processes**

### **Gambling and erroneous beliefs**

It is important to understand the processes governing decisions to participate in gambling in the first instance, the selection of a preferred form of gambling and the factors triggering or maintaining individual gambling sessions.

Demographic factors can be viewed as variables which increase the likelihood of a person engaging in a gambling session. For example, through socialisation processes, males are often introduced to gambling at an earlier age than females, may be more likely to be supported in their gambling activities by their peers, and may regard gambling as consistent with the traditional male sex role. Thus it is important to distinguish between the processes that influence a person to commence and those that prolong the gambling session. Essentially, this is to draw a distinction between explanations for starting a gambling session and explanations for persisting with gambling once a session has begun. Broadly, this distinction also correlates with the distinction between ecological explanations of gambling and psychological explanations of gambling. Walker (1992) has provided an extensive review outlining aspects of the psychology of gambling and its treatment. Interestingly, no studies have addressed the issue of why people do not gamble or resilience factors that protect people from gambling excessively.

At the level of individual psychology, there are two main kinds of explanation, although each has many forms. On the one hand, there are explanations based on learning theory, while on the other hand there are explanations based on cognitive processes. Learning theories emphasise contingencies of reinforcement generated by subjective and physiological arousal

associated with winning delivered on fixed interval or variable ratios (Anderson & Brown, 1984, Dickerson, 1979; 1991;) or the action of neo-Pavlovian behaviour completion mechanisms on drives (McConaghy, 1980; McConaghy, Armstrong, Blaszczynski, & Allcock, 1983). Cognitive theories suggest illusions of control (Langer, 1975), irrational thinking or distorted belief systems (Ladouceur & Walker, 1992, Sharpe & Tarrier, 1993;) as fundamental to the process of gambling. Explanations which appear to go beyond these theories, such as those in terms of personality differences, for example impulsivity (Blaszczynski, Steel, & McConaghy, 1997), are frequently either reducible to the two main types of explanation or not truly explanations at all. Psychoanalytic explanations (Bergler, 1957) possibly form a third category and will be referred to briefly.

### **Gambling and conditioning**

The outcome of the gambling event determines whether the gambler will be rewarded or not. Thus, gambling is an example of a behaviour which is intermittently reinforced. Since each gamble requires the outlay of money, with the rational expectation of a net loss, the increasing losses constitute a punishing stimulus. Thus gambling behaviour can be viewed in terms of operant conditioning as the product to two major reinforcement schedules: an intermittent positive reinforcement and more nearly continuous punishment (Dickerson, 1979). Rats and pigeons under such reinforcement regimes have been shown to maintain bar pressing and disk pecking behaviour. Human behaviour is the outcome of the interaction of reinforcements in a highly complex conditioning history in which control over gambling behaviours is determined to a large extent by factors beyond the immediate rewards and punishments associated with a specific gamble. Nevertheless, the impact of the detailed actions and outcomes in a gambling setting would be expected to exert some control over persistence with gambling if an operant conditioning perspective was correct.

### **Gambling and cognitive processes**

Gambling provides a paradox for normative economic theories. Since all legalised gambling is constructed in such a way that the gambler should expect to lose, the individual who wishes to invest wisely should avoid gambling. It follows that explanations of gambling must involve stating why a person gambles despite the expected economic loss. One explanation assumes that the subjective value of money varies from the objective value, and that the subjective assessment of risk is not the same as the objective associated probabilities. According to Prospect Theory (Tversky & Kahneman, 1981), the willingness of an individual to take a gamble depends on whether the current monetary status is perceived in terms of loss or gain. A gambler whose winnings are less than expenditure becomes risk-seeking, whereas a gambler whose winnings exceed expenditure becomes risk-averse. Although there are large individual differences in risk orientation, there is general support for Prospect Theory. The predictions of the theory provide one possible explanation of the phenomenon of 'chasing', where a gambler will take increasing risks with large monetary sums, as his or her losses increase. Chasing losses is frequently associated with problem gambling.

Many individuals also have faulty conceptions of randomization. In a random sequence of events, each event is independent of all other events. However, individuals behave as if random events are constrained and have an internal logic. Thus, when asked to generate a random sequence of Heads and Tails in coin tossing experiments, subjects avoid long sequences of one repeated result, and typically ensure that there is an equal number of Heads and Tails overall. The belief that sequences of events of the one kind affect the likelihood of alternative events is known as the 'gambler's fallacy'. According to Ladouceur (1996), inadequate conceptualisation of randomization is the core cognitive feature associated with gambling behaviour.

### **Gambling and erroneous beliefs**

A wide range of erroneous beliefs among gamblers have been documented, and these are usually understood in the context of attribution theory. 'Illusion of control' (Langer, 1975) refers to the belief that the outcomes of random events can be influenced by the actions of the gambler. Illusion of control varies from the over-estimation of the role of skill in games which allow some skill in decision making, to the use of superstitious practices to influence randomly based events. 'Biased evaluation of outcomes' refers to a self serving bias in which successful bets are attributed to personal aspects of the gamblers such as skill and luck, and unsuccessful bets are attributed to factors outside the gamblers' control. By this means, gamblers can maintain the belief that their gambling methods are effective despite the continuing loss of money. In general, false beliefs about the effectiveness of different betting strategies are known collectively as 'erroneous beliefs'. Erroneous beliefs have been documented using the talking aloud technique where gamblers give a running commentary on their gambling behaviour. Very high rates of verbalised erroneous beliefs have been reported for poker machine players and roulette players (Griffiths, 1993).

## **Problem gambling**

### **Is problem gambling a categorical or dimensional condition?**

#### **The impact on the problem gambler's spouse/partner**

#### **The impact on the problem gambler's children**

#### **Treatment**

It is accepted that a majority of gamblers gamble for recreational purposes. While wins are hoped for, the underlying expectancy is to lose. As a consequence, expenditure is limited and control over behaviour maintained. Controlled gambling is typically maintained for a period of years with a time lag of five years on average before problems may become manifest (Blaszczynski, 1988). In some cases problems emerge immediately. Problem gambling may persist and continue for a further five to 10 years before treatment is sought by gamblers, typically in their mid 30s (Blaszczynski, 1988).

Where impaired control linked either to an inability to delay gratification, impulsivity or cognitive processes leads to repetitive excessive gambling, significant problems may be generated in one or more of several areas of functioning: financial, personal, social, employment, legal and marital/familial. Crises in one or more of these areas is the predominant motivating factor influencing the gambler to seek psychological assistance.

The terms ‘compulsive’, ‘pathological’, ‘excessive’, ‘neurotic’ and ‘problem’ are often used interchangeably to denote someone who exhibits an emotional dependence on gambling and impaired control over such behaviour. The neutral term ‘problem’ is now more generally accepted because it lacks any pejorative connotations and any implicit notion of an underlying inherent ‘disease model’ explanation of behaviour.

The natural course of problem gambling remains elusive. Our understanding of problem gambling is based on data derived from clinical samples or Gamblers Anonymous samples. Caution needs to be exercised in extrapolating the following general findings to all problem gamblers in the community. More research is needed to gain a full appreciation of the nature of problem gambling in non-clinical populations.

One of the strongest predictors for gambling related problems is the level of expenditure. This finding argues for preventative strategies and responsible marketing as important approaches to harm minimisation. Factors instrumental in causing the transition from control to loss of control remain obscure although it is generally accepted that gamblers lock themselves into an inevitable path to destruction where they have gambled more than intended and thus have incurred intolerable losses. The frequency and intensity of bets/gaming escalate as an attempt is made to recoup such losses through continued gambling.

Continuous gambling, for example, poker-machines, keno, roulette and video-draw poker machines, and forms allowing for substantial individual bets, for example horse-racing, are the forms most commonly associated with the development of financial pressures. Financial problems are more likely to occur as the frequency and duration of gambling sessions and expenditure and proportion of gross income gambled increases. Evidence suggests that the source of gambling funds is initially limited to available disposable income but as these become depleted, there is a gradual progression involving a re-allocation of daily living expenses to gambling, multiple credit card advances and borrowing from financial institutions and friends (Blaszczynski & McConaghy, 1992). Financial pressure acts as a major stressor triggering further episodes of gambling. Gambling is perceived to be the only opportunity or avenue through which the gambler can obtain sufficient funds quickly enough to cover debts and avoid detection. The knowledge that gambling caused the problem is dismissed in favour of the belief that gambling is the only means of salvation (Blaszczynski & McConaghy, 1992; Lesieur, 1979). Financial counselling and advice in conjunction with psychological interventions are essential in proper management.

Once legitimate sources are exhausted, half to two thirds of problem gamblers are driven to commit non-violent property offences to sustain their habit, conceal losses and/or meet essential expenses (Blaszczynski & Silove, 1996). Although the majority of such offences do not lead to legal action, about one fifth to a quarter of offenders are charged and convicted. A diagnosis of pathological gambling is not accepted as an argument for diminished responsibility although some magistrates will take the condition into consideration in imposing sentence. Given the finding that 15% of problem gamblers meet criteria for anti-social personality disorder (Blaszczynski & McConaghy, 1994) and the prospect that criminals may use problem gambling as an excuse in avoiding prosecution, it is necessary for psychologists to take care in establishing the fact that the offence was committed predominantly if not exclusively to support the gambling habit.

It is noted that as gambling escalates, other activities become constricted. Social activities, family interactions and leisure pursuits diminish in frequency, quality and satisfaction as the gambler becomes increasingly detached from interpersonal interactions, isolated and encapsulated in her/his own preoccupation with thoughts of the next session of betting/gaming and where to obtain funds to fuel her/his habits (Lesieur, 1979).

Data derived from clinical populations suggest that a crisis often motivates the person to seek assistance. Research has consistently shown that three quarters of problem gamblers entering treatment settings suffer severe depression, with 10% to 22% reporting at least one suicide attempt (McCormick, Russo, Ramirez, & Taber, 1984). A substantial minority of gamblers also reports co-morbid alcohol and/or substance abuse (Ramirez, McCormick, Russo, & Taber, 1984). The risk of suicide increases in relation to the severity of the financial predicament, level of depression, impulsivity and substance abuse (Blaszczynski & Steel, 1996). Males may be proportionately more at risk for suicide than females. The precise causal relationship between depression, substance abuse and gambling is not known. Depression and substance abuse may lead to, or aggravate, loss of control or, alternatively, emerge as a secondary response to gambling generated stresses. However, it is necessary to address all three aspects if effective management of problem gambling is to be achieved.

Family and marital disturbances are a common end result of problem gambling behaviours (Lorenz & Shuttleworth, 1993). Financial stresses cause fluctuations in mood states, irritability, lying, failure to meet obligations and other behaviours that lead to marital friction and sexual disharmony. Repeated deceit, lying and broken promises undermine any sense of trust a spouse may have in the gambler. Lack of funds to support children and the home, fear of loss of assets such as the family home or savings, and the frequent absences of the gambler lead to frequent arguments and separation.

Problem gambling has a negative effect on the gambler's employment potential (Lesieur, 1979). Excessive preoccupation with gambling, gambling during work hours, absenteeism, poor concentration and attention due to chronic gambling induced stresses, theft and substance use act to reduce efficiency and productivity. In some circumstances such as operating machinery and driving, inattentiveness and substance use exposes the gambler and

others to risk of physical injury. As a result, a substantial minority of gamblers has employment terminated or they leave voluntarily to avoid possible prosecution. Loss of income aggravates their financial position and self-esteem, and places a further strain on their marital relationship, not to mention compromising future prospects for re-employment.

### **Is problem gambling a categorical or dimensional condition?**

The disease model suggests that problem gamblers are categorically distinct in some way from social gamblers and non-gamblers. This view is espoused by Gamblers Anonymous and clinicians who advocate gambling as an addictive disorder. The opposing dimensional view argues that gambling lies on a continuum with arbitrary cut-off points delineating persons who could heuristically be labelled social, regular, heavy and problem gamblers.

To date there is no evidence which provides a strong argument in favour of the categorical disease model. Data from uncontrolled studies suggest some similarities with attention deficit disorder (Rugle & Melamed, 1993) and/or the presence of neurotransmitter dysregulation (serotonin and dopamine) (Roy, Adinoff, Roehrich, Lamparski, Custer, Lorenz, Barbaccia, Guidotti, Costa, & Linnoila, 1988) in problem gamblers but such findings remain inconclusive.

There are no consistent personality differences or characteristic patterns of behaviour separating subgroups of gamblers from each other except that problem gamblers spend more time and money gambling and therefore experience more difficulties.

Gambling has also been conceptualised as an addictive disorder (Jacobs, 1993; Rosenthal & Lesieur, 1992). Although it has been shown that gamblers experience high arousal, both subjectively and physiologically (Anderson & Brown, 1984), associated with gambling, gambling itself does not involve the ingestion of an external substance as required by a stringent definition of a substance use addiction. While no studies have adequately demonstrated the presence of tolerance (the need to increase bet size to produce the same effect as originally desired) or withdrawal (where abrupt cessation produces a characteristic cluster of physical symptoms), most workers accept that a strong psychological dependency on gambling is apparent in those manifesting impaired control over their gambling behaviour.

Importantly, controlled treatment outcome studies have shown that some gamblers may achieve controlled gambling behaviours over the long term and that lapses in behaviour do not invariably lead to a resumption of excessive gambling (Blaszczynski, McConaghy, & Frankova, 1991). Consequently, at this stage problem gambling can be viewed as a psychological dependence (addiction), habitual or psychosocial problem behaviour.

### **The impact on the problem gambler's spouse/partner**

Research has shown that high rates of emotional distress and psychosomatic symptoms are prevalent in female partners of male problem gamblers (Lorenz & Yaffee, 1986, 1989). The

female partner is confronted with chronic uncertainty, distrust and suspiciousness, fear of possible concealed and escalating debts, loss of financial security, a sense of interpersonal rejection, self-blame and guilt which combine to produce a pervasive state of emotional distress and physical tension. Headaches, gastrointestinal problems, generalised anxiety and worry, depression, anger, guilt and fatigue often lead to high utilisation of medical services. For most women presenting to general practitioners, their focus of concern is restricted to complaints of physical symptoms and a desire to obtain medication based treatments (Lorenz & Shuttleworth, 1983). Given the social stigma and embarrassment associated with excessive gambling, many wives are reluctant to reveal the true nature of the cause of their symptoms and thus fail to receive appropriate counselling. Whether the impact of women gamblers on their male partner is similar has not been researched.

### **The impact on the problem gambler's children**

Few data are available describing the specific impact of problem gambling on children. Financial and other problems caused by excessive gambling often strain marital and family relationships but further research is required before any statement can be made on the specific effects of excessive gambling on children and their long term development.

### **Treatment**

Why individuals persist in problem gambling patterns of behaviour is puzzling given the apparent absence of any biological, physiological or behavioural adaptive utility associated with gambling itself. To date there is no comprehensive theory that effectively explains the pathological process leading from controlled to problem gambling, its persistence over time and why relapses occur after periods of abstinence. This absence of a unifying theory is reflected in the divergent approaches to the management of this condition.

There is a consensus that problem gambling is a treatable condition. Research suggests that the process leading to problem gambling involves a complex dynamic interaction between ecological, psychophysiological, developmental, cognitive and behavioural components. All these elements should be addressed within a treatment strategy if successful treatment is to be achieved. However, there is no single intervention modality that is the 'gold standard' or 'best practice' in the management of problem gambling. Strategies and goals should be developed in conjunction with the client taking into account co-morbid conditions and other relevant environmental factors.

In terms of outcome, a review the extant literature on treatment (Blaszczynski, 1993) reveals that the majority of studies are single case reports or case series descriptions of specific treatment techniques or unsystematic multimodal approaches, and thus no conclusion can be adequately drawn as to either the relative effectiveness of interventions or their particular mode of action. Apart from the studies of McConaghy, Blaszczynski and colleagues (McConaghy, Armstrong, Blaszczynski, & Allcock, 1993; Blaszczynski, McConaghy, & Frankova, 1991), studies have not employed randomised controlled outcome designs in

comparing different treatment modalities. Problems associated with sample selection have restricted the ability to generalise results across specific subgroups of gamblers according to gender or form of gambling. Selection criteria and procedures for inclusion of gamblers into (for example) treatment programs are often poorly delineated with most samples characterised by heterogeneity in forms of gambling, co-morbid conditions and severity. Further, there is a failure to report attrition rates, to describe criteria for measuring successful outcome and/or to include adequate long term follow-up periods. This is an issue of major concern given that many psychologists and counsellors are employing interventions and offering claims of effectiveness in the absence of empirical data.

Despite the strongly advocated call for abstinence as the only viable treatment goal or criteria for success, there is some empirical evidence that controlled gambling over a five year average at least, may be achieved by some problem gamblers (Blaszczynski, McConaghy, & Frankova, 1991). At the moment there are no key predictors identifying those gamblers who could effectively maintain controlled gambling over the long term. Therefore, abstinence should be the recommended goal except in those circumstances where a gambler cannot accept complete cessation and is therefore likely to drop out of treatment. A flexible approach should be adopted with goals adjusted accordingly to make every allowance for the gambler to enter treatment as a priority.

Individual and group outpatient services are effective, with cognitive-behavioural approaches promising to be an important component (Sharpe & Tarrier, 1993) given their contributions in other areas of addictive and repetitive impulse driven behaviours. Studies have established the presence of cognitive distortions, perceptions and beliefs in gamblers but the association shown has been correlational in nature (Ladouceur & Walker, 1992). A causal relationship is yet to be determined; thus cognitive distortions are yet to be shown to covary with indices of gambling severity and to be absent in non-problem gamblers. Walker (1992) notes that gambling may equally serve to maintain irrational thinking styles as the reverse. The majority of gamblers commence gambling in adolescence but are able to maintain control for several years. Cognitive theories, therefore, must explain what factors generate cognitive distortions and the processes that ultimately lead to the transition from normal to dysfunctional cognitions.

Inpatient or residential care is warranted only in the context of suicide risk or where a comorbid condition dictates its necessity for example schizophrenia. The level of intervention must be appropriate to the severity of the problem. In some instances, minimal intervention in the form of education and suggested guidelines are sufficient whereas in other instances the application of more rigorous and intensive techniques are required.

Bilingual counsellors within the Indo-Chinese community in New South Wales (Sylvie Huyhn, personal communication - A.B.) have suggested that the need to 'save face' and to contain problems within the confines of the immediate family structure is of paramount importance in some cultural groups. This has led to the formation of multiple informal groups designed to meet the needs of the members and families of their own ethnic community. As a

consequence, individuals show a strong preference to seek advice and assistance from recognised ‘healers’ from within these cultural groups in preference to Western based health therapists.

Language barriers prevent some gamblers of non-English speaking backgrounds from gaining access to English language health delivery services (which are often not culturally sensitive), especially psychological interventions heavily reliant on understanding and modifying attitudes and belief structures such as cognitive therapy. There are insufficient numbers of bilingual counsellors trained in the management of problem gambling and financial counselling to meet the needs of the larger ethnic groups let alone those with differing dialects and smaller regional ethnic groups.

**The minimal requirements for any intervention are:**

- Counselling or psychological interventions must be competently delivered by appropriately trained clinicians.
- Only an intervention whose effectiveness is supported by empirical research should be used.
- The most appropriate minimal and non-intrusive approach should be applied in the first instance.
- Comorbid primary conditions must be diagnosed and treated accordingly.
- Relapse prevention strategies should be included to help avoid recurrence of problems.

## GENERAL CONCLUSIONS AND RECOMMENDATIONS

### A: Primary Prevention

1. Children and adolescents should be provided with school-level education on probability theory, gambling and the potential effects that excessive gambling may have on themselves and on others. Children are exposed to gambling behaviour at an early age. Therefore it is important that children develop an accurate perception and understanding of gambling as a form of entertainment, the likelihood of winning/losing at gambling, and the potential negative psychosocial effects of excessive gambling.
2. There are positive and negative aspects of gambling. Significant social and community benefits are provided to the majority of the population through its use as a leisure pursuit, an opportunity for employment, an attraction for tourism and revenue for the government. However, a small proportion suffers adverse consequences from excessive gambling, and the overall effect of gambling on the distribution of wealth is repressive. A balanced approach recognising the legitimacy of gambling in the context of promoting harm minimisation should be adopted rather than arguing for its total prohibition.
3. Social policy and environmental factors have an influential effect in determining the rate and frequency of gambling amongst sectors of the general population. Evidence suggests that the number of people in any given community who actively participate in gambling activity is related to the promotion, accessibility and availability of gambling outlets. As an extension, a positive relationship exists between the number of people who gamble and the number of persons placed at risk for developing problems as a result of excessive gambling activity. Therefore, there is argument for governments to restrict the further expansion of gambling outlets in Australia until more data are obtained.
4. Governments should take action to promote responsible gambling behaviour within the community through education. An attitude fostering the perception of gambling as a form of entertainment rather than income, and the promotion of sensible gambling behaviour rather than its prohibition, should be fostered. Public education on randomisation and probability should be strongly fostered.
5. Gambling advertisements should not promote the erroneous belief that most people win when gambling but should include accurate information on the relevant odds of winning and the percentage return to participants. Knowledge and understanding of the true probability of winning may assist in promoting responsible gambling among patrons. Public awareness of randomisation and probability should be enhanced through educational campaigns.
6. The gambling industry and governments have a social responsibility to fund treatment services in urban and rural regions and to inform patrons of the availability of counselling

services for those who may require some assistance in preventing or moderating problem gambling behaviours. Signs cautioning against the dangers of excessive gambling and listing counselling contact numbers should be clearly and openly displayed in areas where gambling takes place.

7. Problem gambling has a significant effect on spouses and other family members. Information on the availability of psychological assistance, counselling services and information resources should be made freely available to gamblers and their family members. The gambling and gaming industry and governments should provide funds for prevention, early intervention and the provision of welfare services.
8. Psychologists should be active in enhancing public education and awareness of problem gambling and its effects and the availability of psychological services through media comment and the development, publication and dissemination of educational information brochures.
9. Psychologists should support, advise and liaise with key stake-holders in the gaming and racing industry and governments to develop harm minimisation strategies for regular gamblers.

### **Secondary Prevention**

1. Psychologists have an active role to play in developing and evaluating effective intervention strategies at all levels of service delivery. Cost-effective minimal intervention programs should be made readily available for people at risk or who show early signs of problem gambling such as spending too much time or money than intended on gambling. Harm minimisation for regular gamblers and early intervention programs for problem gambling represent the most cost-effective strategy to employ.
2. Psychological counselling services operated by appropriately trained staff should be promoted. Psychologists should conduct staff training for psychologists in private and community settings who may work with people adversely affected by gambling.
3. High quality training programs should be given to clinical and counselling psychologists to enhance their understanding of psychological processes underlying gambling and their competency in the provision of direct services. Training programs ideally should be included within postgraduate Clinical and Counselling Master and Doctor of Psychology degree level courses.

4. Anecdotal evidence suggests that some ethnic groups may be at high risk for problem gambling. Prevalence studies and needs analyses must be carried out to determine the extent, nature and changing patterns of gambling in the community and especially within defined ethnic groups. Bilingual counsellors must be trained to develop and offer culturally appropriate interventions within ethnic communities.
5. Psychologists should conduct research into patterns of gambling, reasons why people gamble, and gender and age differences in gambling to obtain a better understanding and to provide more effective treatment options for people who go on to develop problematic gambling behaviours. Governments should provide funding for research and service delivery.

### **Tertiary Prevention**

1. There is limited knowledge as to the best counselling and clinical strategies that should be applied for the management of problem gambling. There is a need for psychologists to carry out controlled treatment outcome studies to develop 'best practice' approaches in the management of problem gambling. Research evaluating the efficacy of educational and public health campaigns and the influence of advertising and role-modelling is needed. Controlled treatment outcome studies comparing different approaches are required.
2. Problem gamblers should have access to demonstrated cost-effective treatment interventions, either in individual or group settings.
3. Problem gambling affects the psychological well being and functioning of spouses and other family members. The families of problem gamblers should have access to psychological assistance in helping them to deal with the impact of excessive gambling on the family.
4. Concurrent depression and substance abuse are commonly found in populations of problem gamblers. Psychologists should co-operate with psychiatrists in establishing residential programs for seriously disturbed gamblers who may pose a suicide risk or who suffer serious comorbid psychological and psychiatric conditions.
5. Rural areas suffer from inadequate services and access to specialist assessment and treatment services. Psychologists should endeavour to, with government support through funding, assist their colleagues in rural areas by offering training programs in the recognition and treatment of problem gamblers and to lobby governments for adequate services.

6. It is important to gain a full appreciation of predictor variables that will identify at-risk problem gamblers and the demographic characteristics of gamblers in order to tailor interventions for specific subgroups. Further research in this area is required.
7. The judiciary should be made aware of the relationship between gambling and criminal offences committed to support habitual gambling behaviour. Research has shown that up to 60% of problem gamblers commit crimes in order to support their habits and that 20% are charged for such offences. A diagnosis of problem gambling should not be used to argue for diminished responsibility but rather as a mitigating factor explaining illegal actions. Psychological rehabilitation programs should be recommended for offenders in addition to any penalty imposed by the courts.

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