

**TREATING GAMBLING ADDICTION: A PSYCHOLOGICAL STUDY IN THE
SOUTH AFRICAN CONTEXT**

by

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I declare that

“TREATING GAMBLING ADDICTION: A PSYCHOLOGICAL STUDY IN THE SOUTH AFRICAN CONTEXT”

is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete reference.

MRS M BULWER

DATE

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TREATING GAMBLING ADDICTION: A PSYCHOLOGICAL STUDY IN THE SOUTH AFRICAN CONTEXT

KEY TERMS

Gambling addiction; pathological gambling; problem gambling; gambling related disorders; gambling activities; biopsychosocial assessment; gambling treatment programme; National Responsible Gaming Programme; treatment effectiveness; identified problems; dependency/problem behaviours; diagnostic tests; predictors of treatment outcome; research issues.

SUMMARY

The objectives of this study were to provide a detailed biopsychosocial description of the characteristics of a sample of 100 individuals screened and referred by the National Responsible Gaming Programme helpline for their outpatient treatment programme over an eighteen month period, and, importantly, to measure the success of this specific treatment programme at set intervals, up to a one year follow-up period. While 80% of the sample did not relapse during the six-week treatment programme, the number of treatment seekers without any gambling relapses during each follow-up period declined, and those falling back into gambling increased as time went on. After one year 47% of treatment seekers managed not to revert back to gambling – total abstinence. A further 28% reported having relapsed once or twice or that their gambling was controlled. 25% of treatment seekers reported that they reverted back to gambling fulltime which leaves the success rate of the treatment at 75%. Treatment seekers reported an overall reduction in gambling participation, debt and expenditure and an overall improvement in social and vocational functioning. There is evidence in this study to support the perspective that pathological gambling is a multidimensional disorder and that certain sub-groups of gamblers have distinct gambling behaviour.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

Epidemiological data suggest that 80% to 90% of adults gamble at one time or other in their lives (Dickerson, Allcock, Blaszczynski, Nicholls, Williams & Maddern 1996a; Volberg & Steadman, 1988). Estimates, however, suggest that about 20% of men and women do not gamble, 40% gamble regularly once per week or more, 20% less often (Dickerson, et al., 1996a). About 0.5% to 1.6% are said to gamble excessively or suffer problem gambling habits.

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 many South Africans. While certain religious groups regard it as sinful, gambling can be regarded as inherently a morally neutral activity being neither good nor bad in itself.

Except for horse racing and a few remote homeland casinos far from its urban centers, gambling was banned by South African law for 46 years. Even though gambling was banned, the country still had a thriving illegal industry operating approximately 150 000 slot machines. With the election of a new democratic government in 1994, gambling laws were liberalized and the government decided to grant 40 casino licenses. Twenty-eight casinos have opened across South Africa since 1996, and the government has granted licenses to 12 more operators. A further 50 000 limited pay-out slot machines are to be licensed soon. More forms of gambling have been legalized in South Africa than any other country in such a short period of time. Current legislation restricts gambling to adults aged 18 years and over.

The prospect of turning a meager amount of money into a fortune at the casinos exerts a powerful attraction and a quick-fix answer to a lifetime of poverty. In South Africa unemployment has reached desperate proportions and the elderly, barely surviving on monthly pensions of around R620, are among those drawn to gambling by its promises of fortune. Many poor or unemployed people view their chances of winning the lottery or hitting a jackpot in the country's new casinos better than that of securing a decent job. South Africans directed more than one percent of their disposal income to gambling in 2000, which amounted to approximately R10 billion. According to a newspaper article in "Die Burger" written by Jaco Leuvenink (20/4/2002), the government earned R31,5 million in taxes from casinos during 1999 to 2000 and another R106 million during 2000 to 2001.

As for criticism of the gaming industry for its potentially harmful social effects, gaming executives make the argument that it is a regulated industry, which contributes to job creation in the economy and gained respectability through its close association with the funding of welfare projects. Gambling is also promoted as an important leisure activity for many South Africans. 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. It has also moved beyond simple gambling to a point where the overall experienced casino resorts may eclipse shopping malls, cinemas, restaurants and theatres in the competition for consumers' entertainment.

Gambling can fuel fantasies that are out of reach for virtually everyone in a country filled with poverty and can become extremely dangerous when people are using their rent money to gamble. With classical Greek Roman and Italian motifs, gleaming stained-glass domes and red carpets, casinos like Caesars, Gold Reef and Monte Casino in the Gauteng area, fuel the fantasies of people with meager

incomes. Using slick advertising campaigns, South Africa's poor are lured. Lines half a block long are common outside the 7 000 lottery ticket outlets - mostly convenience stores. The practice in some of the casinos is to pick up people from their residential areas in the evening, especially retirees, and transport them to the casinos, so they can gamble away their meager savings in a safe and secure environment. On most nights, people of all races, ages and income groups pack the casinos, feeding crumpled notes or credit cards into racks of slot machines and suffocating each other around the gaming tables. Pawnshops, strategically situated within close proximity of several casinos saw their trade skyrocketed, with gamblers hocking their jewelry, televisions, radios and just about anything else they can get their hands on for gambling money. Money is often spent on gambling which should have been spent on necessities. Thus, recognition is given to the apparent harm and cost to society by individuals who exhibit impaired control over their gambling behaviour and who, as a consequence, experience severe negative personal, financial and social consequences resulting in emotional and psychological distress.

1.1.1 National Responsible Gaming Programme (NRGP)

The National Responsible Gaming Programme (also referred to as NRGP) came into being after 24 of the 40 casino licenses which South African law permits had been awarded. It came about partly because Provincial Gambling Boards, who have the responsibility of determining the conditions with which casino licensees must comply, typically required successful bidders to include in their bids plans for addressing the issue of problem gambling. It also came about because the casino companies perceived that, quite apart from considerations of moral responsibility, it was in their interests to address this problem pro-actively and on a voluntary basis rather than waiting to be compelled to act by government in circumstances likely to be unpropitious. (Collins & Barr, 2001).

The National Responsible Gaming Programme's countrywide study of the incidence of problem gambling, described as the most comprehensive ever conducted in South Africa, was released in November 2001. Conclusions drawn

for this study (Collins & Barr, 2001), are that the overall numbers of people in the South African population with gambling problems are broadly in line with international norms. On the other hand, the number of problem gamblers as a proportion of regular gamblers is about 50% higher than in more developed countries. Just over 0.5 percent of regular gamblers may be considered to have an acute gambling addiction, suggesting that as many as 45 000 people are in trouble (a third of all adult South Africans are regular gamblers). This is to be attributed to the fact that poor people in countries with no welfare state will get into more trouble more quickly if they spend too much on gambling (or anything else). Slot machine gambling and playing the online national lottery game are both generating new problem gamblers. An important causal factor is probably the fact that many people in South Africa have dangerously false beliefs about gambling, notably that if they buy several hundred lottery tickets they will have a much improved chance of winning and that the more a slot machine is played without a big win, the more likely it is to pay out next time. (Not enough people understand that slot machines work like roulette wheels with each spin producing a random number).

The incidence of problem gambling is similar to the incidence of problem drinking, although there are fewer regular drinkers than regular gamblers and among regular drinkers the incidence of problem drinking is 7.2% as against about 6% of regular gamblers. (There is, however, no national responsible drinking programme). It should also be borne in mind that problem gambling is a condition which develops over a fairly long period of time. This means that the incidence of problem gambling is likely to grow over the coming years as people who have started gambling in the past two or three years develop the problem behaviour which may be expected to show up in future surveys.

1.2 CONCEPTUAL FRAMES

Many different conceptual frames can describe gambling. Observers, for example, have considered gambling from a moral, psychological, mathematical, behavioural, cognitive, biological and, more recently, neurophysiological

perspective. Each of these conceptual views rests primarily on an analysis of individual characteristics. According to Blaszczynski, Steel and McConaghy (1997), at the level of individual psychology, there are two main kinds of explanation of gambling, 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 emphasize contingencies of reinforcement generated by subjective and physiological arousal associated with winning delivered on fixed interval or variable ratios (Anderson & Brown, 1984; Dickerson, 1979; Dickerson, 1991) or the action of neo-Pavlovian behaviour completion mechanisms on drives (McConaghy, 1980; McConaghy, Armstrong, Blaszczynski & Allcock, 1993). Cognitive theories suggest illusions of control (Langer, 1975), irrational thinking or a distorted belief system (Ladouceur & Walker, 1996, 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.

Although sociological, situational and demographic factors can indicate which people are more likely to gamble than others, these perspectives cannot explain why some people gamble more than others, or what factors contribute to behaviour maintenance in gambling. According to Blaszczynski & McConaghy (1992), demographic factors can be viewed as variables which increase the likelihood of a person engaging in a gambling session. For example, through socialization 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. Essentially, we need to draw a distinction between explanations for starting a gambling session and explanations for persisting with gambling once a session has begun. Psychological theories become important at this level. Almost every major branch of psychology (e.g. behaviourism, cognitivism, addiction theory) has been utilized in an attempt to understand gambling.

As indicated previously, treatment outcome research typically focuses only on individual attributes associated with treatment. Recently, there has been growing interest in viewing gambling from a public health perspective (Korn, 2000; Korn & Shaffer, 199a; Korn & Skinner, 2000; Shaffer & Korn, 2002; Skinner, 1999). The following is an adaptation of the discussion in the report by Shaffer, LaBrie, LaPlante and Kidman (2002). This public health perspective encourages the examination of population based factors of health problems rather than individual attributes; a public health view focuses on the distribution and determinants of various phenomena among the population. For example, a public health approach to gambling encourages examining the societal risk and protective factors that encourage or discourage the transition from recreational to problem-related gambling, the identification of vulnerable demographic groups, or ethnic differences in the acceptance of gambling. In contrast, a more individuated research approach might emphasize psychobiological or cognitive factors that promote transitions from healthy to disordered gambling. One benefit of the public health approach is that it can provide insight into more wide scale health-related phenomena that might not be observable through more individuated research approaches.

Gambling behaviour is dependent upon individual and environmental features (Shaffer, et al., 2002). This suggests that, over the life course, one's gambling behaviour and degree of pathology probably will vary. The decision to gamble, as well as other decisions, such as the decision to seek treatment is subject to multiple internal and external factors. Fishbein and Ijzen's (1975) theory of reasoned action describes some of these components and subsequent revisions of the theory suggests that past behaviour, attitudes, knowledge of social norms, and perceived self-control influence the behavioural choices we make by shaping our behavioural intentions. Consequently variations among any of these factors will change the likelihood of behaviour.

Recent research has confirmed that for many individuals' gambling disorders are not stable (Abbott, 2001; Shaffer & Hall, 2002). Many scientists have focused on internal events (e.g. coping skills, erroneous perceptions, stress, vulnerable

personality characteristics, mental illness, or neurobiological defects) to explain individuals' gambling behaviour (Shaffer & Korn, 2002). But the environment also has the potential to impact our choices. Consequently, other scientists have focused on social setting or ecological factors such as exposure and availability as prime suspects in increasing individuals' tendencies to engage in potentially addictive behaviour such as gambling or drinking. Volberg recently suggested that increasing access to gambling in the United Kingdom also would increase the incidence of problem gamblers: "... the number of opportunities to wager in a specified period of time - is tied to the development of gambling problems" (Volberg, 2000, p.1556).

This idea is consistent with the exposure model which implies that the object of addiction causes addictive behaviour. Exposure models suggest that the presence of environmental toxins (e.g., gaming settings) increase the likelihood of related disorders (e.g. pathological gambling). An expanded exposure model purports that gamblers' vulnerable or resilient characteristics also play a role in determining the consequences of gambling exposure. For example, exposure to gambling or intoxicant use will adversely impact only those who have an underlying vulnerability, but not those who are sufficiently resilient (e.g. Jacobs, 1989; Khantzian, 1975, 1985, 1997). In South Africa, the exposure model suggests that more treatment seekers will reside in areas closest to gambling opportunities in general and casinos in particular.

Alternatively, the social adaptation model suggests that gamblers - or people who are exposed to or use intoxicants - are dynamic and capable of changing their behaviour in response to exposure (Shaffer, Hall & Vander Bilt, 1997a; Shaffer & Zinberg, 1985; Zinberg, 1974, 1975; Zinberg & Fraser, 1979; Zinberg & Shaffer, 1985; Zinberg & Shaffer, 1990). The social adaptation model included the idea that novelty often stimulates new interest in social activities, but participants eventually adapt to novelty and the effect of these new activities are therefore limited. For many, this process often results in unexpected social change. That is, the early increases in new patterns of intoxicant use or gambling - whether with

or without adverse consequences - are typically followed by an adaptive process that leads to lower levels of involvement or abstinence. Social adaptation can result from a weakening of the novelty effect, increases in adverse consequences, the emergence of competing interests, or a combination of these factors - even among some people who evidence fundamental vulnerabilities (Miller, 2000, Shaffer & Jones, 1989).

Within South Africa there is a variation to gambling exposure - with the most exposure of six casinos in the Gauteng metropolitan area. It is reasonable, for example, to hypothesize that increased exposure to gambling in regions of Gauteng that are more proximate to gambling venues will be associated with increased use of the NRGP. If increased exposure leads to higher levels of gambling involvement and this activity in turn is associated with an increased incidence of gambling related problems among new gamblers, then we can expect that people with greater exposure will seek the services of the NRGP. It also follows that relapse rates will be higher among those people who have used the NRGP but live in areas that have high levels of exposure to gambling.

1.3 OBJECTIVES OF THIS STUDY

The objectives of this study are the following:

- To provide a detailed biopsychosocial description and analysis of the clinical characteristics of people entering treatment of gambling.
- To measure the effectiveness of a gambling treatment programme.

Griffiths (2001) warns about the importance of contextual factors when addressing the issue of problem gambling. I did, however, also start with some of his general hypotheses, which I specifically want to apply to the South African context, which I hoped this study and follow-up studies would confirm or refute. These were:

- Gambling is a multifaceted rather than a unitary phenomenon, strongly influenced by contextual factors that cannot be encompassed by any single theoretical perspective.
- Focusing upon self-reported factors maintaining the behaviour do not provide insights into the factors that led to the behaviour developing. Thus, when one takes a biopsychosocial view, it becomes possible to perceive the individual gambling in terms of its broader social and cultural context.

According to Dickerson (1993, 1995), variations in the motivations and characteristics of gamblers and in gambling activities themselves mean that findings obtained in one context are unlikely to be relevant or valid in another. To date, there have been a small number of studies about the characteristics of problem gamblers in specialized treatment services. A few studies have been done in a Canadian context (Rush, 2000; Beaudion & Cox, 1999; Moore, 1998; Stinchfield & Winters, 1996). The results suggest that gambling to relieve dysphoria or escape from life problems characterize a large subset of problem gamblers in treatment and that female problem gamblers increasingly participate in treatment. As the specialized treatment programme (NRGP) for problem gamblers has only been available since June 2000, and the only treatment programme worldwide that is privately funded, no in-depth publicized qualitative research has been done on the problem gambler in South Africa in this specific treatment context.

1.3.1 Methodology

The 24-hour toll-free Gambling Helpline, operated by trained counselors, and based at Kenilworth Place Addiction Centre in Cape Town, screen and assess all incoming calls. Calls from persons who suffer from gambling problems are then referred to treatment professionals in their area. As a Registered Clinical Social Worker and working in the field of addiction, I have been part of a team of 21 counselors nationwide, since the inception of the programme in June 2000, to assist in outpatient counseling treatment for problem gambling in the Gauteng

area. During an eighteen month period I have assessed and counseled approximately 100 persons with gambling problems, referred by the Gambling Helpline. Thus, my aim with this study is to report on my personal observation, assessment and clinical experience of the problem gambler in a therapeutic context. The gamblers in treatment were unaware of my role as researcher and I will therefore commit to anonymity of these gamblers. This study is of an explorative nature. Inherent in this pilot study is the tentativeness of the conclusions and should therefore be treated as a way to locate important information for future study.

1.3.2 Data elements and collection

The measurement device that I used in the initial assessment of the gambler in treatment was the "Biopsychosocial Assessment Questionnaire" included in the Treatment Programme for the Problem Gambling Treatment Network", devised by Dr Rodger Meyer, (NRGP Programme Director). This treatment programme is of a structured nature and runs over six weekly one-hour sessions and consists of assignments to be completed in written form by the gambler related to their gambling behaviour. These assignments also provided a very useful tool in the proper assessment of the problem gambler.

The data elements were divided into eight broad categories and consisted of the following:

1.3.2.1 Demographic characteristics

- Gender
- Age
- Ethnic/cultural background
- Occupation
- Level of education

1.3.2.2 Problem severity

- DMS-IV diagnostic criteria
- South Oaks Gambling Screen (as completed by gambler)

- Gamblers Anonymous 20 Questions (as completed by gambler)
- Phase of gambling
- Type of gambler

1.3.2.3 Gambling activities

- Length of time gambling
- Frequency of gambling
- Type of gambling location
- Type of gambling activity
- Largest amount of money ever gambled in one day

1.3.2.4 Identified problems (prior to entering treatment)

- Primary relationships (conflict, separation, divorce)
- Residential (loss of property, living arrangements)
- Occupational (absenteeism, loss of productivity and/or loss of employment)
- Financial (gambling debt and borrowings)
- Psychiatric history (diagnoses and suicidal behaviour)

1.3.2.5 Criminal activities

- Type and charges

1.3.2.6 Biological factors

- History of chemical dependency or gambling in family of origin (parents)

1.3.2.7 Dependency/problem history

- Other dependency/problem behaviour
- Dependency/problem treatment history

1.3.2.8 Treatment effectiveness

Treatment effectiveness was examined by comparing client data collected at admission, discharge (after six weeks), and follow-up (after three months of first session). Included in this examination were written feedback from the gamblers themselves regarding the effectiveness of the treatment programme. A six month follow-up as well as a one year follow-up was also done telephonically. With

each telephonic follow-up the gambler self, as well as one other significant person in the gambler's life (e.g. family member or friend) was contacted. The following variables were assessed:

- statistical results of completers and non-completers
- attendance of family/concerned other at fourth session
- changes in gambling problem severity at respective follow-up periods (i.e. amount of relapses)
- post-treatment service utilization (Gamblers Anonymous and self-exclusion)
- vocational functioning (loss of or new employment, unemployed, general productivity)
- marital/family relations (improvement / no improvement, relationship break-up/separation, divorce)
- changes in financial problems (debt and financial problems)

1.4 ANALYSIS OF KEY CONCEPTS

In my view one of the weaknesses of much writing about gambling is lack of precision in the analysis of certain concepts, particularly in relation to "problem" gambling. Another concept which I think needs clarification is the classifying of gamblers into different types and different stages. I am also of the opinion that a thorough initial assessment of the person with a gambling problem is imperative for correct and appropriate treatment and, to be able to do this, all mentioned concepts as listed below, were taken into consideration. For the purpose of this study I wish, therefore, to set out as clearly as possible how I understand the terms that are being employed and why I use them as I do. This will be discussed as follows:

- Gambling
- Pathological Gambling: A disease or a social problem?
- Different phases of gambling
- Different types and levels of gambling
- Screening Tools
 - DSM IV diagnostic criteria for pathological gambling

- South Oaks Gambling Screen
- Gamblers Anonymous 20 Questions

1.4.1 Gambling

Collins and Barr (2001) follow the standard definition of gambling as an activity where:

- Two or more parties place at risk something of value (the stakes)
- in the hope of winning something of greater value (the prize)
- where the outcome depends on the outcome of events which are unknown to the participants at the time of the bet (the result).

Teitelbaum, Edwards and Gold (1999) define gambling as any betting or wagering for self or others, whether for money or not, no matter how slight or insignificant, where the outcome is uncertain or depends upon chance or skill. 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 (Blaszczynski, et al, 1997). 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 stockmarket 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 become so broad that the term becomes virtually meaningless.

Turner and Fritz (2001) divided games into two categories:

- *Games of chance*, such as lotteries, keno, craps, roulette, baccarat, bingo, dice, newspaper jackpots, scratch cards, slot machines; and
- *Games of skill*, such as horse race betting, sports betting, card games such as poker and black jack.

For example, playing bingo requires perceptual and motor skills, but winning is purely a matter of chance. In contrast, winning at poker is dependent on skills relative to the other players. The relationship between skill and problem gambling is particularly interesting. Several researchers have noted that problem gamblers often have an inflated sense of their own skill (Gadboury & Ladouceur, 1989; Toneatto, Blitz-Miller, Calderwood, Dragonetti & Tsanos, 1997).

1.4.2 Pathological gambling: A disease or a social problem?

No one is really clear about the nature of pathological gambling. The "disease" model suggests that pathological gamblers are categorically distinct in some way from social gamblers and non-gamblers. This view is held by Gamblers Anonymous and health professionals who advocate classifying gambling as an addictive disorder. The medical model of gambling is, arguably, the dominant one in North America at the moment. In this model, compulsive gambling is seen as a disease, a medical pathology that needs to be addressed. Compulsive gambling is seen as a black and white distinction, with the gambler either compulsive or not compulsive. Compulsive gamblers, therefore are seen as in some way qualitatively different from other gamblers. The language used to describe those with the disease is not consistent, with the term "compulsive" more often used by lay persons such as Gamblers Anonymous members and "pathological" used more often by clinicians. The clinical definition of gambling is a disorder of impulse control (DSM-IV diagnostic criteria). The qualitative difference seen as central to the model may be due in part to some physiological factor which predisposes the individual to compulsive gambling or to a mental illness such as obsession or compulsion or to a combination of factors, including environmental circumstances. Compulsive gamblers are seen as different, different even from other gamblers who experience serious gambling problems, in some measurable way. The "disease" of compulsive gambling has been differentiated from other gambling by suggestion that it must be reliably and repeatedly harmful for the individual, and/or others. It must represent a characteristic pattern for the individual and be outside of the individual's conscious control. The aspect of the involuntariness of compulsive gambling

behaviour is also a key one. Compulsive gambling is not a chosen route, but rather something which happens to an individual. It is a problem in and of itself and not a symptom of another disease. Further, it is not an unconscious habit, which can be changed by focusing an individual's attention on the behaviour. The disease follows a recognizable course, common to others with the same problem and is manifested through characteristic signs, symptoms and stages of development.

Major components of the Disease Model are:

1. There is a single phenomenon that can be called "compulsive gambling".
2. Compulsive gamblers are qualitatively different from other gamblers.
3. Compulsive gamblers lose control and are eventually unable to stop gambling.
4. Compulsive gambling is a progressive condition and one with an inexorable progression through well-defined stages:
 - 4.1 Initial success, usually characterized by a "big score" that leads to unrealistic expectations of future winning and so an increase in gambling activity.
 - 4.2 With increased gambling activity there is less success and a progressive loss of financial resources. The gambler believes that only more gambling can improve the financial picture.
 - 4.3 There is an increasing need to continue gambling, to be "in action" that is driven by an irrational optimism about winning until the need to gamble becomes an all-consuming compulsion.
 - 4.4 Money becomes simply a means to gamble rather than an end in itself.
 - 4.5 The gambler begins to suffer psychological distress as unresolved feelings of guilt keep the gambler gambling.
 - 4.6 The gambler begins to "chase" losses, which means that he returns to gambling to win back money that was lost gambling. At this stage the gambler will do almost anything for money for gambling including illegal activities, such as theft, fraud, or embezzlement.

- 4.7 Bouts of guilt and self-castigation result in attempts at abstinence which are followed by a rationalization period, and then by another round of betting. Gambling is no longer a pleasure but rather a compulsion, undertaken in a frantic, even ritualistic manner.
- 4.8 The gambler hits rock bottom. All funding avenues have been exhausted and rationalization is no longer possible. The individual finally acknowledges that any further gambling would be catastrophic.
5. Compulsive gambling is a permanent and irreversible condition. The only cure is total abstinence. If the gambler were to resume gambling, all of the “symptoms” described above would manifest once again.

The medicalization of gambling is a positive development which allows the problem gambler to avoid the excessive guilt that might result by avoiding responsibility for the behaviour, defining oneself as “sick”. Labeling has also been seen as a device that marginalizes those with gambling problems and they may resist labeling to avoid being seen as members of a deviant group. The “sick” role requires that the patient accept the label applied and work toward recovery. Those who refuse to accept the label and the constraints of the sick role are seen as in “denial”. This “sick” role and its attendant labeling do not mean that the “sick” person is a passive recipient of expert assistance, but rather can and should be an active part of the recovery process. While the model does not hold an individual responsible for contracting the disease, the individual is responsible for doing everything possible to recover. The fact that the individual sought help is evidence of the desire to recover.

The disease concept is understandably popular with many persons in the gaming industry. By emphasizing that pathological gamblers are fundamentally different from other persons, the disease model implies that the availability of opportunities to gamble has little or nothing to do with gambling problems. The alcohol industry has suggested that just as sugar is not the cause of diabetes, alcohol is not the cause of alcoholism. This argument is obviously an attractive one to the gaming industry as it suggests that gambling is not the cause of compulsive gambling,

according to the disease model. If compulsive gambling is a disease then the appropriate public response is to provide treatment for those with the disease, while at the same time providing access to gambling for others who are not predisposed to the disease.

The opposing "dimensional" approach argues that gambling lies on a continuum and that social and pathological gamblers represent extremes at each end of the spectrum. In this view, problem gambling is considered a social issue and not a psychological or psychiatric illness (Blaszczynski, 1998).

What we do know is that problem gambling is not just a bad habit. It is also regarded as an emotional illness and recognized by the American Psychiatric Association. I am, however, disposed to follow the view here, elaborated by Abbott (1996) in Collins & Barr (2001), that disordered gambling is a continuum of varying degrees of loss of control which reaches a brink after which the gambler falls into a condition of total uncontrollability. According to the disease model pathological gambling is considered a form of addiction. The term "addiction" is usually reserved to explain a compulsive attraction of pathological attachment to a substance, normally a drug. Addiction is also the compulsive use of a substance or activity resulting in physical, psychological, or social harm to the user; the user continues in this pattern of behaviour despite the harms that result. However, it is now recognized that some behaviours can also be addictive, such as eating, sex and gambling. All addictions are characterized by loss of control, preoccupation, compulsivity, narrowing of interests, dishonesty, guilt and chronic relapse. Addictions to behavioural processes are called "process addictions". The process of engaging in these behaviours leads to typical addiction symptoms (tolerance, withdrawal, heightened excitement or euphoria). When people describe their subjective experience related to gambling or other process addictions, their stories are qualitatively similar to users' descriptions of their drug addictions. Compulsive gamblers indicate that they seek "being in action", referring to the "high" or euphoric state associated with the act of gambling. Gamblers also describe an anticipated high or "rush" prior to being in action.

After much investigation and deliberation about the multifaceted nature of pathological gambling I came to the conclusion that a combination of these two models provided a very good assessment platform for future treatment.

1.4.3 Different types and levels of gambling

Many terms are used to describe a person who has a problem with gambling, including pathological gambler, gambling addict, compulsive gambler or problem gambler. All of these terms are used to describe a person for whom gambling has become more than an innocent diversion. I found that some of these terms lack specific meaning and for the purpose of this study it was important to make this distinction.

Since 1980, the definition of pathological gambling has undergone some major changes. At first, the emphasis was on the damage and disruption caused by the disease. The motive was of little importance. Subsequent versions have changed this description and revised the diagnostic criteria for pathological gambling, emphasizing the addictive nature of the disease. It mentions issues concerning tolerance and withdrawal, suggesting a physiological basis for the disorder. In the case of the pathological gambler, tolerance refers to their increasing need for gambling and usually gambling with greater risks to get the same emotional effect. As with chemical dependency, withdrawal refers to the pain and discomfort associated with not practicing the behaviour. If I follow the literature here and use "problem gambling" to mean an umbrella term to describe a situation where gambling activity disrupts one's life, the extent of the disruption and loss of control in the gambler's life is not clearly defined. It was, however, important in this study to obtain clarity with regard to the extent of the disruption and loss of control caused by gambling in the gambler's life. The use of different terms for different types of gamblers will therefore reflect a more specific meaning to the respective terms being used.

Teitelbaum, Edwards, Mark and Gold (1999) classified gambling into four types: social, problem, pathological/compulsive and professional. I regarded social,

problem and pathological/ compulsive gambling to be on a continuum. The small number of professional gamblers to be found in South Africa is not identified and will not be discussed in detail in this study.

1.4.3.1 Social gambling

Casual social gamblers gamble for recreation, sociability and entertainment and gambling typically occurs with friends or family. These people gamble for fun rather than for the "certainty" of winning, recognize that they are likely to lose, and don't bet more than they can afford to lose. Thus, the gambling is controlled, lasts for a limited period of time and the losses are predetermined and reasonable. Gambling does not interfere with family, social or vocational obligations.

1.4.3.2 Problem gambling

This describes an involvement in risky gambling behaviour that adversely affects the individual's well being. This may include issues of relationships, family, financial standings, social matters and vocational pursuits. (Arizona Council on Compulsive Gambling, Inc. 1995). The problem gambler experiences a pre-occupation with gambling with impaired to poor, to periodic loss of control. There is a narrowing of interests and gambling continues despite adverse consequences. There are also failed attempts to cut down. Problem gamblers very often find themselves in the losing phase ("the chase"). It is also possible to have gambling problems without being a compulsive gambler - someone can go out and lose a lot of money at a casino after being denied a promotion, for example. Sometimes this sort of problem can resolve itself without professional intervention in the very early stages. Problem gambling is used to refer to the wider group of people who show some, but not all signs of developing a pathological gambling condition.

1.4.3.3 Pathological gambling

Pathological gambling is a progressive disorder characterized by a continuous loss of control over gambling; a preoccupation with gambling and with obtaining money with which to gamble; irrational thinking; and a continuation of the

behaviour despite adverse consequences (Rosenthal, 1992). Pathological gambling is recognized as a medical disorder by the American Psychiatric Association and has elements of addiction similar to alcohol and drug addiction. It describes a chronic inability to resist the impulse to gamble. The term is usually limited to cases where the gambling causes serious damage to a person's social, vocational or financial life. Very often the pathological gambler suffers from legal problems. Because the gambler is losing control it is referred to by mental health practitioners as an impulse disorder. Pathological gambling is a progressive disease, meaning that the symptoms will get worse over time and also harms every aspect of the gambler's life. It is also seen as a complex disease and has high rates of co-morbidity with disorders such as chemical dependency, anxiety and depression. Pathological gamblers have lost total control over their gambling. For them, gambling is the most important thing in their lives. As they continue to gamble, their families, friends and employers are negatively affected. In addition, pathological gamblers may engage in criminal activities - such as stealing, lying or embezzling - which go against their moral standards. They have enormous difficulty in stopping gambling, no matter how much they want to or how hard they try.

With so many different types of gambling opportunities, the course and motivation of problem and pathological gambling can be broken into two sub-types:

- *The Escape Gambler*: This is the gambler who prefers slot machines, bingo and lotteries (games of chance). They are often female, tend to be depressed and use gambling to numb themselves. Blaszczynski (1998) refers to this type of person as the "psychologically vulnerable" gambler. For them gambling becomes a means of emotional escapism, a means by which they can forget their problems through the distraction of excitement - escaping is thus the primary motive and winning is secondary.

- *The Action Gambler*: This is the gambler who usually started gambling at a much younger age and prefers cards, dice, racing, sports and stocks or

commodities (games of skill). Early large wins, intermittent winning and the excitement of the gambling environment combine to establish a gambling habit. At the same time, specific beliefs and attitudes are firmly set down; these include the notion that winning is almost a certainty, that one has above average skills or is able to influence the outcome during play, that luck is with or will soon come to one, and a tendency to dismiss losses in preference to concentrating on wins (Blaszczynski, 1998). They are competitive and concerned about status. They see themselves exercising skill in their gambling. They are more likely to be male and gamble for much longer before seeking treatment than the escape gambler - winning becomes the primary motive.

1.4.3.4 Professional gambling

Professional gamblers make their living by gambling and thus consider it a profession. They are skilled in the games they choose to play and are able to control both the amount of money and time spent gambling. Professional gamblers are not addicted to gambling. They patiently wait for the best bet and try to win as much as they can. Thus, the risks are limited and discipline is exercised. For most purposes it makes better sense to understand such people as practicing a profession or plying a trade rather than as gambling.

1.4.4 Different phases of gambling

The following classification of the different phases of gambling is an elaboration of the schema proposed by Teitelbaum, Edwards, Marks & Gold (1999):

Compulsive gamblers go through the following four phases:

- winning
- losing
- critical
- desperate

Phase I: Winning phase (apparent control - social gambling)

The early or winning phase is similar to the learning phase of a substance addict where the high is fun and the consequences minimal or nonexistent.

- comfortable passing of time and recreational activity
- excitement and entertainment
- big win or initial period of winning
- increased self-esteem
- unreasonable optimism - feeling omnipotence
- lasts months to years

Phase 2: Losing phase (poor control - problem gambling)

Here the gambler develops an increased tolerance for gambling with more time, higher stakes and bigger losses. He starts to believe that he is simply on a losing streak and starts to double up on bets. Losses are rationalized as bad luck with the "big win" just around the corner. Unfortunately, luck does not hold out. He starts losing much more often than he wins. The longer gambling continues, the greater is the likelihood of losing and he starts borrowing money in order to gamble.

- often begins with an unpredictable losing streak
- borrows money (bailouts)
- covering-up, lying
- secret gambling
- promises to stop

Phase 3: Critical phase ("chasing") (loss of control - problem gambling)

Eventually the gambler loses more than he intends or can afford and attempts to recover by "chasing" losses. That is, pouring more and more money into gambling with the hope of winning amounts already lost. Soon the gambler is plunged into the critical phase, caught up in a cycle of chasing losses, winning occasionally, then suffering more losses and so on in a tightening downward spiral. It often begins with gambling away funds from a bailout that were supposed to pay debts. Even more time is spent gambling or thinking about gambling. Here the onset of "consequences" begin and problems with finances, relationships and work are experienced, which include:

- lying to cover money spent on gambling

- behind in bills and debt payments
- start selling items to finance gambling
- irritable when not gambling
- negligent of family or family responsibilities
- unsuccessful attempts to limit or stop gambling
- gambles longer than planned and until last cent is gone
- productivity at work affected
- feels remorse after gambling and anger when confronted about gambling
- personality changes - irritable, restless and withdrawn

Phase 4: Desperate phase (absence of control - pathological gambling)

Irrational gambling begins. The frequency and size of bets increase and bigger debts are accumulated until rock bottom is reached. Everything else is neglected - work, family, relationships and social life. At this point the gambler is out of control. Nothing matters except finding more money to gamble, even to the point where many will begin to steal or embezzle funds to support their habit. Gambling becomes a full-time occupation with loss of social supports and work. Criminal offences, social misfit, depression and suicidal behaviour are common:

- obsessed with gambling
- physical well being neglected
- constant bail-outs
- reputation affected
- loss of friends and/or family (divorce)
- lack of concern for others and drastic mood swings
- illegal acts (embezzlement, fraud, bad cheques, stealing)
- suicidal thoughts or attempts
- co-morbid substance abuse
- emotional/psychological breakdown
- arrests

1.4.5 Screening tools

Several surveys are available to assist in diagnosing problem/pathological gambling and I made use of the following:

- DSM-IV diagnostic criteria for pathological gambling.
- South Oaks Gambling Screen (SOGS). (Annexure A)
- Gamblers Anonymous 20 Questions. (Annexure B)

(The above three questionnaires will be discussed in full in Chapter 3: Research Methodology).

1.4.5.1 DSM IV diagnostic criteria for pathological gambling

Although the debate continues whether pathological gambling is a disease or a social problem, the American Psychiatric Association, in its most recent Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, 1994), decided to regard gambling as a psychiatric condition but was not fully in favour of considering it a true addiction because there was no external substance involved. As a compromise, the decision was reached to include pathological gambling in the category of "Disorders of Impulse Control Not Elsewhere Classified" alongside a range of seemingly unrelated problems such as intermittent explosive personality, compulsive shoplifting (kleptomania), fire-setting (pyromania) and hair pulling (trichotillomania). Importantly, however, the diagnostic criteria for pathological gambling were deliberately and directly based on those used for the substance abuse disorders (Blaszczynski, 1998).

There are three main features which distinguish disorders of impulse control. These are:

- The repeated failure to resist an urge to carry out a behaviour that is
- preceded by an increasing sense of tension and
- result in an experience of pleasure, gratification or release following its completion.

These features are also found in the group of sexual deviation disorders that includes exhibitionism, voyeurism, and pedophilia, a separate and distinct group of behaviours that is also characterized by recurrent impaired control over urges.

Suicide attempts, felony convictions, spouse and child abuse, and unemployment are common in pathologic gamblers. Gamblers may hide or deny gambling-related problems, however, making pathologic gambling an often overlooked and undiagnosed condition. According to the DSM IV, persistent and recurrent maladaptive gambling behaviour should occur which causes disruption or damage to several areas of a person's functioning, including personal, family or vocational pursuits. The gambling cannot be explained by a psychiatric condition of mania or a manic episode. In addition, at least five or more of the following features need to be present:

1. An excessive pre-occupation with gambling (e.g. preoccupied with reliving past gambling experiences, handicapping or planning the next venture, or thinking of ways to get money with which to gamble).
2. Needs to gamble with increasing amounts of money in order to achieve the desired excitement.
3. Has repeated unsuccessful efforts to control or stop gambling.
4. Is restless or irritable when attempting to cut down or stop gambling.
5. Gambles as a way to escape from problems or relieve a dysphoric mood (i.e. feeling of helplessness, guilt, anxiety and depression).
6. After losing money, often return on another day to get even ("chasing" one's losses).
7. Lies to family members or others to conceal the extent of involvement with gambling.
8. Has committed illegal acts such as forgery, fraud, theft or embezzlement to finance gambling.
9. Has jeopardized or lost a significant relationship, job educational or career opportunity because of gambling.
10. Relies on others to provide money to relieve a desperate financial situation caused by gambling ("bail-out").

As mentioned above, the criteria have been deliberately based on those for the substance abuse disorders. Certain criteria suggest the concept of craving, the notion of tolerance and that of withdrawal symptoms.

1.4.5.2 South Oaks Gambling Screen (SOGS)

This screening tool uses a series of questions to determine the presence of a gambling problem. Developed by Henry Lesieur and Shiela Blume (1987) of the South Oaks Psychiatric Hospital, the instrument consists of 20 items, with a score of five or higher considered evidence of probable pathological gambling. The South Oaks Gambling Screen (SOGS) has been the most widely used instrument in assessing the prevalence of pathological gambling among the general public, though it has not been specifically validated for that use. The higher the score, the more severe the problem. (Annexure A)

1.4.5.3 Gamblers Anonymous 20 Questions

Although it is not validated, the Gamblers Anonymous screening tool, which includes 20 questions, is helpful in providing clinical information and can orient the gambler to the Gamblers Anonymous programme. Seven positive responses to the survey questions suggest the diagnosis of probable pathological gambling. The higher the score, the more severe the problem. (Annexure B)

CHAPTER TWO

TREATMENT PROTOCOL

In this chapter the focus will fall on treatment protocol. A detailed description will be presented of the National Responsible Programme services delivered, including treatment outcome evaluation and research.

2.1 THE NATIONAL RESPONSIBLE GAMING PROGRAMME (NRGP)

2.1.1 Background and structure

The introduction of national lotteries, proliferation of gaming machines and construction of casinos has greatly increased the accessibility and popularity of gambling in South Africa and, as a result, the number of people seeking assistance for gambling-related problems. The National Responsible Gaming Programme which was founded in June 2000 - a public/private sector initiative - is the only one of its kind in Africa and is acknowledged internationally to be exceptionally well funded and among the most comprehensive in the world (Collins & Barr, 2001). It is the only programme internationally in which the private sector not only funds research, training and public education (which are integrated in a single programme), but also provides free professional medical and counseling treatment for those who suffer from problem gambling. The following is an overview of the structure and services delivered by the NRG, adapted from the NRG's substantial brochure on "Introducing Africa's first Responsible Gaming Programme - A model public/private sector partnership" introduced in 2001.

The NRG began originally as an initiative developed by Sun International, joined by Akani and Centry Casinos in September 2000. Tusk, Tsogo and Global Resorts also had functioning programmes of their own at the time. What started out as a collection of in-house programmes is today an integrated, national private/public sector partnership dealing with problem gambling. For reasons of

cost-effectiveness, it made sense to have a single national industry-wide programme. It was also judged important that the education, treatment and research functions be integrated and organized coherently, so as to ensure that information from each section was shared among all the others. The South African Responsible Gambling Trust supervises the National Responsible Gaming Programme. There is a high degree of accountability and transparency in terms of financial management and reports on the activities of the programme are published regularly. The South African Responsible Gambling Trust was created by the South African Advisory Council on Responsible Gambling (SAACREG), an initiative of the National Gambling Board. This body comprises four government regulators, four industry representatives and an independent chairperson, Dr Vincent Maphai, with Mr Chris Fisser as deputy chairperson.

The National Responsible Gaming Programme is managed by the National Centre for the Study of Gambling at the University of Cape Town. The Centre adds value to the programme by virtue of its considerable experience in this field, its research capabilities, and its strategic alliances with specialist organizations such as the Kenilworth Place Addiction Treatment Centre (for counseling and treatment), and the world-renowned Jellinek Consultancy from Amsterdam (for training). The Centre has forged international relationships with organizations as varied as the Responsible Gambling Council of Ontario, the Institute for the Study of Gambling and Commercial Gambling at the University of Nevada (Reno) and Gamcare in the United Kingdom.

Central to the philosophy of the NRGF is the principle that, while being funded by the private and public sectors, its operation and management are independent. This is why the programme is managed by independent experts and medical professionals from the National Centre for the Study of Gambling. While it is also accountable to its funders, it is responsible to the public and reports to government regulators. All the NRGF's financial and operational information is made available to a wide audience in Southern Africa and abroad. Quarterly reports are submitted to regulators, government, NGO's, industry, the

medical/professional community, civil society and other interested stakeholders, as well as being published on the NRGP's website (www.responsiblegaming.co.za).

The NRGP subscribes to the nationally acknowledged Targeted Access Programme (TAP) protocols. These protocols specify empowerment targets in terms of procurement, outsourcing, recruitment and other relevant criteria, and crucially, provide a mechanism for auditing and monitoring the programme's performance against these targets.

Funding for the NRGP comes mainly from voluntary contributions by industry, as well as from government departments. In the course of 2002 it is anticipated that all sectors of the gaming industry will contribute to the NRGP. Various NRGP initiatives have also been funded by the Department of Social Services and provincial governments.

2.1.2 NRGP services delivered

The National Responsible Gaming Programme was specifically devised to address the unique challenges posed by South Africa's developing nation environment after the legalization of the gaming industry in the mid 1990's.

The NRGP has two main objectives:

- To help prevent the development of problems associated with gaming.
- To help those identified as having such problems.

The NRGP's approach to addressing the incidence of problem gambling consists of integrating the following components into a comprehensive programme: public education and awareness, training, research and, treatment and counseling.

2.1.2.1 Public education and awareness

Prevention, through public education and awareness programmes - including Africa's first-ever education programmes aimed at schools and at senior citizens - is the main thrust of the NRGP. This involves a public advocacy campaign to educate gamblers and potential gamblers about responsible gambling, interaction with interested stakeholders (NGO's, government departments, the medical

community, schools and church groups) to inform them about the programme, and a community outreach component, which specifically educates people about the helpline and treatment options. Brochures, posters and other collateral material have been produced in significant quantities and distributed to these stakeholders. Extensive point-of-contact collateral including posters, plaques, brochures, signage and CCTV talkers are made available in places where gambling takes place. Additional publications, ranging from treatment protocols to advisory leaflets, have been prepared for interested parties, including a wide variety of NGO's, medical professionals and educationists.

A major facet of the broader public education programme has been an external advocacy campaign in the media, both printed and electronic. This has involved the production and regular placement of public service advertorials nationally in newspapers and magazines, as well as a focused campaign in local editorial columns and on actuality programmes. Media inquiries are dealt with on an ongoing basis. Based on the topicality of the message, the NRGP engages in a variety of media promotions such as those held with the popular two TV soaps *Isidingo* and *Backstage* in 2001. Episodes dealt with the issue of problem gambling, facilitated by the NRGP and industry, and the programme and helpline number were given wide and extensive coverage during the show, and in the credits. The impact of these shows was demonstrated by the huge response experienced by the helpline the days which followed the broadcasts; calls to the helpline in this period quintupled.

Using Kwazulu-Natal as a pilot project, a customized programme aimed at South Africa's senior citizens commenced in 2001. Old age homes and retirement villages in Durban, Pietermaritzburg and northern KZN participate by displaying responsible gambling brochures and stands. Supported by the Department of Social Services in the Western Cape, another pilot programme is being conducted, targeting old age homes, services, centers, retired people's clubs and retirement village complexes in the suburbs surrounding the province's three casinos. An NRGP facilitator delivers an informative but entertaining talk on

responsible gambling at monthly club meetings. The project for seniors will soon be extended to other provinces.

Another customized NRGp programme for a specific audience is the pilot project of Africa's first adolescent responsible gambling education programme being undertaken in conjunction with the departments of Social Services and Education in the Western Cape. The aim is to implement this public/private sector initiative successfully within the school curriculum elsewhere in the country. Facilitators fluent in English, Afrikaans and isiXhosa were deployed in schools situated in the vicinity of three casinos. Various items were produced for this project: a comprehensive training manual for facilitators, a worksheet and questionnaire for learners during the session, a poster for display at the school, and informative leaflet and a card with the helpline number for learners to take home with them.

2.1.2.2 Training

Various training programmes have been developed for the industry to ensure that all casino staff are appropriately trained in all aspects of problem gambling. This enables casino staff at different levels - from supervisors to middle and senior management - to identify problem gamblers and intervene where necessary. The programme has been designed to suit South Africa's human resources environment - and to comply with the standards and requirements of the South African Qualifications Authority (SAQA). This means that those who undergo training on various levels can receive a nationally recognized qualification. The training regime has been developed in conjunction with industry, the National Centre for the Study of Gambling and the Amsterdam-based Jellinek Consultancy, who have visited South Africa twice since the start of the programme, and are contracted to it. Jellinek are acknowledged as international leaders in employee training that specializes in problem gambling. Despite work shifts complicating logistics and the different training levels prevailing at different casinos, more than 8 000 industry employees have completed the training programme since inception. Apart from in-house casino staff, the NRGp also focuses on broadening the skills of the helpline counselors, facilitators and trainers, many of

them former school teachers or honours and masters students in the education, social work, medical, clinical psychology or psychiatric disciplines.

2.1.2.3 Research

The object of research work carried out by the NRGP is to understand the nature, causes and prevalence of problem gambling so as to facilitate the development of good public policy and to enhance the effectiveness of prevention and treatment strategies. Research activities include: qualitative research, quantitative research, monitoring international best practices in the areas of public policy, prevention and treatment, and evaluation of the NRGP's own prevention and treatment programme. In November 2001, the programme published a "National Study on Gaming and Problem Gambling in South Africa". This is the most comprehensive study ever conducted in South Africa into gaming behaviour, with a special focus on the incidence of, and sources of vulnerability to, problem gambling. The research sought to establish how much South Africans participate in the different forms of gambling and what their attitudes are towards gambling, to ascertain the prevalence of problem and pathological/addictive gambling in South Africa, and to provide a baseline against which to measure future trends. This research ensures that the effectiveness of the programme is constantly monitored, and additionally, provides an up-to-date resource of valuable scientific data on gaming trends and behaviour in South Africa and the world. It also enables the programme to test itself against international best practices.

2.1.2.4 Counseling treatment protocol

The counseling and treatment network as well as the gambling helpline are based at the Kenilworth Place Addiction Treatment Centre in Cape Town. From here training of industry staff and counselors is co-ordinated, assisted by a regional co-ordinator based in Johannesburg, covering Gauteng, Kwazulu-Natal and the northern parts of the country. The programme's medical professionals regularly interact with their colleagues in public and private service and problem gambling agencies elsewhere, to ensure that the NRGP has the information and resources and continues to offer the highest standards, range and depth in its service

provision. Counselors have been trained countrywide, to provide outpatient and inpatient treatment in eight of the country's official languages. Outpatient counseling treatment is now available, free of charge, in 27 South African cities and towns. Where previous outpatient treatment has failed, severe cases meeting strict clinical criteria are assessed for inpatient treatment which the NRGP is prepared to subsidize at identified clinics around the country. These criteria include strong suicidal tendencies, other concurrent addictive disorders and gambling activity that is hopelessly out of control, with the risk of criminal behaviour.

The NRGP provides services to the entire community, including problem gamblers, family members, and concerned persons. "Problem gambling" is defined as a pattern of gambling behaviour which may compromise, disrupt or damage family, personal or vocational pursuits. Problem gambling includes, but is not limited to, the diagnostic criteria for pathological gambling in the current American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders (1994). "Concerned person" means a person affected by problem gambling behaviour and needing services or a person willing to get involved in the treatment of the person who gambles excessively. The concerned person can be either a relative or non-relative of the person who gambles excessively. For the purpose of this study "concerned person" will mean those friends or family members willing to get involved in the treatment of the person who gambles excessively and actually attend one family therapy session with the gambler.

The NRGP recognizes three different forms of gambling. While each may be difficult to distinguish at times, most of the authorities worldwide now recognize these three groups:

1. Recreational gamblers gamble on social occasions with friends or colleagues. They have pre-determined acceptable losses and by and large their gambling activities cause little harm and their behaviour is associated

with minimal guilt. They simply require information and education on gambling behaviour in order to make sensible decisions.

2. Problem gamblers spend too much time and money gambling. Their behaviour causes harm both to themselves and others and is associated with much guilt. Many NRGP patients requiring treatment fall into this group and they very often respond positively to the intervention.
3. Compulsive and pathological gamblers have a psychiatric disorder diagnosable by strict criteria. It is regarded as a disorder of impulse control and has a very poor prognosis. Such gamblers have an inability to control their gambling, with consequent significant damage to themselves and others, and they are very difficult to treat. They constitute less than one percent of gamblers.

2.1.2.4.1 Toll-free telephone helpline

A unique component of the NRGP is the toll-free telephone helpline (0800 006 008) for problem gamblers, their families and friends. This was established to provide callers affected by problem gambling behaviour with information and referral to local professional counselors and education services. The helpline provides countrywide 24-hour telephone information and referral. The program maintains a directory of services for persons who gamble excessively and for concerned persons, and has also expanded its services with an international number, allowing access to the service from neighbouring states. In the two years since its inception, in June 2000, there have been more than 27 000 callers to the toll-free helpline, and 1,737 referrals for free treatment by a medical professional.

For nearly all recipients of the NRGP services, their initial contact is with the helpline counselor. A client, either a person gambling excessively or a concerned person affected by problem gambling behaviour, is eligible for outpatient services and a telephonic assessment, performed by the helpline counselor, identifies a need for gambling treatment services. A person gambling excessively is

determined in need of gambling treatment services if the person meets the criteria outlined in the NRGH Helpline Assessment and Referral form. The completed assessment form is then referred to the treatment counselor within closest proximity of the caller as soon as possible, and not later than 48 hours after initial contact with the helpline. The option, of the caller or the treatment professional making the first appointment, is offered to the client. If it is required of the treatment professional to contact the client, he/she will respond within the following 48 hours to set up an appointment.

2.1.2.4.2 Customized outpatient treatment programme

The customized outpatient treatment programme is of a structured nature. It was devised by the NRGH's medical director, Dr Rodger Meyer, and enables therapists to make a significant difference within a limited period of time. It aims to meet the therapeutic needs of problem gamblers wanting help and insight into their behaviour. The following is an overview of the structured six-session individual therapy programme adapted from the "Treatment Protocol for the Gambling Addiction Network Counselors" (Meyer, 2001).

This treatment programme for problem gambling and addictive (compulsive) gambling over six sessions (one hour session once a week for 6 weeks) is designed to provide the patient with a cognitive insight into the dynamics of the problem so that behaviour changes may be effected and a recovery process facilitated. It subscribes to a disease concept model of understanding, currently described as a disorder of impulse control. The programme also has a 12 Step facilitation component that aims to integrate the patient into a 12 Step recovery programme as a member of an ongoing self-help support group of proven value. The treatment programme philosophy commences from a threshold of a "disease of unknown origin" with a probable but unproven neurobiological basis, but does not attempt to delve into psychodynamic, systemic or social conditioning explanations for the problems. It also strongly avoids a moral or judgmental stance, even though many gamblers engage in criminal activities or socially unacceptable behaviour as a result of their compulsion.

PLEASE NOTE THAT THE FOLLOWING DESCRIPTION OF THE SEVEN SESSION PROGRAMME IS DONE WITH THE COURTESY OF THE NRG. THIS STRUCTURED PROGRAMME IS PROTECTED BY COPYRIGHT. (Meyer, 2001)

Session one: Session one requires a comprehensive biopsychosocial history with the focus on the gambling behaviour. A DSM IV diagnostic inventory is completed. Most importantly, it requires the signing of a therapeutic contract which must be adhered to. It is critically important that the patient takes responsibility for their recovery programme. The counselor's role is simply to provide the information and guidance, but it is the patient's personal responsibility to make himself/herself well. It is important to establish a therapeutic alliance at the first session and the only expectation is that the patient will not gamble, "one day at a time". At the closure of the session, the handout entitled "Step One Prep" is given as homework to be completed for the second session. Patients are also encouraged at this stage to work on a financial inventory as most compulsive gamblers are hopelessly in debt and unless a realistic payback plan is established, the situation may remain equally hopeless to the patient. For the purpose of this study, the patients were also requested to complete two additional assessment forms; "The South Oaks Gambling Screen" and "Gamblers Anonymous 20 Questions".

Session two: At this session the therapist tries to introduce the features of the disease of addictive gambling as listed in the treatment protocol. The therapist also tries to establish in the mind of the patient a non-moral or -judgmental attitude to the problem and that, even though his/her behaviour may have been unacceptable or even criminal, the condition is, in and of itself, morally neutral. The patient is not responsible for the illness (in that it is not a choice), although he/she is certainly accountable for his/her behaviour. This treatment programme expects the patient to take responsibility for his/her recovery from the problem.

This provides an acceptable construct for recovery whereby the patient can begin to make sense of his/her behaviour and the counselor attempts in the process to highlight the predictable nature of the problem. This adds further weight to the notion of a disease. The completed financial payback plan is also attended to. Gamblers Anonymous is also introduced as a self-help support group and the requirement is set to attend the first meeting the same week. Another handout which aims to personalize the behaviour should be completed for the third session.

Session three: Session three begins with a review of the issues as listed in the protocol. The first GA meeting is discussed, if it was attended, and the issues arising. Session two's handout is then discussed. The handout tries to illustrate the out-of-control gambling behaviour in its various forms. The next step in the therapeutic process is to establish the loss of control over the gambling as the primary problem that has created chaos or unmanageability in the patient's life. The next handout is given for completion for the following session and the expectations for the ensuing week identified.

Session four: This session is an important one as it is the conjoint session with the spouse or significant other person. Session three's handout should be discussed, initially attempting to expose how the problem gambling has affected and damaged family member(s), who should also be present. The therapist should provide some safe space for the spouse for this purpose. This may need to be a slightly longer session, but is kept contained and goal-directed. The family session itself is not intended to be a time for recrimination but rather an opportunity for discussing and highlighting the concepts of enabling and detachment. A handout for background reading is provided. The point is that the family is also a casualty of the problem gambling and they, too, have to "recover". Another handout is provided for completion for the next session. Involvement in GA is still encouraged. If the spouse will not attend the fourth session or if there is no significant of concerned other person, the time is used to consolidate the work

covered thus far, focusing on the lifestyle unmanageability arising from the problem gambling.

Session five: The aim in this session is to focus on the gambler's delusional state that provides the addictive gambler with a "license" to continue gambling actively. Dismantling this delusional system can be a tricky task in that it requires experience to do successfully. By this stage, most patients should have some insight into their delusional system. The next handout is given for the following session. If the patient is involved in a 12 Step GA group at this stage it is expected, and they should be prompted, to share their experience of problem gambling and recovery so far at the forthcoming GA meeting.

Session six: This session is devoted to relapse prevention and a handout is provided for this purpose for completion. This is a lengthy handout and could well be the substance of an entire programme on its own. The therapist tries to establish the notion that vigilance needs to be maintained and an active programme of relapse prevention instituted in order to remain gambling-free. The session also devotes time to closure and arranging for a follow-up visit to assess progress after three months (7th follow-up session). If the patient requires or requests ongoing one-to-one therapy, this is available by individual/mutual arrangement between patient and therapist, at the patient's own cost. A "Case Summary" form is also required by the NRGP for completion by all therapists for statistical purposes. What I have also included in this session - and for the purpose of this study - is the assessment of treatment effectiveness by comparing client data collected at admission and discharge (after the sixth session). Aspects that were examined and assessed were: changes in gambling problem severity (relapses), vocational functioning, marital/family relations, changes in financial problems and post-treatment utilization.

Session seven: This session is scheduled three months after the first session was attended. This is part of an aftercare counseling service provided by the NRGP in order to address relapse issues and to support and increase the gains

made in the treatment process. This counseling session also includes only a therapist and a patient who has completed primary treatment (all six treatment sessions). Again all aspects of treatment effectiveness (as discussed above in the sixth session) are assessed on an individual interview basis with the patient. If a patient was unable to attend the seventh session, he/she was contacted telephonically to determine the status of the individual.

A patient's progress and current status is recorded in the patient's case records. Information is noted following each individual counseling session and a "Treatment Tracking" form is completed after each session. Each therapist should ensure that he/she exercises responsibility for safeguarding and protecting the client case record against loss, tampering, or unauthorized disclosure of information.

2.1.3 Treatment and outcome evaluation

Why is it important to study and evaluate treatment outcomes? The first principle of medical ethics is to do no harm. This maxim exists because the best of intentions can lead to treatment efforts that inadvertently and unintentionally stimulate adverse consequences (Shaffer, et al., 2002). A similar and equally simple premise dictates the need for program evaluation: despite the best of intentions, unless a programme is evaluated, we do not know whether it is producing positive, neutral, or negative results. It is easy to assume that the outcome of the National Responsible Gaming Programme will be obvious and straightforward - that it will help problem gamblers to recover and improve the lives of "concerned others". Unfortunately, treatment reality seldom reveals itself in a straightforward manner. In fact, treatment programmes can: a) have no effect; b) change knowledge about problem gambling but not gambling behaviour; c) decrease problem gambling as planned; d) inadvertently increase problem gambling; or e) have a range of other outcomes (Shaffer, Hall & Vander Bilt, 1997b). Since South Africa has invested heavily in the gambling treatment programme, and many people depend upon this programme to help them recover

from problem gambling, it is critical that the efficacy of the programme be evaluated.

The situation is complicated by the fact that gambling treatments are relatively new; few treatments have been studied scientifically (Shaffer & LaPlante, in press). Given the increasing access to gambling during the latter part of the 20th century public health researchers, clinicians, and policy makers have had both the opportunity and social obligation to study the impact of legalized gambling on adults as well as children and adolescents (Shaffer & Korn, 2002). As the popularity of legalized gambling continues to grow, society is directing more attention toward the public health risks and the economic, legal and social costs of expanded gambling (Korn & Shaffer, 1999b). Despite this increasing attention and public health concern, there is a notable absence of treatment related research that can provide information about how people recover from gambling disorders or how co-morbid psychiatric conditions usually interact with gambling problems and recovery from gambling problems (Eber & Shaffer, 2000; National Research Council, 1999). With few gambling treatment programmes available throughout North America, and the lack of treatment outcome studies, the place to begin studying the epidemiology and natural history of gambling disorders is to examine how people who have received a variety of treatment interventions and those who have not, differ in both their psychopathology and their recovery experiences. Since there are few scientific studies of gambling treatment outcome (Ladouceur et al., 1998; Sartin, 1988; Seager, 1970) and no studies of gambling treatment impact, a broad study and discussion of this issue is warranted.

By evaluating the National Responsible Gaming Programme (NRGP) and its outcomes it will enable us to have more insight into the precise nature of problem gambling, the utilization and impact of treatment resources, and the efficacy of the treatments that currently are available.

2.1.4 Treatment outcome research issues

The very idea of a "treatment outcome" is complex. Treatment outcomes represent constructs that must be operationally defined with great care - and these definitions must be multi-dimensional (Shaffer, et al. 2002). For example, what influence do we attribute to client adherence to treatment protocols when we assess the influence of treatment? When evaluating treatment outcomes, are we limited to client outcomes obtained at discharges or can we measure treatment outcomes many months later? In some instances, there are important short-term outcomes due to treatment experiences; however, it also is possible that treatment outcomes emerge more slowly and might not appear until 12 - 24 months after treatment. The opposite is also true: short-term treatment outcomes observed at discharge can wane rapidly and patients with addiction often slip or relapse within 12 months. Complicating matters, treatment outcomes are associated with the severity of client illness at intake so that it is not easy to determine whether the outcome is due to treatment or the nature of the problem. In addition, a study recently conducted in October 2002, "The Iowa Department of Public Health Gambling Treatment Services: Four years of evidence" (Shaffer, et al, 2002), psychiatric severity was associated with treatment outcome: those with more severe disorders had poorer outcomes than those who were healthier at the outset of treatment. Since co-morbidity is a commonly observed circumstance among gambling treatment seekers presenting for treatment, it is suggested essential to treatment planning considerations (Crockford & elGuebaly, 1998b; National Research Council, 1999; Shaffer & Korn, 2002). While treatment efficacy is an index of a treatment's relative capacity to produce a positive outcome among those individuals who experience it, treatment impact refers to two major factors: (1) how many people a treatment attracts; and (2) of those it attracts, how effective it is in producing a positive outcome. Thus, impact = treatment participation x treatment efficacy. For example, a treatment that attracts only 100 people into a programme and is 30% effective has only half the impact of a treatment that attracts 600 people into treatment and is 10% effective (Shaffer, et al. 2002).

New research demonstrates a variety of other problems associated with treatment outcome research. For example, in the substance abuse treatment outcome literature, there is inconsistent reporting of: (1) demographics, (2) drug use, (3) study characteristics, and (4) outcome and follow-up information (Ellingstad, Sobell, Sobell & Planthara, 2002). In particular, this body of research is weak with respect to follow-up procedures and information. New treatment programmes are particularly vulnerable to the absence of follow-up information even if they show interest in collecting such data; it takes time for a treatment cohort to mature sufficiently to examine the long-term impact of clinical experiences.

Since there are few scientific studies of gambling treatment outcomes and a notable absence of treatment related research worldwide, it is essential that a proper overview is necessary on two recently completed treatment outcome studies. The following is an overview of these studies.

2.1.4.1 Treatment effectiveness of six state-supported compulsive gambling treatment programmes in Minnesota

Stinchfield and Winters (1996) describe the results from an evaluation of six state-supported pathological gambling treatment programmes in Minnesota. This report describes a longitudinal study representing all clients who were recruited from six programmes between April 1992 and January 1996.

During the study period (April 1992 to January 1996) 1342 clients were recruited for the study and 944 were admitted to treatment. Among the 944 clients admitted to treatment, 658 completed treatment (70%). Clients were administered follow-up assessments at six and twelve months after treatment. The follow-up response rates were 75% and 62% at six and twelve months follow-up respectively. These follow-up response rates are similar to those obtained for drug abuse treatment outcome studies.

- Client demographics include :

- (a) 61% were male;
- (b) the average age was 39;

- (c) the sample was predominantly white (93%);
 - (d) 93% were high school graduates and 16% were college graduates; and
 - (e) over two-thirds were employed full-time.
-
- Clinical history:
 - (a) almost half (49%) of the sample had previously sought help for their gambling problem;
 - (b) over one-third (33%) had received chemical dependency services and 47% have used mental health services;
 - (c) 52% had co-existing psychiatric disorder; and
 - (d) nearly all clients received a diagnosis of pathological gambling and obtained a South Oaks Gambling Screen (SOGS) score in the probable pathological gambler range.
 - Most clients began gambling before adulthood (57% before age 19) and began to gamble regularly soon afterwards (49% before age 30).
 - The three most preferred gambling activities were cards (37%), gambling machines (37%), and pull tabs (14%). However, the lottery, which was rated by less than 1% as the game of choice, was played about as frequently as the most preferred games.
 - In the six months prior to treatment, over one-third of the sample gambled on a daily basis (36%) and over half gambled at a weekly rate (53%).
 - The majority of the sample (94%) had experienced at least one gambling-related financial problem in their life-time. Lifetime gambling debt ranged from zero to hundreds of thousands of dollars with an average of \$47,855 and a median of \$19,000. Recent (i.e. past six months) debt also ranged from zero to hundreds of thousands of dollars with an average of \$10,008 and a median of \$4,500.
 - Over half of the sample (58%) reported that they had been absent from work due to gambling on one or more days during the six months prior to treatment.
 - One in five clients reported they had a legal status of either being on parole, probation or pending as a result of gambling-related legal problems,

and at least 10% had been arrested for a gambling-related offense in the six months prior to treatment

- In terms of substance use, 69% report daily tobacco use, and almost one-third are weekly to daily alcohol users. Very few reported a history of illicit drug use.
- Almost two-thirds reported having a poor self-image (64%) and over half reported experiencing poor emotional health (58%) during the six months prior to treatment.
- Most clients readily acknowledged that they have a gambling problem, that their gambling has caused harm to others, and that they want help to recover from their gambling addiction.
- Clients who completed treatment (N=658) exhibited significant improvements from pretreatment to post-treatment in the following areas:
 - (a) There was a statistically significant decline in both gambling frequency and gambling problem severity from pretreatment to post-treatment. While most of the sample was gambling at a daily or weekly rate before treatment, 79% reported no gambling at discharge from treatment, and 43% and 42% reported no gambling at 6 and 12-months follow-up respectively. If treatment success is defined in terms of either abstinence or less than monthly gambling, about 70% of treatment completers fall in this range at six and twelve months follow-up. Almost the entire sample (98%) had five or more problem signs before treatment and only 36% and 41% reported five or more problem signs at six months and twelve months after treatment, respectively. Four out of five treatment completers moved from gambling on a weekly or daily frequency before treatment to a monthly or less frequent gambling after treatment. In terms of gambling problem severity (SOGS), 65% of treatment completers moved from the clinical range before treatment to the normal range after treatment.
 - (b) Improvement also occurred in the following areas of functioning: better psychosocial functioning, less gambling debts, fewer friends who are gamblers, and fewer financial problems were reported at follow-up.

- No predictors of treatment completion were found and only modest predictors of treatment outcome were identified. Gambling frequency during treatment, client satisfaction with treatment, psychosocial problems at intake, age, and recovery orientation at discharge were moderately predictive of gambling frequency and gambling problem severity (SOGS scores) at six months follow-up. In other words, low frequency of gambling during treatment, higher levels of client satisfaction with treatment, fewer psychosocial problems, older clients, and a positive recovery orientation were slightly predictive of a positive outcome at six months follow-up.
- The majority of clients participated in an aftercare programme and/or attended Gamblers anonymous meetings after treatment.
- The majority of clients were satisfied with the treatment services they received and attributed their improvement to the treatment programme.
- The six treatment programmes were not significantly different from each other in the amount of reduction in gambling frequency and problem severity between pretreatment and post-treatment assessments. There are more similarities than differences between the six programmes on client variables and treatment outcome.

2.1.4.2 The Iowa Department of Public Health Gambling Treatment Services : Four years of evidence

The IGTP (Iowa Gambling Treatment Programme) amassed participant data for gamblers and concerned others of gamblers (e.g. family members, significant others, or close friends of problem gamblers) over four years (1997 - 2001) (Shaffer, et al. 2002). This data provided information about IGTP participants' background and demographic characteristics, financial status, gambling habits, mental health, and treatment services. Some of the data collection opportunities included : (1) admission, (2) discharge, (3) follow-up.

- (a) Compared with Iowans in general, gamblers seeking services were more likely to be male, older, single, less educated, and unemployed; further, gambling assistance seekers were more likely to be employed in sales and services than their counterparts who did not seek gambling treatment.

- (b) At admission, IGTP gamblers held approximately \$14,000 (median = \$4,060) in gambling debt and lost about \$522 weekly.
- (c) 23% of treatment seekers reported a history of treatment for substance use disorders.
- (d) Various games disproportionately accounted for their losses and reported that slots accounted for 58% of their losses, video poker for another 10%, casino table games were associated with 14% of losses and no other game accounted for more than a small fraction of losses.
- (e) Gender distinguished treatment seekers on important characteristics that relate to treatment :
Women treatment seekers :
 - started gambling later and went more quickly into treatment than their male counterparts;
 - were less likely to be single and more likely to be a parent compared with men;
 - lost more money on slots and less money on casino games than male treatment seekers;
 - were less likely to report substance abuse and alcohol use but more likely to report being compulsive about food and shopping.
- (f) Reporting a history of treatment for gambling was an important differentiating factor :
 - People with previous gambling treatment had more gambling-related debt, more declared bankruptcy, lost more jobs, and were more likely to have attended GA than those treatment seekers without prior gambling treatment experience.
- (g) Reporting a concerned other involved in treatment was an important differentiating factor.
IGTP participants who reported that a concerned other was involved in their treatment:
 - were less likely to be single, but more likely to be a parent and employed;
 - had more total debt, but not more gambling debt;

- had less delinquency and reported lower values of the most money lost in a week than did other gamblers;
- (h) Overall, only 12% of those treated participated in family counseling. The two most frequent patterns of treatment types were individual plus group (49%) and individual only (32%).
- (i) Only 9% of all gamblers admitted to the IGTP had follow-up records. This small group of follow-ups is likely not representative of the entire treatment cohort. This sample precludes confident generalization of the follow-up findings to the four years of the IGTP.
- (j) Among those who did complete the IGTP, in the period between discharge and six-month follow-up, 74% of treatment completers, 49% of partial treatment completers, and 36% of others were abstaining from gambling.
- (k) From admission to follow-up, among the small sample, followed, 85% of treatment completers, 88% of partial treatment completers and 65% of others significantly reduced their dollars lost per week.

CHAPTER 3

RESEARCH METHODOLOGY

The purpose of this chapter is to discuss, in detail, the research method followed to obtain the results of the study. This includes a discussion of the basic research design, the sampling and data collection, as well as the statistical techniques used to analyse the results.

3.1 RESEARCH DESIGN

“A research design is a *strategic framework* for action that serves as a bridge between research questions and the execution or implementation of the research” (Terre Blanche & Durrheim, 1999:29). It is therefore a plan that ensures that sound conclusions are reached.

This specific study makes use of quantitative measurement instruments to assess certain variables. It is also important to note that the clinical assessments made by the researcher during the data collection are integrated in the assessments and interpretation of the results. This merging of methodologies is known as *Methodology Triangulation* (Leedy, 1993). Leedy describes triangulation as a compatibility procedure designed to reconcile the two major methodologies by eclectically using elements of the major methodologies as these contribute to the solution of the major problem.

This study aims, firstly, to provide a detailed description of the characteristics of the persons entering a specific gambling treatment programme and is therefore known as a descriptive study. Descriptive studies aim to describe a certain phenomenon at a certain point in time. Secondly, it aims to provide an outcome evaluation on the treatment effectiveness of the specific outpatient gambling treatment programme at set intervals.

3.2 SAMPLING AND DATA COLLECTION

There are currently 28 casinos operating countrywide. The majority (six) of these casinos fall in the Gauteng region and are as follows: (National Gambling Board of South Africa, 2002) (www.ngb.org.za).

Fourways	-	Monte Casino
Gold Reef City	-	Gold Reef City Casino
Vanderbijlpark	-	Emerald Safari Resort Casino
Kempton Park	-	Caesars Casino
Brakpan	-	Carnival City Casino
Westrand	-	Rhino Resorts Casino

Other casinos currently operating, per region, are as follows:

Eastern Cape	-	3 casinos
Free State	-	1 casino
Kwazulu-Natal	-	3 casinos
Mpumulanga	-	3 casinos
Northern Province	-	2 casinos
Nothern Cape	-	2 casinos
North West	-	5 casinos
Western Cape	-	3 casinos

According to the NRGF National Quarterly Report for the Period April - June 2002, (www.responsiblegaming.co.za) calls received per region were as follows:

		%
Gauteng	-	42.37
Western Cape	-	23.55
Kwazulu-Natal	-	10.19
Eastern Cape	-	7.31
Free State	-	2.07
Nothern Province	-	1.21
Mpumulanga	-	1.15
North West	-	0.63

		%
Other	-	5.30
Unknown	-	5.99

From the above statistics it is clear that the Gauteng area constitutes the most calls and referrals by province. In the first 24 months of the programme, 27 993 calls were received from across the country. Nationally, some 6.21% of callers were deemed to warrant initial referrals for out-patient treatment. Of the 1 737 patients across the country who have been referred since the inception of the programme, 1 420 contacted the treatment professional to whom they were referred. During the period June 2000 - June 2002, a total of 736 referrals were made to the Gauteng area.

For the purpose of this study I have thus used the first 100 gamblers entering outpatient treatment, referred to me by the gambling helpline for counseling services - which constitutes approximately 14% of the 736 possible treatment seekers from the Gauteng area. Several other treatment counselors service the Gauteng area and the allocation of gamblers to certain treatment professionals was solely done at the discretion of the helpline counselors. I therefore did not select the respondents randomly from the population of gamblers seeking treatment and bias may have occurred limiting the generalization of the results. However, it is considered that the basis of the allocations made by the helpline counselors were on variables such as convenience for the treatment seekers and workload of the counselors and that these variables have not biased the results to a great extent and generalization is still considered possible. Also, given the majority of gambling taking place in Gauteng, this would still give a good indication of certain trends, behaviours and effectiveness of treatment.

3.2.1 Data integrity and the role of the programme evaluator

Given the importance of treatment evaluation, it is essential to consider myself as the evaluator and my relationship with the material that I examined. It is important to note that this study is based on my own internal review of the NRGP

six-session customized outpatient treatment programme. No outside consultants were involved as external reviewers. This decision carries significance. My role as internal reviewer and the lack of review by outside consultants could impact on the generalization of this study. However, to compromise with the lack of unique external objectivity, I utilized the services of independent statistical experts for data capturing, the analysis of the data and interpretation and discussions of the results. Unintentional bias when examining this data should thus be taken into consideration. An independent party with a fresh perspective might notice trends or conclusions that I, as the internal reviewer, might have missed because of familiarity with the data and expectations about its value. However, having deep insight and knowledge of the person and his gambling behaviour enabled me to discover real truths that would otherwise not have been able to be obtained by an external party.

3.3 MEASUREMENT INSTRUMENTS

Three diagnostic tools were used to determine the gambling severity of treatment seekers:

- DSM-IV diagnostic criteria for pathological gambling.
- South Oaks Gambling Screen (SOGS). (Annexure A)
- Gamblers Anonymous 20 Questions. (Annexure B)

The DSM-IV diagnostic criteria were completed by myself for each individual in treatment after having performed a thorough assessment. With the first session treatment seekers were given the South Oaks Gambling Screen (SOGS) as well as the Gamblers Anonymous 20 Questions to complete at home and bring with them to the second session. As 14 treatment seekers did not return to treatment after the first session the total number of treatment seekers on both the South Oaks Gambling Screen and Gamblers Anonymous 20 Questions measures is 86. In some cases where treatment seekers did not complete these two questionnaires or perhaps mislaid them, they were requested to complete another set of questionnaires at the second session.

A brief discussion on these instruments which have been used to measure problem gambling as well as the strengths and weaknesses of each measure will be presented. This will be followed by a discussion of the other variables that were measured.

3.3.1 Measurements of gambling severity

3.3.1.1 DSM IV diagnostic criteria for pathological gambling

These criteria for pathological gambling were published by the American Psychiatric Association (APA, 1994). The diagnosis for pathological or problem gambling is based on this set of eleven criteria. This list is typically used by mental health professionals and determine, based on what the patient is saying, how many criteria fit. It can be difficult for a person to make a “self-diagnosis” because someone can manipulate the questions in a manner that is not accurate. Unfortunately there is no real scoring key for the DSM-IV assessment tool. Based on careful research and clinical experience, the authors of this symptom list decided that five or more positive, or “yes” responses, indicate a diagnosis of pathological gambling (Shaffer, et al, 1997). However, there was a lot of discussion about the number of symptoms needed and some of the authors felt strongly that four symptoms were sufficient for the diagnosis of problem gambling. In this study people who endorsed 1 to 4 symptoms were evaluated as problem gamblers rather than pathological gamblers. I would like to reiterate that the issue of making a diagnosis can be very complex. I have counseled some patients who did not endorse five symptoms and yet clearly were pathological gamblers, for example, a gambler who is dishonest about their gambling, borrows money from many people or institutions, and/or has had a financial bail-out from someone. In this situation the gambler does not meet the criteria, but they may be a pathological gambler, or on their way to becoming a pathological gambler.

The DSM-IV diagnostic criteria are less focused on the financial aspects of gambling problems than the South Oaks Gambling Screen (SOGS) or the Gamblers Anonymous (GA) 20 Questions, and more focused on the loss of control aspects of gambling problems. This behavioural focus is a strength of the

measure, as it results in a more balanced view of gambling problems than is possible with the SOGS and GA 20 Questions. The end result is a more conservative estimate of gambling problems. Summing “yes” responses mean that the DSM-IV accords a maximum score of 2 to financial difficulties, while the SOGS, financial difficulties and borrowing money can contribute a score of up to 14 (Shaffer, et al, 1997).

3.3.1.2 South Oaks Gambling Screen (SOGS) (Annexure A)

The South Oaks Gambling Screen (SOGS) a self-completion instrument, has been by far the most widely used measure of gambling problems in the literature, both for assessment of clinical populations and in the general population. There are several reasons why the SOGS has become the most commonly used measure. First, it is arguably the only gambling measure, which has been validated and reliability tested. Second, as Shaffer et al. (1997) point out, many of the prevalence studies conducted in the United States have been designed or conducted by Rachel Volberg, who has chosen to use this instrument. As the body of literature using the SOGS grows, it becomes more and more unlikely that another instrument will be used because cross-jurisdictional comparisons are often an important goal of prevalence studies, and a common measurement instrument is necessary in order to make these comparisons.

The SOGS was developed at the South Oaks Hospital in the United States which treats alcohol, drug and gambling problems. It was designed to be used in this clinical setting, for use by non-professionals as well as professional clinicians to identify the presence of a diagnosable disorder among clients presenting for gambling problems. The scale was developed based on the DSM-III diagnostic criteria, which was the standard at the time of development (1986-1987). The development, validation and reliability testing process included individuals presenting for and currently in treatment as well as other populations, most notably students and hospital staff (Lesieur & Blume, 1987). The instrument was carefully validated and its reliability tested, and it is perhaps the most rigorously developed measure of gambling problems to date. The SOGS has been widely

used by gambling researchers. Lesieur (1993) cites studies in five countries which have used this measure (Canada, United States, Spain, New Zealand and Australia), and Shaffer, et al's. (1997) meta-analysis of 120 studies show 55.1% used the SOGS or a SOGS derivative such as the SOGS-RA for adolescents as a measurement instrument.

The criticisms of the SOGS have centered around the fact that it was developed in a clinical setting, and yet is used in general population studies (Lesieur & Blume, 1993). It was suggested that the use of this type of screening test for a general population survey is inappropriate for establishing prevalence rate and results in a low predictive value for the SOGS given the very low rate of occurrence of the disorder in the general population. Some researchers have also suggested that the SOGS, when used with the general population, results in a high number of false positives (Dickerson, 1993). However, Dickerson (1993) has suggested that SOGS' reliability has not been satisfactorily established and that respondents with identical SOGS scores could have very different characteristics (as noted in Shaffer, et al, 1997).

The SOGS screen is composed of 20 items intended to address seven dimensions of gambling problems (type of gambling, financial, emotional and behavioural, genetic vulnerability, loss of control, social and relationship, and occupational problems). A "yes" response to between three and four items is considered indicative of problem gambling, while "yes" responses to five or more items is considered diagnostic of probable pathological gambling (Volberg & Steadman, 1988).

3.3.1.3 Gamblers Anonymous 20 Questions (Annexure B)

This series of 20 questions are completed by the gambler and is intended to identify compulsive gamblers. Those who qualify as compulsive or pathological, according to Gamblers Anonymous (GA), are those scoring a "yes" to seven or more of the twenty questions, and these are, presumably, those who would benefit from the Gamblers Anonymous 12 Step Programme (Gamblers

Anonymous, 2002). The higher the score, the more severe the gambling problem. In terms of rough domains, the questions address personal correlates of gambling, (e.g. difficulty sleeping, remorse over gambling, gambling to forget worries, and decreased ambition and efficiency), social correlates of gambling (unhappy home life, gambling in response to arguments and frustrations, and damage to one's reputation), and financial correlates (gambling until one's last rand is gone, borrowing money or selling property to finance gambling and committing illegal activities to finance gambling). As with the SOGS, there is an apparent over-emphasis on the financial problems resulting from gambling.

3.3.1.4 Psychometric properties of measures

There is relatively little information available in terms of the psychometric properties of instruments other than the SOGS. Stinchfield's 1997 paper is one of the few containing psychometric comparisons between instruments and he uses the DSM-IV diagnostic criteria as the gold standard for measurement. He examined the SOGS in terms of reliability, validity and classification accuracy for three populations; a general population sample (n=803), a sample of callers to a gambling hotline (n=92), and finally a gambling treatment sample (n=1 331). The SOGS and DSM-IV diagnostic criteria were administered to the general population and hotline caller samples. The entire treatment group was given the SOGS and a sub-sample of the treatment group was given the DSM-IV diagnostic criteria (n=152).

His analysis suggests that the SOGS had fairly good reliability (alphas of 0.9, 0.85 and 0.86 in the general population, hotline and treatment samples respectively). He felt that the SOGS achieved good validity in terms of obtaining high correlations with the DSM-IV diagnostic criteria and moderate correlations with the other measures of gambling problems. The SOGS was also able to discriminate between the general population and treatment/hotline groups. While classification accuracy was good for the hotline and treatment samples, it was not as good for the general population. Stinchfield recommends that the DSM-IV diagnostic criteria be used in general population surveys, as the SOGS appears to

overestimate pathological gambling in comparison with the DSM-IV diagnostic criteria. However, Stinchfield makes the point that one of the reasons the SOGS has low classification accuracy is the very low prevalence rate of problem gambling. With absolute numbers so low, percentage error is inflated – SOGS identified four people from 1 331 as pathological and DSM-IV identified two. So, in this study, the SOGS had a false positive rate of 50%.

3.3.2 Demographic and other descriptive variables

The demographic and other descriptive variables were recorded based on observation and the asking of questions. At intake the patient was requested to complete an intake-form where the following details were obtained: referred counselor name, date, surname, name, age, date of birth, residential address, postal address, telephone number (home, work and cellular phone), occupation, employer, referral source, close contact/spouse, as well as address and telephone number of a close contact/spouse. The patient was also requested to sign this intake form.

A standard biopsychosocial assessment form, prepared and prescribed by the National Responsible Gaming Programme, was used during the intake and assessment process. This was done in a private individual setting. The following patient information was obtained:

- *Demographic information* (name, age, male/female), sufficient identification of the referral source and date, general practitioner, psychologist.
- *Marital position* including duration, current state of relationship, divorce, children, chemical or gambling dependency of spouse.
- *Biological family history* including chemical dependency or gambling dependency in family (siblings and parents).
- *Residential situation* and whether this has been affected by the gambling problem.
- *Occupation* including current employment, employment history, schooling/qualifications, special interests.

- *Medical history* including surgery, active medical problems, current medications, nicotine addiction.
- *Psychiatric history* including diagnosis, attention deficit hyperactivity disorder (ADHD), bipolar affective disorder (BAD), previous admissions, previous or current counseling/therapy, suicide attempts related and not related to gambling, current medication.
- *Criminal record* including criminal activity (theft, fraud, embezzlement), charges pending, disciplinary actions.
- *Chemical history* including current drug of choice and relationship to gambling, current usage (pattern, quantity), other addictive behaviours, chemical dependency treatment history.
- *Gambling history* including first gambling episode (age, situation, nature of game memorable consequences), biggest early win, biggest loss, current game of choice, pattern of gambling (frequency, duration), average loss per session, superstitions about play, playing strategies, other games played, total current debt.
- *Motivation for treatment* including any significant past attempts to stop gambling, reasons for failure, pre-treatment motivational crisis, reason for wanting treatment now.

3.3.3. Treatment effectiveness

The criteria for treatment effectiveness were whether, after a given period, treatment seekers had reverted back to fulltime gambling or not. As an added measure of effectiveness those who did have relapses during the period were also determined and analyzed. The period at which treatment effectiveness was determined at was set at one year, with intermittent periods of three and six months.

Recording of these treatment effectiveness variables (as stated in section 1.3.2.8) was done through telephonic contact at various periods throughout the year. The number of relapses during the six week treatment programme, at the three month

follow-up session, at six months and again at one year after completing the treatment programme, were recorded.

In cases where some treatment seekers were unable to attend the seventh follow-up session (three month follow-up), I contacted them telephonically. With each telephonic follow-up contact during the intermittent periods, the gambler (treatment seeker) self as well as one other significant person in the gambler's life (e.g. family member or friend as stated on the intake form), was spoken to, to confirm information received from the patient treated. As I kept regular contact with the treatment seekers, it was relatively easy to keep record of their movements. In some cases where the gambler had moved or changed telephone numbers, I was able to trace them with the help of the significant other's contact number. A 100% follow-up rate was thus achieved. The following variables were assessed:

- changes in gambling problem severity at each respective follow-up period (i.e. amount of relapses);
- vocational functioning after one year (loss of or new employment, unemployed) (improvement/no improvement);
- marital/family relations after one year (relationship break-up/separation, divorce) (improvement/no improvement);
- changes in financial problems after one year (debt and financial problems) (improvement/no improvement);
- post-treatment service utilization at each respective follow-up period (Gamblers Anonymous and banning/self-exclusion);
- statistical results of completers and non-completers.

3.4 STATISTICAL ANALYSIS

This section provides an overview of the process that was followed to analyze the collected data.

3.4.1 Data capturing

After the data was collected it was converted into machine readable format. This included assigning numerical values to information (e.g. male = 1 and females = 2).

Variables such as gender is known as nominal variables where the 1 or 2's assigned to the variables do not hold any significance other than to identify it. In ordinal variables there is some degree of order in the assignment of the number. Education level is an example of such a variable. A-1 assigned to grade 12 is less than A-2 assigned to a university degree. In contrast to these types of variables actual numbers in the ratio types (e.g. the 20 Questions or DSM-IV diagnostic criteria) do mean exactly what they say. In ratio variables a 10 is for instance 6 more than 4, and it has an absolute 0 point - scale type. Interval variables is similar to ratio variables but no absolute 0 point exist. This was not used in the present study.

After entry, the data was "cleaned". This involved ensuring that no invalid responses were captured (such as a 3 in the gender column). The inspection of the data in this manner is part of ensuring high quality research data. The statistical package SPSS were used to analyze the data.

3.4.2 Statistical significance

An important concept in statistical analysis is that of statistical significance. Due to the fact that it is almost impossible to test a hypothesis directly on the population (often due to constraints of time and money), samples are drawn from the population from which inferences are made (Salkind 2000:170). Some error may therefore occur.

Type I error may occur when the null hypothesis is wrongly rejected (where the null hypothesis states that the groups are equal and no difference exists). Differences are thus accepted as true when, in fact, they don't exist for the

population. Likewise, real differences may be missed in the population when they do not appear in a sample (Type II error).

The probability that the results obtained in a sample is only a **chance occurrence** and not real for the population (Type I error) is calculated for all statistical tests. The smaller the p-value the smaller the probability that the observed difference is only a chance occurrence. This p-value gives some indication as to the chance being taken of accepting differences when they don't in reality exist.

The magnitude of chance remains the decision of the researcher. When making the decision on the level of statistical significance the following was taken into consideration:

- In the human sciences, we are as concerned with missing a significant result or making a Type-II error as we are about falsely concluding a significant result. Hays (1963) and Winer (1971) point out that when both types of errors (Type I and Type II) are equally important, significance levels such as 0,20 (and possibly even 0,30) are more appropriate than the conventionally used 0,05 and 0,01 levels.
- As the total number of statistical tests to be performed on the same sample increases, the probability of a Type I error also increases. One approach to counter this accumulating effect is to set the level of significance smaller for the individual statistical test so as to compensate for the overall Type I error effect.

In view of all these considerations, it was decided to use a conventional significance level of 0.05 for any one particular statistical test in the present study.

3.4.3 Descriptive statistics

Descriptive statistics describe the characteristics of the sample. These types of statistics include frequencies, means and standard deviations.

A frequency distribution provides a count of respondents in each category. For instance how many males and how many females were included in the sample.

A mean is the sum of a set of scores divided by the number of scores. The standard deviation is used to measure variability and gives the average amount that each of the individual scores varies from the mean.

The results of the descriptive statistics are presented in the form of graphs and tables.

3.4.4 Inferential statistics

Inferential statistics allow researchers to make inferences about the true differences in the population on the basis of the sample data (Cozby: 1985:142). The inferential statistical techniques used in the present study are discussed below.

3.4.4.1 Chi-square

The basis for selecting the appropriate statistical test depends on the type of variable (measurement). When nominal data is compared with nominal data or ordinal data a cross tabulation is done, showing one variable broken up by another. For instance how many males and females are in each education category. To test how certain cells (e.g. males with grade 12) differ from other cells (females with grade 12) a Chi-square test is done. A p-value is calculated for this test.

3.4.4.2 T-test for differences in means

When one wants to compare two groups (nominal variables such as gender) on the mean score of interval or ratio data, the appropriate statistical technique is the t-test. The t-value is calculated as well as the p-value. When the groups are independent of one another the t-test for independent groups is done. If for instance two sets of mean scores are compared within the same group, the t-test for dependent measures is performed.

3.4.4.3 Analysis of variance

When more than two groups are compared (nominal or ordinal data) with regard to their mean scores on interval or ratio data, the appropriate technique is the analysis of variance (ANOVA). This test calculates the f-value and a p-value.

3.4.4.4 Correlation analysis

When two or more scales were considered to be measured on an interval-scale or ratio scale, the Pearson product moment correlation coefficient (Hays, 1963, p. 499) was calculated as a measure of the linear relation between any two variables. This was the case for example when the various measures of gambling severity were correlated with one another. The correlation coefficient (r) indicates the estimated extent to which the changes in one variable are associated with changes in the other variable on a range of +1.00 to -1.00. A correlation of +1.00 indicates a perfect positive relationship, a correlation of 0.00 indicates no relationship and a correlation of -1.00 indicates a perfect negative relationship. In the case of a positive correlation between two variables, the higher the scores on one variable, the higher the scores tend to be on the other variable. If the correlation is negative, then the higher the score on the one variable, the lower the scores on the other variable tends to be.

CHAPTER FOUR

RESULTS

The objectives of the study were to provide a detailed biopsychosocial description and analysis of the clinical characteristics of people entering treatment for problem gambling and to measure the effectiveness of a gambling treatment program. With this in mind, the current chapter is structured to first describe the characteristics of the sample and then to investigate the treatment effectiveness.

4.1 DESCRIPTION OF THE BIOPSYCHOSOCIAL CHARACTERISTICS OF THE SAMPLE

Seven broad categories were identified according to which the biopsychosocial data was structured (see section 1.3.2). The results will be presented in the same format. Treatment effectiveness will be discussed separately in section 4.3.

4.1.1 Demographic characteristics

The demographic composition of the sample is discussed below, graphically presented by tables and graphs, and includes gender, age, cultural/ethnic background, level of education and employment of the sample.

4.1.1.1 Gender

Figure 4.1 indicates that 37% of treatment seekers consisted of females and 63% consisted of males. It would appear that females in South Africa reflect the general gambling trends among other females around the world observed by scientists recently. Importantly, although traditionally thought to be restricted to males, the prevalence of problem gambling among females is slowly approaching that of males (Shaffer, et al, 2002). It was interesting to note during the counselling sessions with females that they perceive casino gambling and the casino space as “safe” and “secure”. Many females also view the casino as one

of the few places where they felt comfortable going on their own without any concern of being disturbed by other males or anybody else.

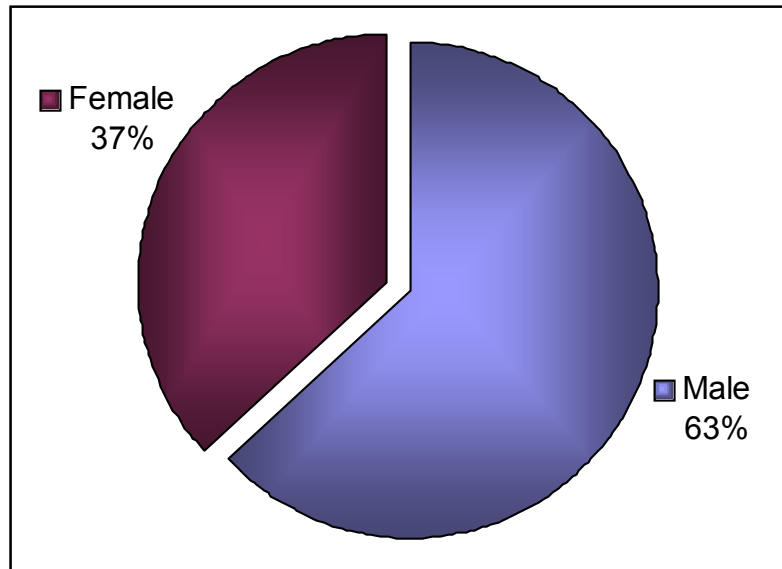


Figure 4.1: Gender composition

4.1.1.2 Age

Table 4.1 shows the age distribution of male and female individuals seeking help for their gambling problem. Treatment seekers are on average between 37 and 38 years old. Most are falling between the ages of 27 and 47 years (std. of 10.13). On average females are significantly older than males when they enter the treatment programme ($t = -3.24$; $p = 0.002$). Among the NRGp treatment seeking patients, females on average started gambling 6 years later than treatment seeking males. The differences between male and female identified gamblers were consistent with other research that indicates that females begin to gamble at a later age than men (Shaffer, et al, 2002).

	Minimum	Maximum	Mean	Std. Deviation
Age total	20	67	37.47	10.13
Males	20	59	35.06	8.59
Females	27	67	41.47	11.29

Table 4.1: Average age distribution

4.1.1.3 Ethnic/cultural background

Figure 4.2 indicates the ethnic and cultural background of individuals seeking treatment for their gambling problem. The largest proportion of individuals seeking treatment are people of White background (81%). People of Indian heritage accounted for 7% of patients. People with Coloured background accounted for 7% and people with a Black cultural background accounted for 5% of treatment seeking individuals. It is clear from the statistics that the treatment seekers were predominantly white (81%) and that a significantly smaller amount of other race groups (19%) featured and utilized the outpatient gambling treatment facility. It is suspected that many of these different race groups are still “closet” gamblers living in a culture of “non-treatment/counseling”. These people may be particularly vulnerable to the negative impacts of gambling for a variety of complex health and social reasons. In general, Indians in Iowa (US) report relatively high rates of problem and pathological gambling, significant unemployment and poor mental health status indicators as well as higher rates of substance-related problems than does the general population in Iowa (Elia & Jacobs, 1993; National Steering Committee, 1999; Office of Public Health, 1999; Wardman, El-Guebaly & Hodgins, 2001). Counselors should be sensitive to tribal beliefs and traditional healing practices when formulating treatment strategies. Perceptions of gambling differ across cultures. Individuals belonging to different cultures may be particularly vulnerable to gambling problems because of low socio-economic status, financial pressures and sense of marginalization. Clinicians should consider the use of an interpreter to understand both culture and language and offer interventions in a cultural sensitive manner. Please note that

the small number of treatment seekers in the other race groups makes comparisons based on race not feasible.

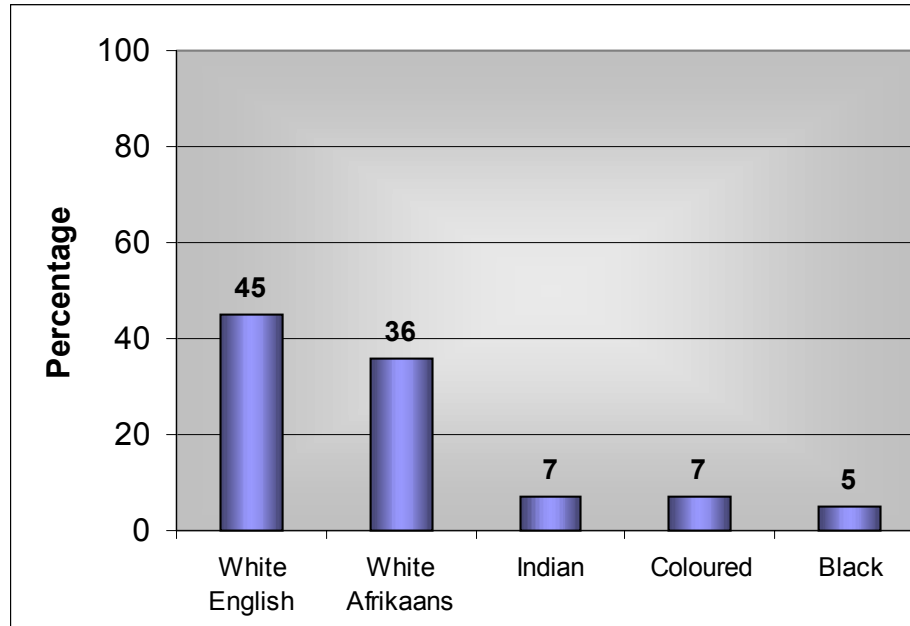


Figure 4.2: Race composition

The number of females and males in each race group is given in Table 4.2. It is interesting to note that the other race groups (Indian, Coloured and Black) were mostly men.

		GENDER	
		Male	Female
RACE	White English	23	22
	White Afrikaans	26	10
	Indian	6	1
	Coloured	5	2
	Black	3	2

Table 4.2: Gender and race composition

4.1.1.4 Occupation

Table 4.3 indicates the occupational composition of the samples. Most treatment seekers were employed in a sales position (24%) or were self-employed (23%). Professional jobs (accounting/law/management/other) accounted for 18%. Treatment seekers who were employed in a sales position or who were self-employed seemed to have had more spare time outside an office environment during the day and worked in an environment that was less controlled, which allowed for more opportunities to gamble. These treatment seekers also seemed to be more money and challenge oriented which fits with the gambling environment.

	Frequency	Percentage
Housewife	5	5*
Sales consultant	24	24
Self-employed	23	23
Secretary	6	6
Accountant	4	4
Attorney/ law	3	3
Management	9	9
Computers	5	5
Other professional	2	2
Governess	2	2
Student	2	2
Unemployed	7	7
Public sector	2	2
Other	5	5
Retired	1	1
Total	100	100

- The sample size is 100 and therefore the percentage and frequency is the same. Henceforth only the percentage will be given.

Table 4.3: Occupational composition

4.1.1.5 Level of education

Figure 4.3 indicates that treatment seekers have an average to above average level of education and 79% are high school graduates. Only 21% have less than a grade twelve qualification and 38% have a college or university degree.

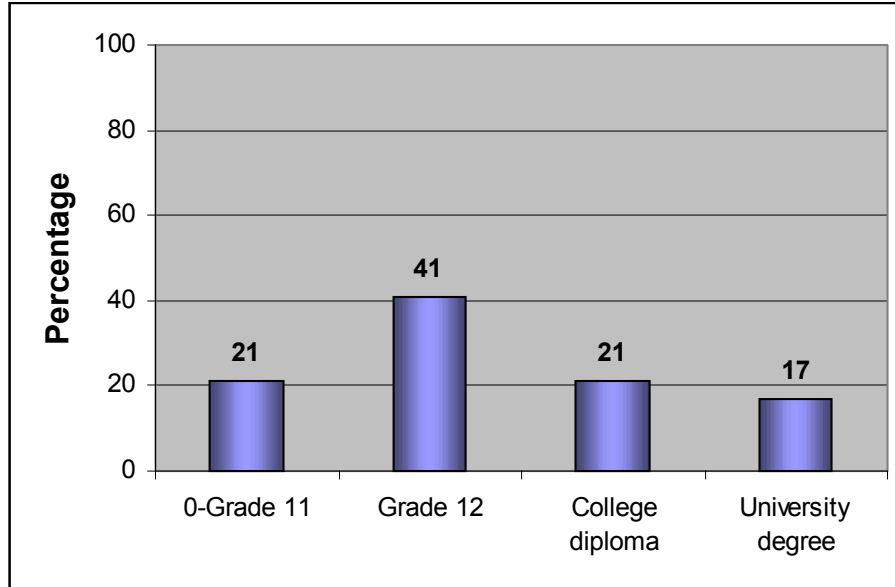


Figure 4.3: Level of education

Although females appear slightly less educated there is no significant difference between males and females with regard to their level of education (Figure 4.4).

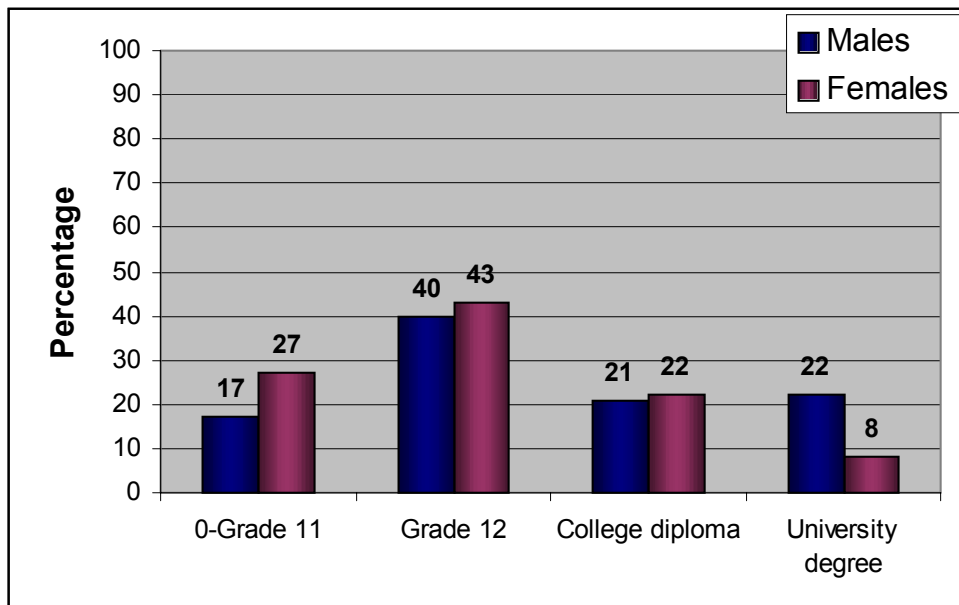


Figure 4.4: Level of education of males and females

4.1.2 Problem severity

4.1.2.1 Diagnostic tools (DSM-IV, SOGS and GA 20 Questions)

Three diagnostic tools were used to identify the severity and degree of the gambling problem: The DSM-IV diagnostic criteria, the South Oaks Gambling Screen (SOGS) and Gamblers Anonymous 20 Questions (section 1.4.5). The higher the scores on these tests the more severe the gambling problem. With the first session treatment seekers were given the South Oaks Gambling Screen (SOGS) as well as the Gamblers Anonymous 20 Questions to complete at home and bring with them to the second session. **As 14 treatment seekers did not return to treatment after the first session the total number of treatment seekers on both the SOGS and GA 20 Questions is 86.**

The averages on all three tests (specified also for the demographic groups), are presented in Table 4.4. To determine if males and females differ significantly on the measures of problem severity a t-test for differences in means were conducted and the results are presented below in Table 4.4.

	Total N	Total	Male	Female	t - value	p-value
DSM scores	100	8.52	8.76	8.11	1.94	0.055
20 Questions	86	15.79	16.07	15.29	0.73	0.467
SOGS scores	86	13.09	13.78	11.87	2.55	0.013

Table 4.4: Average scores obtained on the measurements of gambling severity

Table 4.4 indicates that females obtained a significantly lower score on the SOGS measurement and a lower score (although not significant) on the DSM-IV test, but did not differ from males in terms of problem severity as measured by the Gamblers Anonymous 20 Questions. When the average scores obtained by both male and female treatment seekers were compared with the respective cut-off scores for all three screening tools, (the DSM-IV (5), the South Oaks Gambling Screen (SOGS) (5) and Gamblers Anonymous 20 Questions (7), it appeared that most of the treatment seekers fell in the probable pathological gambling range.

No correlation was found between the gambling problem severity and the age of a treatment seeker.

Table 4.5 indicates that all three measurements of gambling severity correlate significantly high with one another. The high positive correlation indicates that if a treatment seeker received a high score on one test he/she also received a high score on the other tests. This correlation supports the fact that all three tests measure the same construct, that of gambling severity, and indicates a high test reliability.

		DSM scores	20 Questions	SOGS scores
DSM scores	Pearson Correlation	1.00		
	Sig. (2-tailed)	.		
	N	100		
20 Questions	Pearson Correlation	0.69	1.00	
	Sig. (2-tailed)	0.000	.	
	N	100	100	
SOGS scores	Pearson Correlation	0.72	0.74	1.00
	Sig. (2-tailed)	0.000	0.000	.
	N	86	86	86

Table 4.5: Correlation between measurements of problem severity

4.1.2.2 Phase of gambling

The classification of treatment seekers into the different phases of gambling (losing, critical and desperate) was done according to certain cut-off scores in the South Oaks Gambling Screen (SOGS). It was decided to use only one diagnostic screening tool, the SOGS, for this purpose as it measures 7 dimensions of gambling behaviour. The cut-off scores for this purpose are as follows:

1-4 losing stage

5-13 critical stage

14-20 desperate phase

Figure 4.5 indicates that males and females differ in respect to the phase of gambling they are in. Males tend to be more in the desperate phase, while

females are more in the critical phase (Chi-square = 11.68; $p = 0.003$). Females thus seek treatment for their problem at an earlier phase of problem gambling development than males.

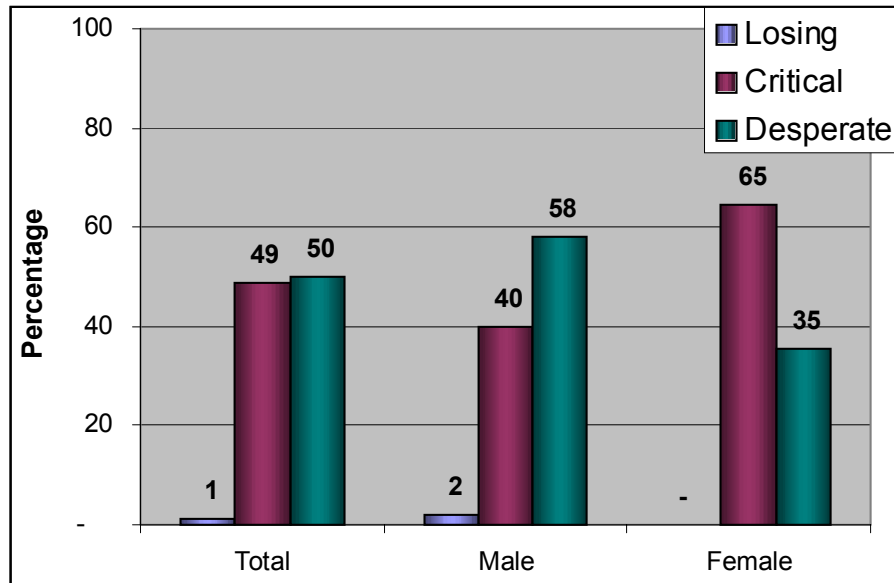


Figure 4.5: Phase of gambling

4.1.2.3 Type of gambler (problem/pathological)

The classification of treatment seekers into problem and pathological gambling was done according to the respective cut-off scores for the three different diagnostic screening tools. These cut-off scores are as follows:

- DSM-IV (1-4 problem gambling) (5-10 pathological gambling)
- SOGS (1-4 problem gambling) (5-20 pathological gambling)
- GA 20 Questions (1-6 problem gambling) (7-20 pathological gambling)

Table 4.6 indicates that 99% of treatment seekers fell in the probable pathological range of problem gambling.

As per scale:		
DSM-IV	20 Questions	SOGS scores

	n = 100	n = 86	n = 86
Problem	1	-	1
Pathological	99	100	99

Table 4.6: Type of gambler: problem/pathological

4.1.2.3.1 Sub-type of gambler (action/escape)

Table 4.7 indicates that females tended to be clearly escape gamblers and males action gamblers. Females differed significantly, at the 0.05 level, from men on the sub-types of gamblers. The classification of treatment seekers into action and escape gamblers was purely done through subjective observation and questioning with regard to their motivation for gambling. Their motivation was then analysed according to the description given of escape and action gamblers in section 1.4.3.2 and 1.4.3.3. The action gambler usually started gambling much earlier in his life and his primary motivation was money, action, winning, playing games of skill, and they gambled to beat other individuals or the “house” and often believe they can develop a system to achieve this goal. For the escape gambler gambling was not a problem until predisposing factors appeared and winning money was a secondary motivation – money only means they can play longer – escape longer – an emotional escape from life’s problems experienced while in the act of gambling is the sole “win”. Although money is usually secondary for escape gamblers, they may see gambling as a way to solve financial difficulties, become financially independent or make extra money. Escape gamblers prefer games of chance such as slot machines, lotto and bingo – games that are not skill based.

	Total	Males	Females
Action gambler	49	75	5
Escape gambler	51	25	95

Table 4.7: Sub-type of gambler: action/escape

4.1.3 Gambling activities

This section describes the gambling activities of treatment seekers in terms of how long they have been gambling, how often, how and where they gamble, as well as the biggest amount of money they have ever gambled in one day.

4.1.3.1 Length of time gambling

Figure 4.6 gives the number of years treatment seekers have been gambling for, categorized to ease interpretation. The majority of treatment seekers have been gambling for between 6 to 15 years (56%), with an average of 11,51 years. (std. 7.61). 52% of treatment seekers have been gambling between 1 to 10 years and 48% have been gambling between 11 to 26 years plus. The conclusion can thus be made that a large percentage of treatment seekers had already engaged in some or other form of legal or illegal gambling before the legalisation of gambling in South Africa in 1994.

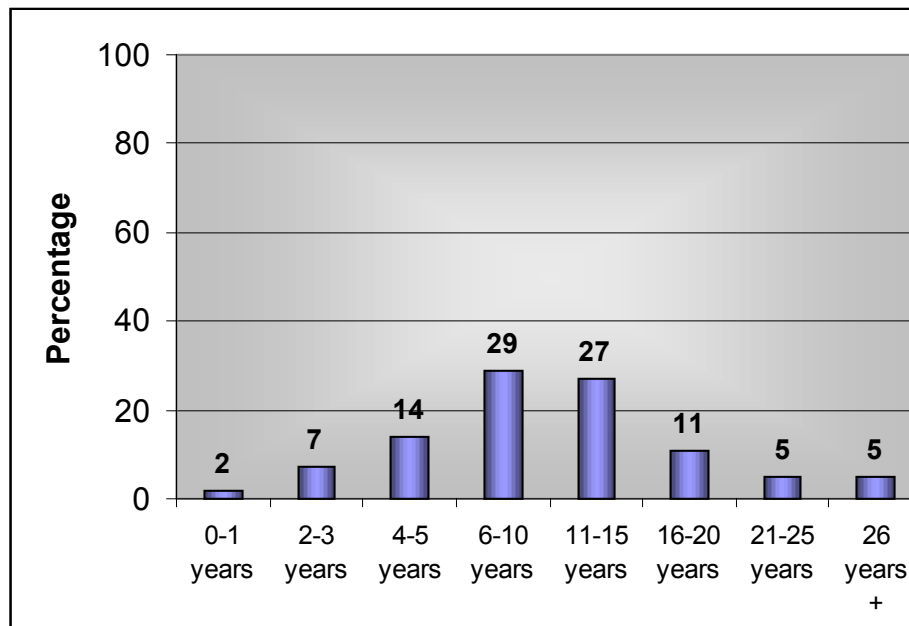


Figure 4.6: Length of time gambling

Table 4.8 indicates that the average length of time gambling for male treatment seekers is 12.06 years with a standard deviation of 7.06. Thus, most male

treatment seekers have been gambling for between 5 and 19.12 years before entering treatment. The average length of time gambling for female treatment seekers is 10.57 years with a standard deviation of 8.48. Thus, most female treatment seekers have been gambling for between 2.09 and 19.05 years before seeking treatment. Consistent with previous research (Tavares, Zilberman, Beites, & Gentil, 2001), female gamblers progressed to treatment more quickly than did men.

	Minimum	Maximum	Mean	Std. Deviation
Males	2	35	12.06	7.06
Females	1	40	10.57	8.48

Table 4.8: Average length of time of gambling for males and females

4.1.3.2 Frequency of gambling

Figure 4.7 indicates that most treatment seekers (40%) were gambling daily and 45% were gambling between 3 to 6 times per week in the last three months prior to entering the treatment programme. Due to the close proximity of casinos in the Gauteng area it seems relatively convenient for treatment seekers to gamble whenever the opportunity arises, whether this be during the day or night – during working hours, their lunch breaks, after work on their way home, early in the morning (especially housewives) when the children are at school and weekend shopping time is partially substituted with gambling for a few hours. Many of these “stolen” gambling opportunities are accompanied by much lying and manipulation from the gambler to everybody involved.

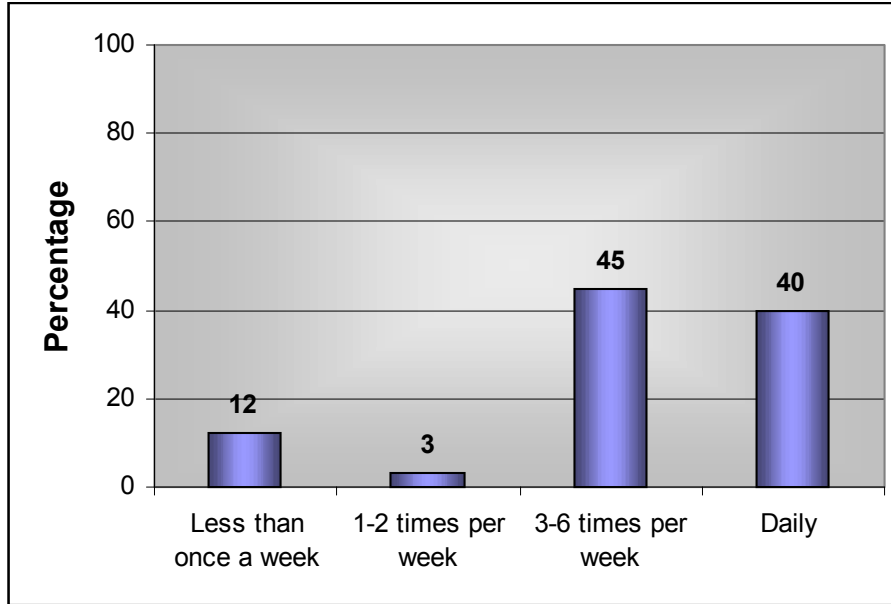


Figure 4.7: Frequency of gambling in last three months prior to entering treatment

From Table 4.9 it is seen that there is no significant correlation between the frequency of gambling and the length of time a treatment seeker has been gambling. An individual who has had the gambling problem for a relatively short time could very well be one of the most frequent gamblers.

		Length of time gambling
Frequency of gambling activity	Pearson Correlation	0.14
	Sig. (2-tailed)	0.172
	N	100

Table 4.9: Correlation between the length of time gambling and the frequency of gambling

4.1.3.3 Type of gambling location

Figure 4.8 shows the percentage of treatment seekers who have gambled at each type of gambling location. **Some gambled at more than one type and percentages will therefore not add to 100.**

Casino gambling and playing the lottery were very popular, though playing the lottery was never the game of preference. It is also interesting to note that treatment seekers who have gambled at illegal casinos in the past, before the legalization of casinos in South Africa, are notably high (23%). The use of Internet for online gambling was not popular among treatment seekers with only 2% claiming to have gambled online. Making use of different stockbrokers also show a small percentage (11%), but this is comprehensible due to the complexity in accessing this type of gambling channel. Visiting or making contact with bookmakers (including telephone betting) and visiting tabs and totes were fairly popular. "Other" constitute gambling locations such as pubs, bars and clubs. Treatment seekers visiting community bingo halls constituted 11% of the sample. Many treatment seekers (43%) are more inclined to visit the casino closest to them. 72% also visit other various casinos other than the casino closest to them. 85% also visit other various casinos other than the casino closest to them.

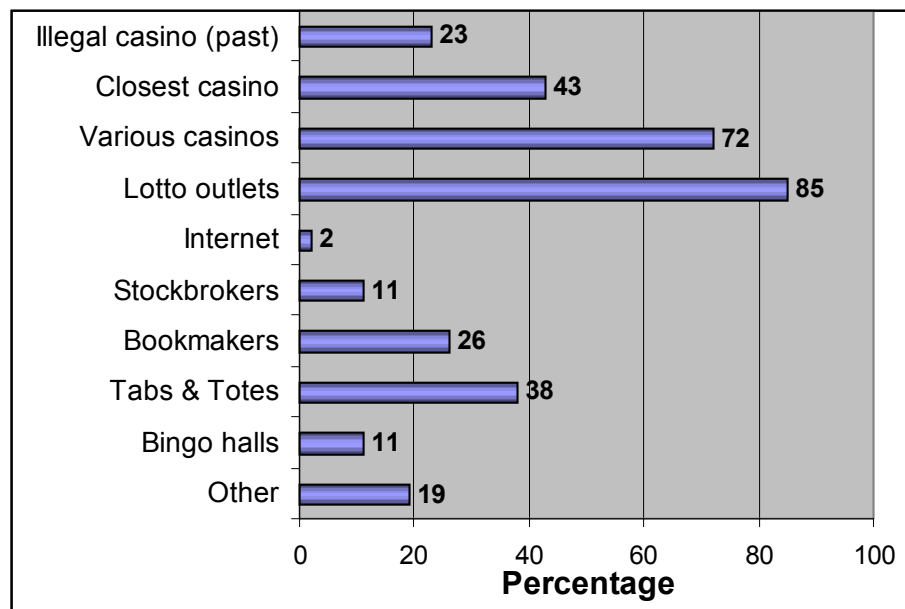


Figure 4.8: Type of gambling location

The race groups did not differ with regard to the type of gambling locations used, with the exception of the illegal casinos. No Black or Coloured treatment seekers had used this type of location and only 1 Indian had used an illegal casino.

Females are significantly less likely (at the 0.05 level of significance) to use:

- Tabs & Totes
- Bookmakers
- Stockbrokers

4.1.3.4 Type of gambling activity

The history of the type of gambling activities that treatment seekers have partaken in is given in Figure 4.9. **It is important to note that many gamblers have a history of engaging in more than one gambling activity and percentages will therefore not add to 100.**

Figure 4.9 indicates that games of chance seemed to be preferred over games of skill. Lottery and slot machines were very popular and seemed to be favoured by most. 81% of treatment seekers played slot machines and 85% played the lotto – games of chance. Even though lotto was played by the majority of treatment seekers (85%), not one individual suggested lotto as their game of preference and relatively small amounts (R15 to R300) were being played on a weekly basis compared to much larger amounts in casino and other types of gambling. 9% played dice, 11% played bingo and 9% played roulette. 18% engaged in “other” gambling activities and this included keno, scratchcards, baccarat, craps, golden ten, pool and matches.

It was also interesting to note that some treatment seekers rated themselves as “a gambler by nature” who would literally gamble on anything when the opportunity arises, for example, who can drink a beer faster than others. 11% of treatment seekers gambled on the stockmarket and 4% on sport. 41% engaged in wagering

(horse race punting) and 51% played table card games such as black jack, poker and punter banker (mostly male).

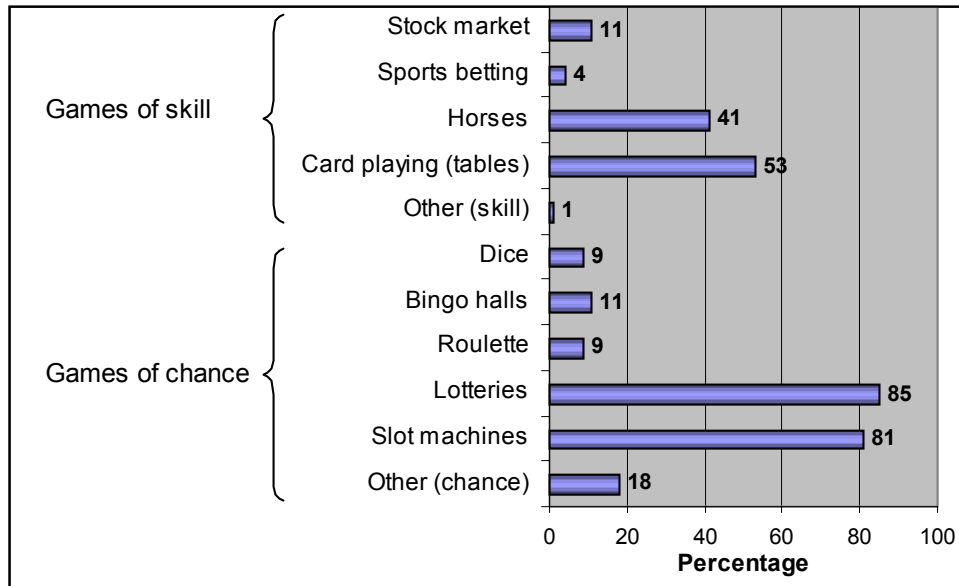


Figure 4.9: Type of gambling activity

Table 4.10 indicates that almost all female treatment seekers (97%) played slot machines significantly more than the males (71%). Males seemed to prefer roulette, card playing, horse race punting, sports betting and gambling on the stock market significantly more than females. Except for roulette, which is rated as a semi-skilled game, card playing, horse race punting, sports betting and playing the stock market are all rated as games of skill (Blaszczynski, 1998).

Very often gamblers develop cognitive distortions which include an inflated sense of skill and view themselves as superior gamblers who believe they have found a way to “outsmart” the system and believe that luck and probability can be manipulated to produce favourable outcomes.

	Male n = 63	Female n = 37	Chi- square	p-value
	%	%		
Slot machines	71	97	10.136	0.001
Lotteries	86	84	0.068	0.794
Roulette	14	0	5.808	0.016
Bingo	11	11	0.002	0.963
Dice	11	05	0.927	0.336
Other (chance)	24	08	3.893	0.048
Card playing	60	41	3.660	0.056
Horses	51	24	6.751	0.009
Sports betting	6	0	2.447	0.118
Stock market	16	3	4.130	0.042
Other (skill)	2	0	0.593	0.441

Table 4.10: Types of games played by males and females

4.1.3.5 Largest amount of money ever gambled in one day

The largest amount of money ever spent on gambling in one day by treatment seekers is given in Figure 4.10. Few treatment seekers (8%) have ever spent between R100 and R1 000 in one day. 62% have spent between R1 000 and R10 000 in one day and 30% have spent more than R10 000 in one day. 35% of males compared to 22% of females have spent more than R10 000 on gambling in one day.

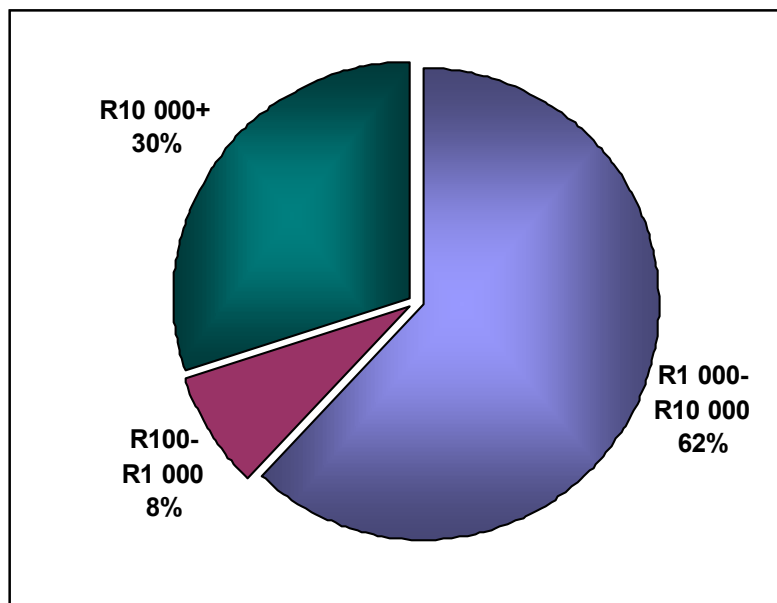


Figure 4.10: Largest amount of money ever gambled in one day

Table 4.11 indicates that at the 0.05 level of significance there appear to be a difference between the largest amount of money spent on gambling by males and females in one day. Fewer females have spent large amounts of money on gambling, tending more towards the smaller amounts.

		GENDER		Chi-square	P-value
		Male n =63	Female n=37		
Largest amount of money gambled in one day	R100 - R1 000	%	%	6.33	0.042
	R1 000 - R10 000	3	16		
	R10 000 +	61	62		
		35	22		

Table 4.11: Comparison of largest amount of money ever gambled by males and females in one day

4.1.4 Identified problems prior to entering treatment

Gambling often causes relationship problems and the extent to which treatment seekers experienced relationship problems are given in Figure 4.11. Pathological gambling is a family problem – a systemic problem. One individual in the family might be the gambler but the whole family suffers the consequences. The impact of gambling on the welfare of the gambler’s partner and family can be extensive. The consequent financial difficulties in particular cause strain and friction within the family. The more severe the gambling problem, the more the suffering of the family. Often the partner experiences a sense of betrayal, anger or despair and may suffer stress-related disorders. Children in such living circumstances suffer considerably when exposed to a climate of tension, arguments and hostility, leading them to display signs of disturbed conduct and behaviour. The child responds with confusion, depression and a sense of low self-worth. The gambler is often absent (from home and work) but when present, is irritable, edgy and withdrawn. Constant arguments between partners create an environment of tension and fear. Tragically, some studies have shown that possibly a fifth of

problem gamblers perpetrate acts of child physical abuse or domestic violence against their wives (Blaszczynski, 1998).

4.1.4.1 Primary relationships

Figure 4.11 indicates that the majority of treatment seekers (90%) experienced conflict, while 28% split up and 13% got divorced as a consequence of their excessive gambling, prior to entering the treatment programme. Males and females' relationships have been affected to the same extent as a consequence of problem gambling. Across race and gender gambling causes conflict in relationships. There is a **positive correlation** between the degree of relationship problems and the severity of the gambling problem. The more severe the gambling problem the more serious the relationship problems.

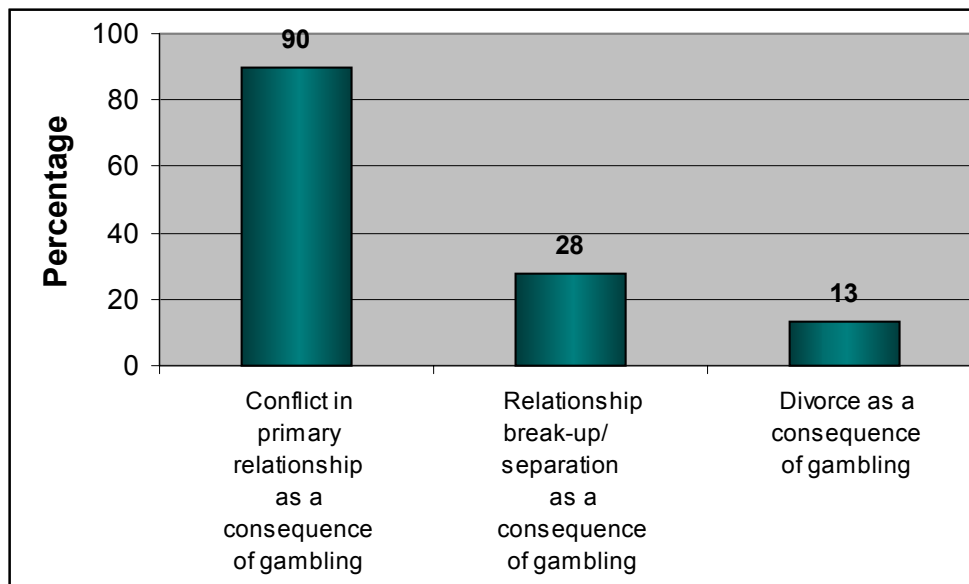


Figure 4.11: Primary relationships

4.1.4.2 Various identified problems

Table 4.12 indicates the percentage of treatment seekers (both in total and for males and females respectively) who have indicated “yes” to various identified

problems (residential, financial and occupational) relating to gambling prior to entering treatment.

4.1.4.2.1 Residential

14% of treatment seekers had lost their house/property in the past, before entering treatment, as a result of the negative financial consequences of excessive gambling (Table 4.12). For some, an access bond on their property provided them with access to extra cash available for gambling – in many cases without the knowledge of their spouse or partner. 32% reported that their bond repayments or rent payments were in arrears or had been affected due to money meant for living expenses and necessities being used for gambling. 21% reported that they were forced, as a result of financial strain caused through excessive gambling, to live with friends or family.

4.1.4.2.2 Occupational

Absenteeism and loss of productivity were common among treatment seekers and 28% had lost their employment in the past, before entering the treatment programme, as a result of excessive gambling (Table 4.12). 66% reported to have been absent from work as a consequence of excessive gambling. This included gambling during working hours (especially individuals in sales who spent much time outside the office environment) and some reported pretending to be sick the following day, due to fatigue, after having spent most of the previous night at the casino gambling. 86% reported loss of productivity related to their employment. The loss of productivity reported was as a consequence of obsessive preoccupation with wanting to go gambling, with ways to obtain money to go gambling as well as constant worrying about financial strain and debt.

4.1.4.2.3 Financial

Almost all treatment seekers had borrowed from household money, spouses, partners and family and friends (Table 4.12). Males (84%) were more inclined to use money, intended for general household necessities, for gambling compared to females (68%). At the 0.05 level of statistical significance males were more

likely to borrow money from money lenders, loan sharks and pawn brokers. Males were also more inclined than females to selling their personal effects and equipment, cash in securities and cashing false cheques, and also more inclined to have revolving credit for gambling with casinos. One possible reason for this could be that males in general have higher incomes than females and also in a position to give stronger collateral than females.

	Total group n = 100	Male n = 67	Female n = 37	Chi-square	p-value
	%	%	%		
Residential					
Lost house/property	14	19	5	3.603	0.058
Bond/rent affected or in arrears	32	35	27	0.667	0.414
Forced to live with friends	21	27	11	3.675	0.055
Financial					
Borrowing from household money	78	84	68	3.725	0.054
Borrowing from spouse/partner	55	57	51	0.316	0.574
Borrowing from family or friends	68	71	62	0.920	0.338
Borrowing from banks	66	70	59	1.120	0.290
Borrowing from money lenders	37	44	24	4.048	0.044
Borrowing from loan sharks	17	24	5	5.596	0.018
Selling effects/ cash in securities	35	44	19	6.675	0.010
Borrowing from the pawnbrokers	26	33	14	4.759	0.029
Cashing false/ bad cheques	13	19	3	5.506	0.019
Revolving credit	70	73	65	0.737	0.390
Revolving credit with casinos	6	10	-	3.749	0.053
Occupational					
Absent from work	66	78	46	10.525	0.001
Loss of productivity	86	94	73	8.278	0.004
Lost employment in past as a consequence of gambling	28	37	14	6.114	0.013

Table 4.12: Treatment seekers with certain identified problems prior to entering treatment

4.1.4.2.3.1 Gambling debt

The amounts stated in Figure 4.12 included current (at the time of entering treatment) actual gambling debt (actual monies borrowed for gambling, for example, banks, casinos, loan sharks, money lenders, family and friends) before entering treatment. These amounts do not include general payments of any kind

that were in arrears as a consequence of gambling. 19% of treatment seekers reported actual gambling debt between R1 000 and R10 000 and 30% between R11 000 and R50 000. Another 30% reported actual gambling debt between R51 000 and R200 000 and a further 8% between R201 000 and R500 000 plus.

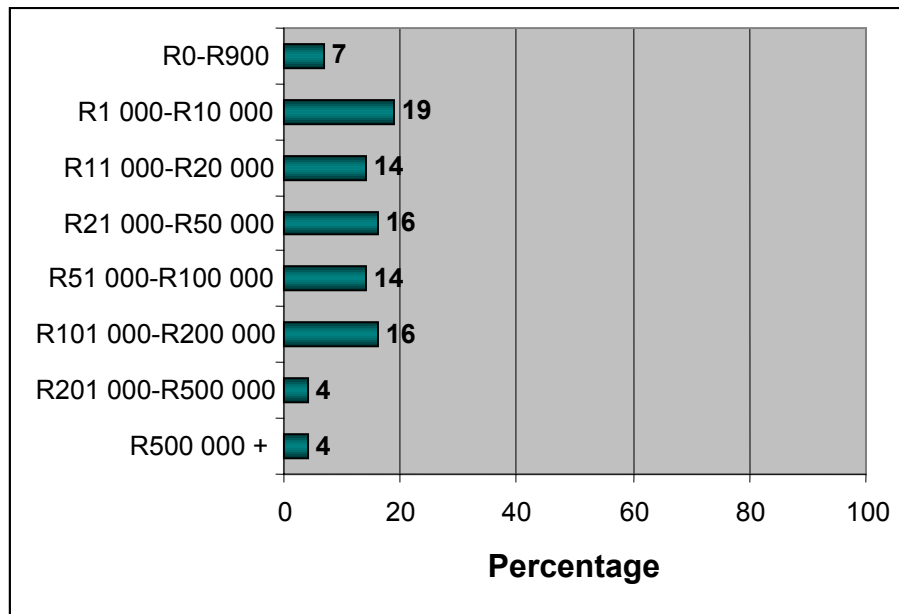


Figure 4.12: Amount of actual gambling debt as a consequence of excessive gambling prior to entering treatment

Table 4.13 indicates that females had significantly less actual gambling debt than males. Males had an average of R121 724 actual gambling debt compared to females with an average of R30 862. Females (mostly escape gamblers) tend to play low denomination slot machines and for them it is more about how long they can play (escape) rather than how much they can win – money becomes secondary. Males (mostly action gamblers) are more inclined to play the tables and other types of skill games – where the stakes are higher - and tend to be more competitive than females. Winning money for males (mostly action gamblers) becomes a primary motivation and some action gamblers even called their gambling “high-risk high reward investment”.

	Minimum	Maximum	Mean	Std. Deviation	T-test	P-value
Total	1 000	1 000 000	91 436	155 840		
Males	1 000	1 000 000	121 724	182 162	2.65	0.010
Females	2 000	700 000	30 862	36 625		

Table 4.13: Average amount of actual gambling debt prior to entering treatment: T-test for differences between males and females

4.1.4.3 Psychiatric history

Table 4.14 indicates that 38% of treatment seekers had previously (before entering the treatment programme) formally been diagnosed with depression, which was also much more common among females. 57% of females were diagnosed with depression compared to 27% of males. Females were also more likely to obtain treatment (medication or counseling) for their mood disorders than males before entering the treatment programme ($p = 0.001$).

A high percentage (35%) of treatment seekers had suicidal thoughts related to excessive gambling (Table 4.14). It is also interesting to note the high percentage of males (41%) who had suicidal thoughts related to their gambling behaviour compared to females (24%) prior to entering treatment. 19% of females had claimed to attempt suicide not related to gambling in the past compared to 5% of males ($p = 0.023$). This could probably be related to their previously diagnosed depression and other emotional problems. 11% of treatment seekers reported actual suicide attempts related to gambling which included acts such as trying to shoot themselves (and missed), hanging or gassing themselves, cutting their wrists, deliberate car accidents (driving off a bridge) and taking an overdose of tablets and liquor.

Thus, as can be seen in Table 4.14, a significant positive correlation was found between the existence of suicidal thoughts and gambling severity, as well as between suicide attempts relating to gambling and the severity of the gambling

problem. The more severe the gambling problem the more likely a treatment seeker was to have had suicidal thoughts or to have had attempted suicide related to gambling.

	Total n = 100	Males n = 63	Females n = 37	Chi-square	p-value
	%	%	%		
Attention deficit disorder	0	-	-	-	-
Bipolar affective disorder	3	3	3	0.018	0.894
Depression	38	27	57	8.770	0.003
Anxiety/panic attacks	5	5	5	0.020	0.887
Obsessive compulsive behaviour	2	2	3	0.148	0.700
Impulse control disorder	1	2	-	0.593	0.441
Previous treatment for above diagnosis	44	32	65	10.377	0.001
Suicidal thoughts related to gambling	35	41	24	2.942	0.086
Suicide attempts related to gambling	11	13	8	0.502	0.479
Suicide attempts not related to gambling	10	5	19	5.191	0.023

Table 4.14: Previously diagnosed psychiatric history

4.1.5 Criminal activities

In the desperate stages of pathological gambling the gambler will very often resort to crimes such as theft, fraud and embezzlement of money as alternative ways of funding his gambling addiction. Gamblers commit criminal offences when legal sources of funds are totally exhausted that will enable them to continue their gambling habit (Blaszczynski, 1988).

4.1.5.1 Type of criminal activity

It is interesting to note from Figure 4.13 below that 25% of treatment seekers admitted to theft from their employer of which only 2% had been caught and charged. Theft from their employers included acts such as stealing from petty cash, embezzling of company funds through access to internal/external transfers within the company, stealing company cheques, stealing company property/equipment and selling it, stealing deposits from clients meant for the company and using company allowances for gambling. 20% reported theft from

family and friends and general petty theft which included stealing cash and/or personal belongings from family and friends and pawning it for cash. General shoplifting was also reported by some of the treatment seekers which included items such as hairdryers and other small electrical equipment which were then being pawned for cash to gamble. 10% of treatment seekers reported cheque fraud which included stealing cheques either from a spouse or company or writing out cheques without any funds available. 8% reported credit card fraud which included the stealing of other people's credit cards at the casino, or using their spouses'/partners' credit card without their knowledge. Males and females do not differ with regard to their criminal activities, with the exception that women are less likely to commit credit card fraud (chi-square = 5.107, $p = 0.024$).

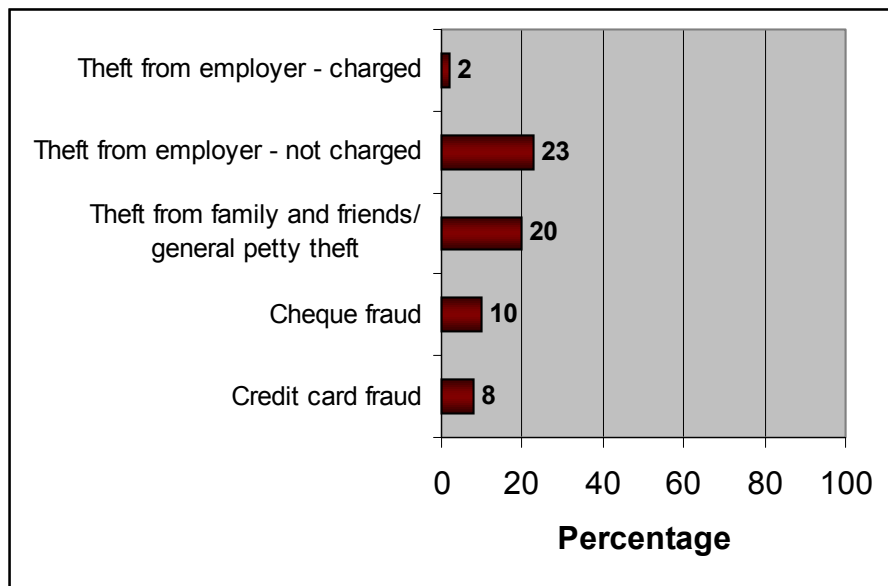


Figure 4.13: Type of criminal activity

Positive correlations were found between the problem severity and criminal activities in Table 4.15 below. The more severe the problem the more inclined treatment seekers were to commit a criminal act such as theft and fraud.

		Criminal Activity				
		Theft from employer: charged	Theft from employer: not charged	Theft from family and friends	Cheque fraud	Credit card fraud
SOGS	Pearson Correlation	0.11	0.23	0.19	0.29	0.24
	Sig. (2-tailed)	0.311	0.033	0.077	0.006	0.028
	N	86	86	86	86	86
20Quest.	Pearson Correlation	0.08	0.29	0.20	0.27	0.21
	Sig. (2-tailed)	0.439	0.007	0.059	0.012	0.054
	N	86	86	86	86	86
DSM scores	Pearson Correlation	0.13	0.41	0.31	0.28	0.27
	Sig. (2-tailed)	0.201	0.000	0.001	0.005	0.007
	N	100	100	100	100	100

Table 4.15: Correlation between criminal activity and problem severity

4.1.6 Biological factors

Research has shown that certain factors can increase the risk of developing a gambling problem and that problem gambling does not exist in a vacuum. Table 4.14 indicates that 3% was previously diagnosed with bipolar affective disorder and 1% with impulse control disorder. Children growing up in a home where dependency of any form is present can become predisposed to developing a dependency problem of some form themselves. (Hardiman, 2000).

4.1.6.1 History of chemical or gambling problems in family of origin

Figure 4.14 indicates that 8% of treatment seekers' mother had an alcohol problem and 27% reported that their father had an alcohol problem. 17% reported that their mother had a gambling problem and 19% reported their father with a gambling problem. No respondents reported an actual drug problem with their parents. Much of the treatment seekers parents' gambling included horse race punting and gambling at home or private card clubs. Males, females and the different race groups showed the same degree of chemical and gambling dependency in their families.

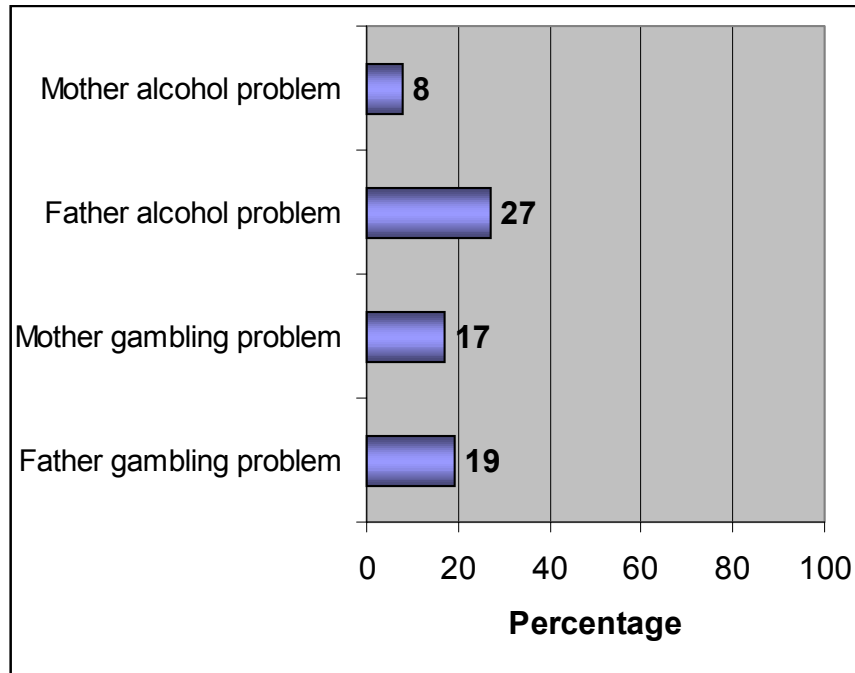


Figure 4.14: Chemical and gambling problems in family of origin

Table 4.16 below indicates that only one of the three measures of problem severity shows a positive correlation with the mother's gambling problem – GA 20 Questions. The more the mother had a gambling problem the more severe the gambling problem of the individual. Because this correlation is only reflected by one of the three measures the results should be considered with caution as it might still be due to chance.

		Mother alcohol problem	Father alcohol problem	Mother gambling problem	Father gambling problem
SOGS	Pearson Correlation	-0.01	-0.13	0.06	-0.17
	Sig. (2-tailed)	0.940	0.225	0.610	0.110
	N	86	86	86	86
20Quest.	Pearson Correlation	0.12	0.03	0.23	0.03
	Sig. (2-tailed)	0.290	0.751	0.033	0.807
	N	86	86	86	86
DSM-IV	Pearson Correlation	-0.05	-0.15	0.12	0.06
	Sig. (2-tailed)	0.631	0.132	0.250	0.527
	N	100	100	100	100

Table 4.16: Correlation between gambling severity and dependency problems of parents

4.1.7 Dependency history

4.1.7.1 Dependency/problem behaviours

Figure 4.15 below indicates problem/dependency behaviours with treatment seekers. The highest percentage (60%) are dependent on cigarette smoking. 31% reported an existing alcohol problem (drinking excessively), 12% reported a compulsive eating problem (obesity) and 13% admitted to compulsive spending. With compulsive spending patients also admitted to having become totally desensitized to the value of money as a result of gambling, and money holds no value at all. 11% of treatment seekers admitted to compulsive and promiscuous sexual behaviour. This was in most cases only discovered in later sessions with the patient as counselling progressed towards the end of the programme or through contact with a significant other.

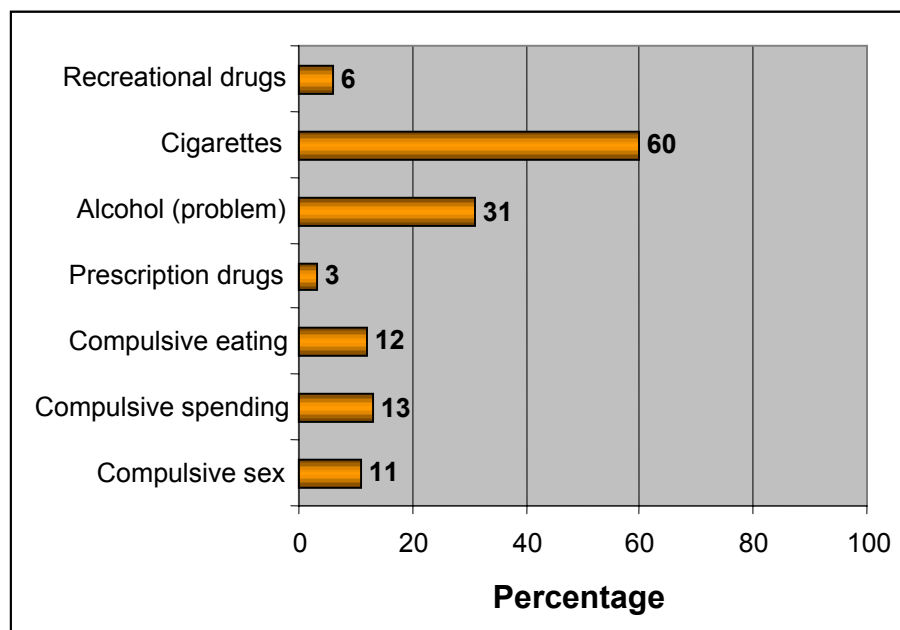


Figure 4.15: Dependency behaviours

4.1.7.2 Dependency and other treatment history

Table 4.17 below indicates that 16% of treatment seekers had received previous treatment (counseling and medication) for their gambling problem. In most of these cases this was with a professional not specialising in gambling addiction or any other addiction (as this was not as common a problem as presently, even

though it existed) and most of the treatment seekers reported this treatment not to be successful. 6% had previous inpatient as well as outpatient treatment for their alcohol problem and 3% reported previous treatment for their drug problem. “Other” refer to general treatment with a professional for depression/anxiety or related mood disorders. It seems that in some of these cases depression or other related mood disorders, which could have manifested as a co-morbidity condition of problem gambling, was treated as the primary condition – instead of compulsive gambling as the primary condition.

	% receiving treatment
Trichotillomania treatment	1
Gambling treatment	16
Alcohol treatment	6
Drug treatment	3
Compulsive eating treatment	1
Compulsive spending treatment	0
Compulsive sex treatment	1
Other treatment	50

Table 4.17: Dependency and other treatment history

4.2 TREATMENT EFFECTIVENESS

Treatment of individuals requesting help was done on an individual basis and the programme, being so personal in nature, was tailored for each person individually. Treatment consisted of six counseling sessions over a six-week period and a seventh follow-up session after three months of the initial session.

4.2.1 Statistical results of completers and non-completers

4.2.1.1 Attendance at treatment sessions (drop-outs)

According to Figure 4.16 more than half of the treatment seekers (51%) attended all seven sessions. A total of 61% attended all six weekly sessions, excluding the

seventh follow-up session. 14% dropped out of the programme after only one session and a further 8% after the second session.

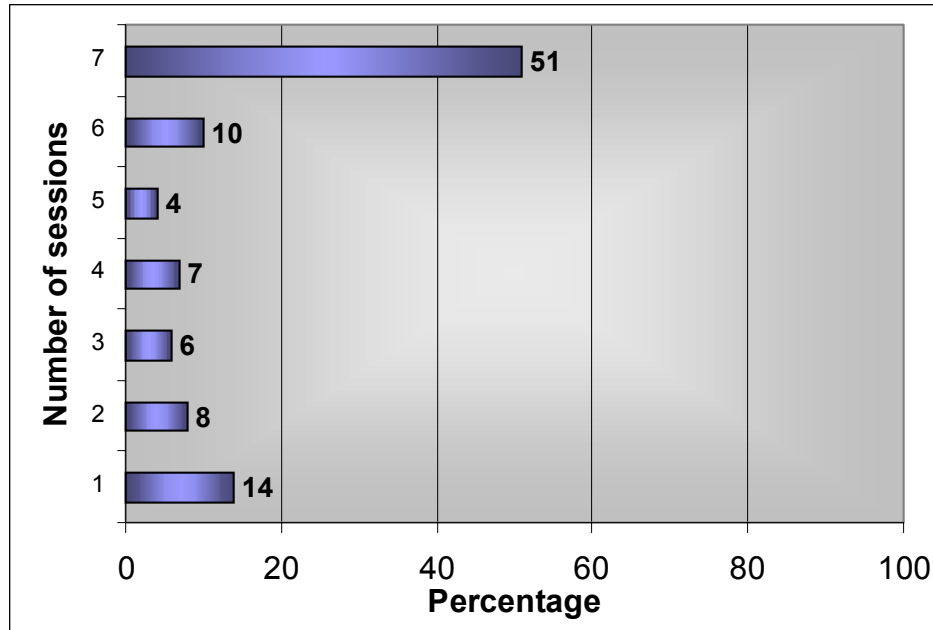


Figure 4.16: Attendance at treatment sessions (drop-outs)

4.2.1.2 Attendance at each respective treatment session

Another way of illustrating attendance of the sessions is by indicating how many treatment seekers there were in total at each session respectively (Figure 4.17 below).

At the first session 100% attendance was obviously observed. From then on the treatment seekers seemed to drop out of treatment in about the same numbers after each respective session.

No one session reflects a particular sharp drop in attendance and the reasons for dropping out of the program are therefore given as ones usually associated with treatment programmes such as a lack of discipline or external factors beyond the control of the individual.

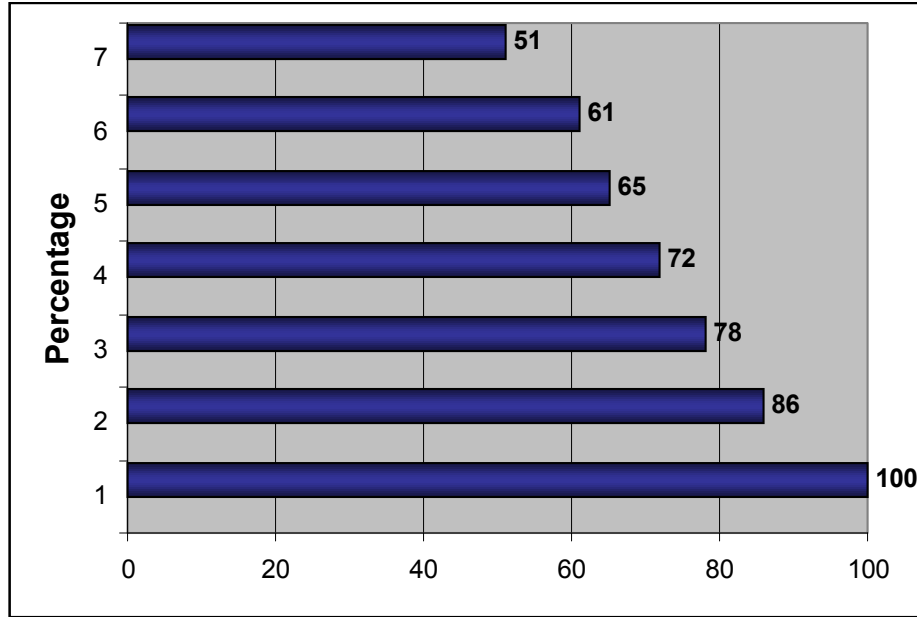


Figure 4.17: Attendance at each respective treatment session

4.2.2 Attendance of family or concerned others at fourth treatment session

At the fourth session a family member or concerned other was requested to attend the session with the treatment seeker. The aim with this was to reveal to the addicted gambler the realities of his behaviour as experienced by others. It was important for the family to see recovery as a family process, taking into account the needs of the spouse and defining some of the gambler's responsibilities in recovery. This time was optimally used as an opportunity for education related to problem gambling, highlighting the concepts of enabling and detachment and establishing a support network for the family or concerned others.

Treatment effectiveness was investigated for only those 72 subjects who had at least attended the first four sessions of the programme.

Figure 4.18 below indicates that males had slightly more family support than females, although not statistically significantly (males 66.7% and females 53.8%). I generally found that female supporters were more supportive and tolerant of a male spouse's/partner's gambling problem than male supporters were of their female spouse's/partner's gambling problem, and that female supporters were also more inclined to make use of available support systems such as Gamanon (a support group for family members of gamblers). As most females tended to be escape gamblers I found that many male supporters had a problem with comprehending the concept of escape gambling. When the female in a family system gambles, the whole system usually collapses. When a male in a family system is the gambler, I found that most females were able to keep the family system "operating" single handedly.

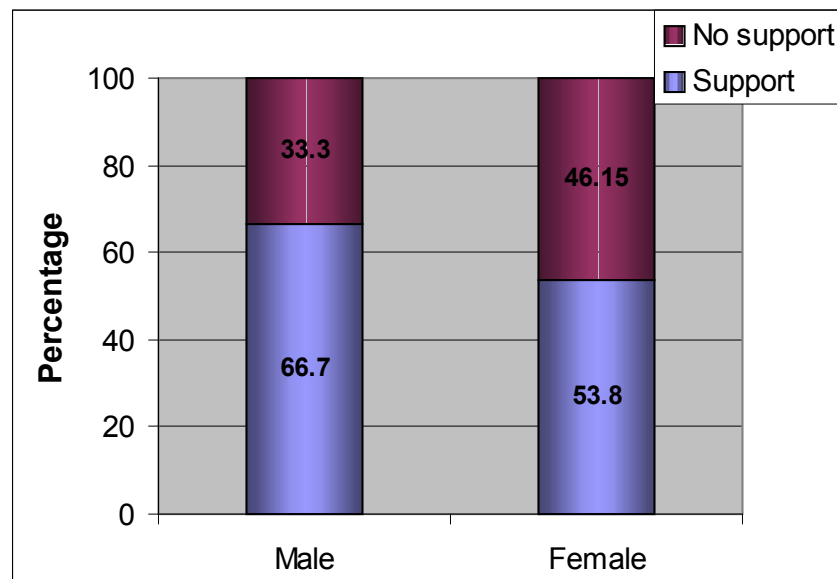


Figure 4.18: Attendance of family/concerned others at 4th session

4.2.3 Changes in gambling problem severity at respective follow-up periods

The effectiveness of the NRGp treatment programme was measured by abstinence from gambling, the number of relapses, controlled gambling and

fulltime gambling at each respective period after treatment completion (three months, six months, and one year). The financial situation, and relationship and vocational functioning of the gambler after one year was also measured.

4.2.3.1 Relapsing and controlled gambling versus fulltime gambling

The number of relapses, if any, were determined at respective intervals during a one year period (Table 4.18). The **primary measure of treatment success** was if treatment seekers did not, after one year, revert back to gambling fulltime. Treatment seekers may have relapsed once or twice, or reported that their gambling was controlled (approximately once or twice per month – which had to be confirmed by a significant other), but if they did not revert back to gambling full time at the end of one year (last measure) they were considered to be a successfully treated gambler. While a longer follow-up period may yield different results, the current study focuses on treatment results after one year.

Table 4.18 below indicates that after 1 year only 25% reported that they were back to gambling fulltime. This leaves the success rate of the treatment at **75%**.

While 80% did not relapse (gamble) during the six-week treatment sessions, the number of treatment seekers without any gambling relapses during each period declined, and those falling back into gambling increased as time went on. **After one year 47% of treatment seekers managed not to revert back to gambling - total abstinence - during the year.**

12,5% reported that they were able to control their gambling by going approximately once or twice per month (controlled gambling). This would include going with a concerned other and also controlling the amount of money and time spent on gambling. The difference between relapsing and controlled gambling is loss of control experienced when gambling.

	Treatment effectiveness			
	6 week discharge %	Between 6 weeks and 3 months %	Between 3 and 6 months %	Between 6 months and 1 year %
No relapse	80.56	63.89	54.17	47.22
1 Relapse	9.72	18.06	11.11	15.28
2 Relapses	6.94	5.56	4.17	-
Controlled gambling	2.78	2.78	12.50	12.50
Gambling fulltime	-	9.72	18.06	25.00

Table 4.18: Relapsing, controlled gambling and fulltime gambling

4.2.4 Post-treatment service utilization

4.2.4.1 Gamblers Anonymous

The original treatment for problem gamblers was Gamblers Anonymous. It is also known by the shorthand GA. GA was established in 1957 in the United States and until June 2000, was the only treatment programme in South Africa for problem gamblers. The programme of Gamblers Anonymous is based upon Alcoholics Anonymous. AA is a spiritual programme that uses twelve steps as a guide to help programme participants recover from alcoholism and its effects. GA uses the same basic twelve steps for treating uncontrolled gambling (www.gamblersanonymous.org/recovery.htm). The programme is supported entirely by member contributions. The only requirement for membership is a desire to stop gambling. Like alcoholics, GA members attend meetings and talk of their experiences. GA members believe that they cannot control their gambling and must abstain. They learn to avoid gambling establishments and also learn that gambling will not solve their problems. For the problem gambler, the fellowship of GA represents a source of comfort, friendship and social activities rather than turning to gambling.

4.2.4.2 Self-exclusion (banning)

Self-exclusion (banning) in the gambling business is a procedure whereby, at the request of the customer, a casino undertakes to treat the customer as if they were banned from the casino. Normally casinos ban customers from entering their

premises if the customer is a known card counter or has a history of making trouble of various kinds – brawling, drunkenness and accusing the management of cheating. In the case of self-exclusion, the casino agrees to help a customer who has decided that they wish to stop gambling by making it difficult for them to access gambling opportunities. Self-exclusion or self-restriction may have a small but useful role to play in achieving the objective of minimizing the incidence of, and harm caused by problem gambling. As such, self-exclusion programmes are available enabling gamblers to ban themselves from entering all venues where commercial gambling takes place. However, for this to be therapeutically helpful rather than counter-productive, it is imperative that self-exclusion not be seen by problem gamblers as a means of transferring responsibility for their excessive gambling away from themselves and onto someone else. Thus, self-exclusion is available as an option to individual gamblers who believe that this might help them in overcoming their problems with excessive gambling. This should never be taken to imply, in therapy or in law, that responsibility for excessive gambling has been transferred away from the gamblers themselves and on to the regulators, gambling companies or treatment professionals. It is also clear that those who are going to backslide will not be prevented from doing so simply because they are excluded from entering a casino, any more than drug addicts are deterred by the fact that obtaining drugs is illegal. Thus, treatment seekers had the added choice of joining Gamblers Anonymous and/or to ban themselves (self-exclude) from casinos as indicated in Figure 4.19.

Figure 4.19 indicates the use of Gamblers Anonymous and banning/self-exclusion during the one year period. As indicated, the use of Gamblers Anonymous decreased steadily throughout the year, yet not much difference is seen in the use of banning/self-exclusion. There was also an inclination with treatment seekers to uplift their banning order after 6 months (as this the minimum period for self-exclusion). Some of the gamblers were desperate to return to gambling and managed to slip through the system even while they were banned.

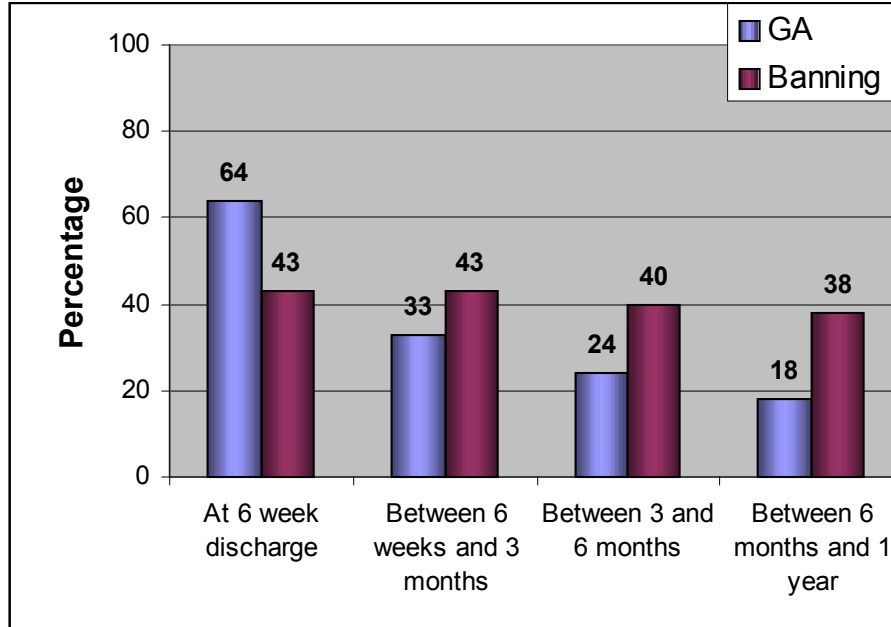


Figure 4.19: Post-treatment service utilization (GA and banning)

To determine the degree to which belonging to Gamblers Anonymous and banning/self-exclusion lead to less relapses, the variable “relapse/no relapse” during a period and the variable “yes/no belonging to gamblers anonymous” were correlated with one another, as was the “yes/no banning” variable (Table 4.19).

It would appear, according to Table 4.19 below, that after the six-week discharge, belonging to Gamblers Anonymous assisted treatment seekers to relapse less (indicated by the significant negative correlations in the Table 4.19). The **more likely** they were to belong to Gamblers Anonymous the **less likely** they were to have any relapses. Banning/self-exclusion seemed not to have much of an effect on the number of relapses. However, in the last period a negative correlation was found which indicated that if treatment seekers had banned themselves they were less likely to relapse. A negative correlation was also found between fulltime gambling during any stage and Gambling Anonymous participation.

	Gamblers Anonymous during period		Banning during period	
	Correlation	Sig. (2-tailed)	Correlation	Sig. (2-tailed)
Relapse during 6 week treatment	-0.07	0.565	-0.07	0.543
Relapse between 6 weeks and 3 months	-0.34	0.004	-0.07	0.543
Relapse between 3 months and 6 months	-0.37	0.002	-0.07	0.543
Relapse between 6 months and 1 year	-0.30	0.010	-0.26	0.025

Table 4.19: Correlation between belonging to Gamblers Anonymous, banning oneself from casinos and the occurrence of any relapses during each respective period

According to Table 4.20 it would appear that making use of Gamblers Anonymous as an aftercare service utilization has a clear positive effect on treatment effectiveness.

	Full time gambling at 3 months	Full time gambling at 6 months	Full time gambling after 1 year
Gamblers anonymous	- 0.23 0.05	- 0.26 0.027	- 0.19 0.115
Banning	- 0.16 0.19	- 0.09 0.447	- 0.12 0.332

Table 4.20: Correlation between belonging to Gamblers Anonymous, banning oneself from casinos and treatment effectiveness

Males and females were equally likely to make use of Gamblers anonymous and to ban/self-exclude themselves from casinos. About the same number of females and males reverted back to gambling after one year, as is seen in Table 4.21. As the treatment program takes into consideration the gender of a person it has proven **equally effective** for both males and females. The program therefore adequately addresses the gender component.

	Male n = 46	Female n = 26	Chi-square	P-value
Not gambling	76	73	0.045	0.833
Gambling	24	27		

Table 4.21: Percentage males and females gambling fulltime after one year

No correlation between age and treatment effectiveness were found and the programme is therefore considered **effective for all age groups**.

As well as being gender and age sensitive the program also has the same success rate among all race groups, no difference is found between the race groups in terms of who abstains from gambling and who reverts back to it full time (chi-square = 0.519 ; p = 0.972).

There is also no difference between persons with different education levels in terms of failing treatment and reverting back to fulltime gambling (chi-square = 3.83 ; p = 0.280).

4.2.5 Variables expected to influence treatment effectiveness

Three variables, which it was hypothesized, that would influence treatment effectiveness are: (1) severity of the gambling problem, (2) support by family or concerned other and, (3) number of sessions attended. It was expected that more family support would lead to improved success, the more severe the problem the greater the failure and the more sessions attended the better the success. Because of these directional hypotheses, the 1 tailed p-value was used for each of these three variables.

Table 4.22 indicates that the number of sessions attended did not correlate with the treatment success. This is possibly due to the sample size being 72 (only individuals who have attended 4 or more treatment sessions).

The attendance of a family member or concerned other at the fourth session, indicative of family or other support, **correlates positively** with the treatment success (Table 4.22). Therefore the positive correlation indicates that respondents with family support at the fourth session were more likely to abstain and not revert back to gambling.

Table 4.22 indicated no significant correlation between problem severity and treatment effectiveness. However, the SOGS showed a 1-tailed p-value of 0.064 which is close to the significant level of 0.05.

		Gambling after 1 Year	No-relapse in one year
		1 = yes; 0 = no	1 = no relapse; 0 = relapse
Number of sessions attended	Pearson Correlation	-0.110	0.010
	Sig. (2-tailed)	0.369	0.936
	Sig. (1-tailed)	0.185	0.468
Concerned other attending 4th family therapy session (1 = yes; 2 = no)	Pearson Correlation	0.200	-0.120
	Sig. (2-tailed)	0.091	0.334
	Sig. (1-tailed)	0.045	0.167
Problem severity			
DSM-IV scores	Pearson Correlation	-0.107	0.117
	Sig. (2-tailed)	0.290	0.246
	Sig. (1-tailed)	0.145	0.123
20 Questions	Pearson Correlation	-0.099	0.043
	Sig. (2-tailed)	0.364	0.697
	Sig. (1-tailed)	0.182	0.348
SOGS scores	Pearson Correlation	-0.165	0.008
	Sig. (2-tailed)	0.129	0.941
	Sig. (1-tailed)	0.064	0.470

Table 4.22: Correlation between gambling fulltime (after one year or during period), no relapses and variables expected to influence treatment effectiveness

Other variables which it was suspected to influence treatment effectiveness were also examined in Table 4.23, yet no directional hypothesis is given.

Table 4.23 below indicates that the only significant correlation between various variables which could have a possible influence on treatment effectiveness, was between alcohol problem and whether a treatment seeker relapsed or not during one year. The positive correlation, however, could be viewed as implausible as it suggests that the more a respondent has an alcohol problem the more they were likely to not have any relapses. However, this could be indicative of a treatment seeker substituting one addiction for another.

		Gambling after 1 Year	No-relapse in one year
		1 = yes; 0 = no	1 = no relapse; 0 = relapse
Psychological problems (0 = no problem; 1 =problem)			
Bipolar disorder	Pearson Correlation Sig. (2-tailed)	-0.10 0.41	0.02 0.87
Depression	Pearson Correlation Sig. (2-tailed)	0.09 0.47	-0.07 0.54
Anxiety	Pearson Correlation Sig. (2-tailed)	-0.12 0.31	-0.05 0.70
Obsessive compulsive behaviour	Pearson Correlation Sig. (2-tailed)	-0.07 0.57	-0.11 0.37
Impulse control disorder	Pearson Correlation Sig. (2-tailed)	-0.07 0.57	0.13 0.27
Dependencies/problems (0 = no problem; 1 =problem)			
Alcohol (problem)	Pearson Correlation Sig. (2-tailed)	0.06 0.60	0.26 0.03
Cigarettes	Pearson Correlation Sig. (2-tailed)	-0.06 0.61	-0.07 0.54
Compulsive behaviour	Pearson Correlation Sig. (2-tailed)	-0.13 0.29	-0.10 0.42
Drug usage	Pearson Correlation Sig. (2-tailed)	-0.10 0.40	0.03 0.78
Treatments (0 = no treatment; 1 = treatment)			
Previous gambling treatment	Pearson Correlation Sig. (2-tailed)	-0.11 0.37	0.09 0.46
Alcohol treatment	Pearson Correlation Sig. (2-tailed)	-0.16 0.17	-0.02 0.84
Other treatments	Pearson Correlation Sig. (2-tailed)	0.04 0.72	0.18 0.13

Table 4.23: Correlation between various variables which could have a possible influence on treatment effectiveness

4.2.6 Vocational functioning of treatment seekers after one year

The vocational functioning of treatment seekers was also measured after one year of receiving treatment to determine if there had been an improvement. Figure 4.20 below shows that 79% of treatment seekers indicated an improvement in vocational functioning, while 21% indicated they had lost their employment. 17% of the respondents changed their employment and 7% was still unemployed.

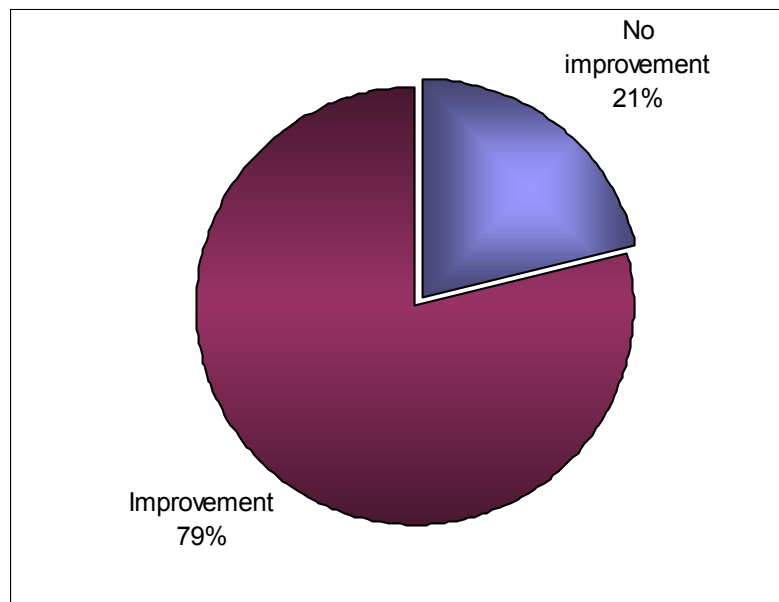


Figure 4.20: Vocational functioning of treatment seekers after one year

4.2.7 Marital and family relations of treatment seekers after one year

Figure 4.21 below shows that at the one year follow-up 70% of treatment seekers reported an improvement in their marital and family relations. 13% reported a relationship break-up and 7% reported that they got divorced or were in the process of being divorced. 10% of treatment seekers reported no improvement in their marital and family relationships. As can be seen from these results, the effect of pathological gambling on the marital and family systems, even after the gambler has stopped gambling, can be devastating and lasting.

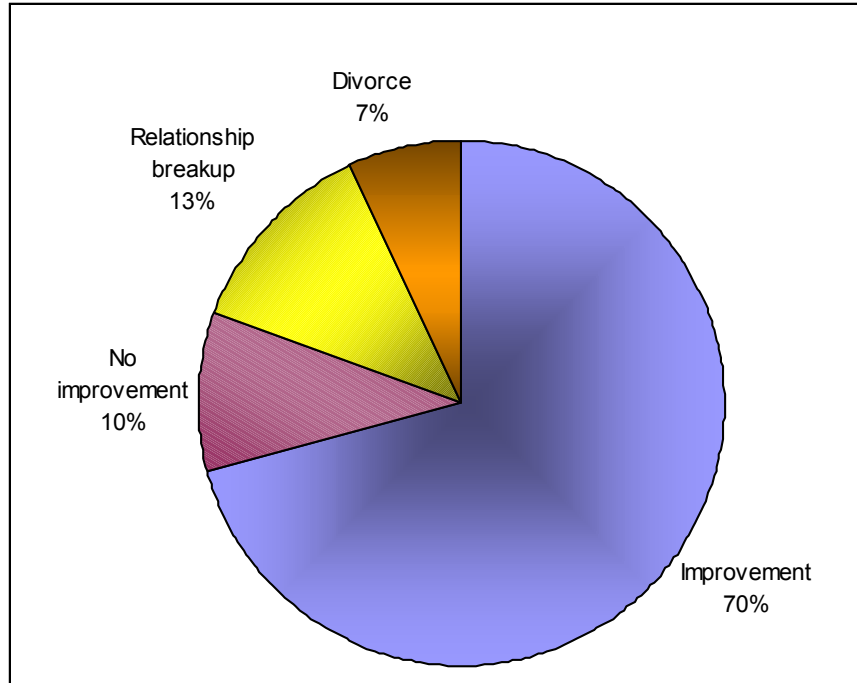


Figure 4.21: Marital and family relations of treatment seekers after one year

Figure 4.22 below gives a comparison between treatment seekers who were and were not gambling and their marital and family relations after one year. It can be seen from Figure 4.22 that treatment seekers who abstained from gambling reported the most improvement. Some individuals who were gambling also reported a measure of improvement, but this was significantly lower than the group who abstained from gambling altogether.

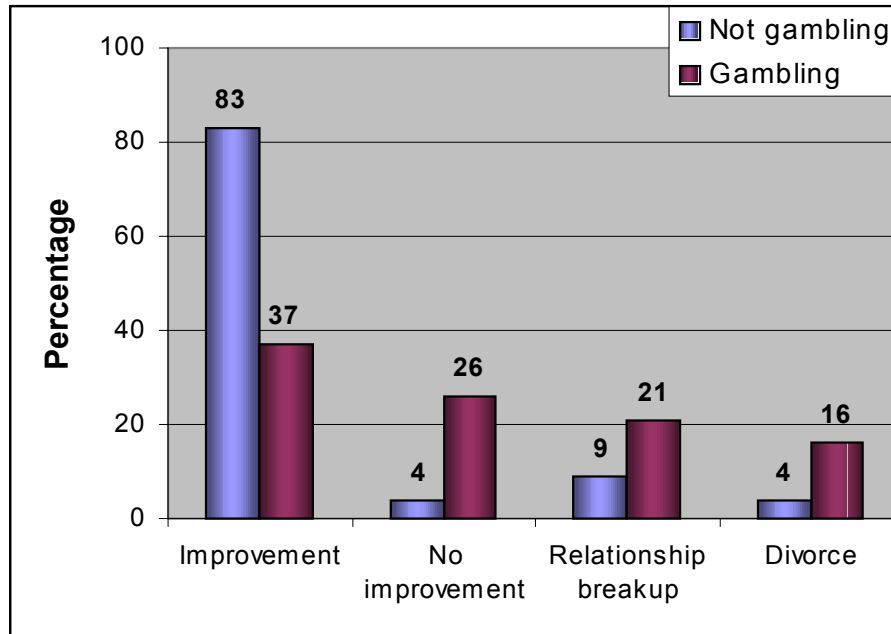


Figure 4.22: Marital and family relations of treatment seekers gambling and not gambling after one year

4.2.8 Changes in financial problems of treatment seekers after one year

Those treatment seekers that did not revert back to gambling at all (abstained), and those that did (including controlled gambling) were compared with regard to the changes in their financial position at the end of one year (Figure 4.23).

Although those treatment seekers who reverted back to gambling did report some improvement financially, this was much less than those who abstained from gambling (significant at the 0.05 level). 86% of treatment seekers who were not gambling reported improvement. Only 40.9% of those who gambled reported improvement.

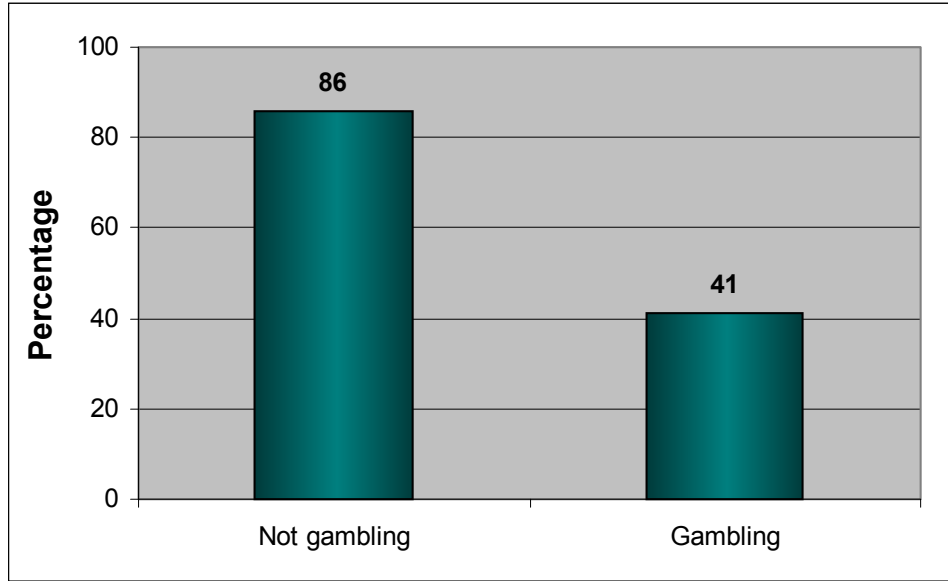


Figure 4.23: Changes in financial problems of treatment seekers after one year

Table 4.23 shows that while more females indicated a financial improvement, the difference is not statistically significant.

Financial improvements	Total %	Males %	Females %
1 year fewer financial problems	72.22	67.39	80.77

Table 4.24: Financial improvement for males and females

CHAPTER FIVE

CONCLUSIONS AND IMPLICATIONS

In this chapter the focus will fall on a general description of the characteristics of treatment seekers, together with a brief comparative profile of the male and female gambler in the South African context. A conclusion on the effectiveness of a specific treatment programme as well as the implications for practice will also be presented.

5.1 CHARACTERISTICS OF TREATMENT SEEKERS

5.1.1 Summary/description of all treatment seekers

- **Gender:** 37% of treatment seekers consisted of females and 63% consisted of males.
- **Age:** Treatment seekers are on average between 27 and 47 years old.
- **Ethnic/cultural background:** The largest proportion of individuals seeking treatment are people of White background (81%). People with Indian heritage accounted for 7% of patients. People with Coloured background accounted for 7% and people with a Black cultural background accounted for 5%.
- **Occupation:** Most treatment seekers (24%) were employed in a sales position or were self-employed (23%). Professional jobs (accounting/law/management/other) accounted for 18%. Only 7% were unemployed.
- **Level of education:** The sample presented with an average to above average level of education and 79% were high school (grade twelve) graduates. Only 21% had less than a grade twelve qualification and 38% had a college or university degree.
- **Phase of gambling:** 50% fell in the desperate phase and 49% in the critical stage of gambling.

- **Type of gambler:** 99% of treatment seekers fell in the probable pathological gambling range, with 50% indicated their motivation for gambling was “action” with 49% indicating it as “escape”.
- **Length of time gambling:** The majority of treatment seekers (56%) had been gambling between 6 to 15 years, with an average of 11.51 years.
- **Frequency of gambling:** 40% were gambling daily and 45% were gambling between three to six times per week in the last three months prior to entering the treatment programme. Others were gambling at the end of the month or when access to monies was available.
- **Type of gambling location:** 23% had gambled at private illegal casinos in the past, before the legalization of casinos in South Africa in 1996. 2% claimed to have gambled online. 43% gambled most often at the nearest casino and 72% at various casinos. 85% visited lottery outlet locations, 38% visited different tabs and totes and 26% made use of bookmakers. 11% made use of stockbrokers and 11% visited their local community hall for bingo gaming.
- **Type of gambling activity:** 81% played slot machines, 85% played the lottery, 9% played roulette, 11% played bingo and 9% played dice – games of chance. 53% played table card games and 41% indicated that they also engaged in wagering (horse punting). 4% engaged in sports betting and 11% in stock market gambling.
- **Largest amount of money spent on gambling:** The largest amount of money ever spent on gambling in one day by treatment seekers were as follows: 8% spent between R100 to R1 000, 62% spent between R1 000 to R10 000, and 30% had spent R10 000 plus.
- **Various identified problems:**
 - Primary relationships:** 90% reported conflict in primary relationship, 28% had a relationship break-up/separation and 13% reported divorce as a consequence of excessive gambling prior to entering treatment.
 - Residential:** 14% had lost their property/house, 32% reported that their bond/rent was affected or in arrears and 21% were forced to live with friends or family as a consequence of gambling prior to treatment.

Financial: 78% were using household money for gambling, 55% borrowed from their spouse/partners, 68% borrowed from friends or family, 66% borrowed from banks, 37% borrowed from money lenders, 17% borrowed from loan sharks, 35% were selling their effects/cashed in securities, 26% borrowed from pawnbrokers, 13% cashed false/bad cheques, 70% had revolving credit with banks and 6% had revolving credit with casinos. 19% reported *actual gambling debt* between R1 000 and R10 000, 30% between R11 000 and R50 000, 30% between R51 000 and R200 000 and 8% between R201 000 and R500 000 plus.

Occupational: 66% reported being absent from work, 86% reported loss of productivity and 28% lost past employment as a consequence of excessive gambling prior to entering treatment.

- **Psychiatric history:** 38% had previously formally been diagnosed with depression, 5% with anxiety/panic related disorders, 2% with obsessive compulsive behaviour, 3% with bipolar affective disorder and 1% with impulse control disorder. 35% reported suicidal thoughts related to gambling and 11% reported actual suicide attempts related to gambling. 10% reported previous suicide attempts not related to gambling.
- **Type of criminal activity:** 25% admitted to theft from their employer of which only 2% had been caught and charged. 20% reported theft from family and friends, including general petty theft. 10% admitted to cheque fraud and 8% to credit card fraud.
- **History of chemical or gambling problems in family of origin:** History of chemical or gambling problems in family of origin of treatment seekers presented as follows: mother with alcohol problem (8%), father with alcohol problem (27%), mother with gambling problem (17%) and father with gambling problem (19%).
- **Dependency behaviour:** 60% were dependent on cigarette smoking, 30% reported an alcohol abuse problem, 12% reported compulsive eating (obesity), 13% reported compulsive spending, 11% reported compulsive sexual behaviour, 6% reported abusing recreational drugs and 3% reported dependency on prescription drugs.

- **Dependency and other treatment history:** 16% had received previous treatment for their gambling problem, 6% for alcohol and 3% for drug dependency. 50% of treatment seekers reported having received treatment with a professional for depression/anxiety or other related mood disorders.

As can be seen from the above, the average treatment seeker who participated in this programme was in his/her early to middle adulthood with mostly a white cultural background. This individual also presented with an average to above average level of education and intelligence. Even though the majority of individuals were employed at the time of seeking treatment (more or less middle-income group), a large percentage had lost previous employment or self-employment as a consequence of excessive gambling. It is of interest to note that a large percentage of these individuals were employed in a sales position or other professional position, or were self-employed with only a small percentage being unemployed. Almost all individuals entered the treatment programme at a very late and desperate stage of problem gambling and had on average been gambling between six to fifteen years, and in the last three months prior to entering treatment - between three to seven times per week. The majority of individuals indicated slot machines followed by table card games and wagering (horse punting) as their game of preference. Even though the lottery was played by the vast majority, it was never indicated as the game of preference with substantially much smaller (affordable) amounts spent in comparison with other types of gambling. Almost one quarter of treatment seekers had engaged in illegal gambling before the legalization of casinos in South Africa in 1996.

More than 40% of individuals (mostly females) reported a history of depression and other mood related disorders of which most had sought treatment for prior to starting gambling. Many treatment seekers also reported a history of chemical and/or gambling problems in their family or origin. The severe negative consequences of pathological gambling manifested in all areas of the gambler's life. By the time most individuals entered the treatment programme their lives

were in total chaos, manifesting in severe emotional, relationship and financial problems, which resulted in relationship break-up, divorce, severe financial difficulties or sequestration, criminal activities, emotional depletion, depression, substance abuse and eventually suicide.

5.1.2 Comparison of the male and female gambler when entering treatment

Female gambler (37%) (n=37)

Male gambler (63%) (n=63)

Average age

41.47 years

35.06 years

Between 27 and 67 years

Between 20 and 59 years

Ethnic/cultural background

59% White english speaking

37% White english speaking

27% White afrikaans speaking

41% White afrikaans speaking

2% Indian

10% Indian

5% Coloured

8% Coloured

5% Black

5% Black

Occupation

27% self-employed

21% self-employed

5% sales

35% sales

11% unemployed

6% unemployed

5% management

11% management

2% computers

8% computers

8% bookkeepers

6% accountants

16% secretarial

5% attorneys

11% housewife

8% other

15% other

Level of education

27% 0 - grade 11

17% 0 – grade 11

43% grade 12

40% grade 12

22% college diploma

21% college diploma

8% university degree

22% university degree

Female gambler (37%) (n=37)**Male gambler (63%) (n=63)****Problem severity**

Average scores:

DSM-IV = 8.11

GA 20 Questions = 15.29

SOGS = 11.87

Average scores:

DSM-IV = 8.76

GA 20 Questions = 16.07

SOGS = 13.78

Phase of gambling

0% in losing stage

65% in critical stage

35% in desperate stage

2% in losing stage

40% in critical stage

58% in desperate stage

Type of gambler

Pathological

95% Escape gambler

5% Action gambler

Pathological

25% Escape gambler

75% Action gambler

Length of time gambling

Average: 10.57 years

Average: 12.06 years

Types of games ever played

97% slot machines

86% lottery

0% roulette

11% bingo

5% dice

41% card playing

25% horse punting

0% sports betting

3% stock market

71% slot machines

84% lottery

14% roulette

11% bingo

11% dice

60% card playing

51% horse punting

6% sports betting

16% stock market

Largest amount of money ever gambled in one day

16% (R100 - R1 000)

62% (R1 000 - R10 000)

22% (R10 000 plus)

3% (R100 - R1 000)

61% (R1 000 - R10 000)

35% (R10 000 plus)

Female gambler (37%) (n=37)**Male gambler (63%) (n=63)****Identified problems:****Residential**

5% lost house/property

19% lost house/property

27% bond/rent affected/arrears

35% bond/rent affected/arrears

11% forced to live with friends/family

27% forced to live with friends/family

Financial

68% borrowed household money

84% borrowed household money

51% borrowed from partner

57% borrowed from partner

62% borrowed from family/friends

71% borrowed from family/friends

59% borrowed from banks

70% borrowed from banks

24% borrowed from money lenders

44% borrowed from money lenders

5% borrowed from loan sharks

24% borrowed from loan sharks

19% sold effects/cashed securities

44% sold effects/cashed securities

14% borrowed from pawnbroker

33% borrowed from pawnbroker

3% cashed false/bad cheques

19% cashed false/bad cheques

65% had revolving credit

73% had revolving credit

0% had credit with casinos

10% had credit with casinos

Occupational

46% absent from work

78% absent from work

73% loss of productivity

94% loss of productivity

14% lost employment

37% lost employment

Gambling debt

Average amount: R30 862

Average amount: R121 724

Psychiatric history

3% bipolar affective disorder

3% bipolar affective disorder

57% depression

27% depression

5% anxiety/panic attacks

5% anxiety panic attacks

3% obsessive compulsive disorder

2% obsessive compulsive disorder

0% impulse control disorder

2% impulse control disorder

24% suicidal thoughts related to gambling

41% suicidal thoughts related to gambling

Female gambler (37%) (n=37)**Male gambler (63%) (n=63)****Psychiatric history (continued)**

8% suicide attempts related to gambling

13% suicide attempts related to gambling

19% suicide attempts not related to gambling5% suicide attempts not related to gambling**Type of criminal activity**

Males and females did not differ in regard to their criminal activities, with the exception that women are less likely to commit credit card fraud.

Summary

37% of treatment seekers consisted of females and 63% consisted of males. On average females were significantly older than males when they entered the treatment programme. The average age for females entering the programme was 41.47 years and males were 35.06 years. Females also tended to start gambling at an older age than males. The most prominent ethnic/cultural background was White afrikaans and english speaking among treatment seekers. Females of Indian, Coloured and Black cultures did not feature prominently. Pathological gambling featured significantly among treatment seekers who were self-employed - both male (21%) and female (27%) - and very prominently among males who were employed in a sales/marketing position (35%). The majority of both male and female treatment seekers had an above average level of education. Even though there was no significant difference in the education level of males and females, 14% more males obtained a university degree. Both males and females fell equally in the probable pathological range, with female diagnostic scores somewhat lower than those of males. Males and females did differ in respect to the phase of gambling they were in. Males tended to be more in the desperate phase and had on average been gambling significantly longer than females before entering treatment. Females tended to be more in the critical phase and progressed to treatment more quickly than males. Females thus sought treatment for their problem at an earlier phase of problem gambling development than males. Females also clearly tended to be escape gamblers and males

action gamblers. Even though both males and females played several different games, the game of preference among female treatment seekers was slot machines, and card playing and horse punting among males, and males had spent significantly more money on gambling while females tended more towards smaller amounts. Males on average had significantly higher actual gambling debt than females and were much more inclined to borrow from household money, banks, money lenders, loan sharks, pawnbrokers and revolving credit with casinos. Males were also more inclined than females to sell their effects or cash in securities and to cash false/bad cheques. A significant number of females (57%) reported a mood related disorder as an initial primary condition in the form of either depression or anxiety/panic attacks of which most had been professionally treated for their condition prior to starting gambling, together with related suicidal thoughts and a significant number of actual suicide attempts *not* related to their actual gambling behaviour. More males attempted suicide related to their actual gambling behaviour than females.

One aspect that should be stressed is to not automatically categorise males as action gamblers and females as escape gamblers – this is not a gender issue – males can be escape gamblers and females can be action gamblers. Individuals' motivation for gambling is different and diverse. In practice I also dealt with males that were clearly escape gamblers – males who only started gambling after a traumatic event, for example, one male lost his leg in an accident, another one shortly after he was retrenched, and even high-powered business individuals who gambled to “de-stress” and “relax”. Another interesting finding was that it was difficult for an action gambler to relate to an escape gambler. For the action gambler it is all about money and power, for the escape gambler it is not about how much I can win, but for how long I can play or “escape”.

According to Hardiman (2000) some gambling addicts tend to deal with emotional distress by using defense mechanisms of distraction and rationalization. In other words, like other types of addicts, they have a lot of problems coping with their feelings – what Blaszczynski (1998) calls the psychologically vulnerable gambler.

What tends to set these addicts apart is their use of thinking as a means of avoidance. Gambling then becomes associated, often unconsciously, with the experience of emotional happiness. Another interesting aspect which some gamblers have in common is their “fantasy or dream worlds” – their “illusions” that they create through their gambling behaviour. In dealing with the “action” gambler, I found that I was more dealing with an “illusion of power” where strong personality traits, impulsivity, dominance, control issues, manipulation, assertiveness, persuasiveness, confidence, intelligence and generosity manifested – which also clearly manifested in the therapeutic relationship. This type of gambler appeared to be addicted to gambling itself and played to test skill, gain social rewards and mostly, for excitement. Griffiths, et al, (2001), termed this as a “primary addiction”. Three prominent elements which many of them had in common could be recognised:

- ACTION (this gambler thrive on any type of action, are very thrill and excitement seeking, are adrenaline “junkies”, get bored very quickly, and enjoy taking risks and challenges).
- EGO (he has an inflated ego – “main man”, attention seeking, narcissistic, inflated sense of skill and very competitive).
- PROFIT (it is all about winning, gain and money).

These gamblers tend to be extremists, knows no balance and tend to be very impulsive and obsessive in nature.

There are important differences between the escape and action gambler and understanding them can accelerate one’s recovery. In dealing with the “escape” gambler, I found that I was dealing more with an “illusion of freedom”. This gambler escapes problems and becomes free from physical or emotional pain while gambling. This gambler could also be described as having a “secondary addiction” in that the player uses gambling as an escape from a primary problem, for example, a broken home, relationship crisis, and other emotional pressing issues. Gambling becomes a dysfunctional emotional coping mechanism, also for issues like boredom, loneliness and co-dependency. Recovery can be greatly accelerated by recognizing and dealing with these issues. They can be assisted

to become empowered by replacing gambling with other activities and regaining or developing functional coping skills. Part of the treatment programme was to admit powerlessness over their compulsion to gamble. Ironically, feeling powerless over all of the problems in their lives may have been a major factor that lead them to gamble in the first place. What they may need is empowerment, that's just what the machine gave them – a sense of having freedom from being powerless. They were then asked to leave the one thing in life that gave them some sense of freedom, their machine. When they no longer have it, they may believe they have nothing. They must be encouraged to replace that illusion of freedom which the machine provided with some other activity or coping skills that will enhance their sense of empowerment.

What is of vital importance together with a comprehensive biopsychosocial initial assessment is the individual's motivation for gambling as well as the structural characteristics of their respective gambling activities. As shown by Weinstein and Deitch (1974) and Griffiths (1993), gambling activities vary considerably in their structural characteristics, including the probability of winning, the amount of gambler involvement, the amount of skill that can be applied, the length of the interval between stake and outcome and the magnitude of potential winnings. Structural variations are also observed with certain classes of activities such as slot machines, where differences in reinforcement frequency, colours, sound effects and machines' features can influence the profitability and attractiveness of machines significantly (Griffiths, 1993). Each of these structural features may (and almost certainly does) have implications for gamblers' motivations and the potential "addictiveness" of gambling activities. For example, skilful activities that offer players the opportunity to use complex systems, study the odds and apply skill and concentration appeal to many gamblers because their actions can influence the outcomes. Such characteristics attract people who enjoy a challenge when gambling. They may also contribute to excessive gambling if people overestimate the effectiveness of their gambling systems and strategies (cognitive theory). Chantal and Vallerand (1996) have argued that people who gamble on these activities (e.g. racing punters) tend to be more intrinsically

motivated than lottery gamblers in that they gamble for self-determination (i.e. to display their competence and to improve their performance). People who gamble on chance activities, such as lotteries, usually do so for external reasons (i.e. to win money or to escape from problems). This was confirmed by Loughman, Pierce and Sagris (1997) in a clinical survey of problem gamblers wherein racing punters emphasised the importance of skill and control considerably more than slot machine players. Although many slot machine players also overestimate the amount of skill involved in their gambling (Walker, 1992), other motivational factors (such as the desire to escape worries or to relax) tend to predominate (Walker, 1985). Thus, excessive gambling on slot machines may be more likely to result from people becoming conditioned to the tranquilising effect brought about by playing rather than just the pursuit of money. On the other hand, racing punters tend to be more likely to gamble for excitement (Blaszczynski, McConaghy & Winter, 1986). This has important implications for the psychological study of ongoing gambling behaviour. In nearly all studies, it has been found that continuous activities (e.g. racing, slot machines, casino games) with a more rapid play-rate are more likely to be associated with gambling problems (Dickerson, 1989; Dickerson, 1995; Dickerson et al, 1996; Griffiths, 1995; Walker, 1992; Walker & Dickerson, 1996). The ability to make repeated stakes in short time intervals increases the amount of money which can be lost and also increases the likelihood that gamblers will be unable to control spending (O'Connor, Dickerson & Phillips, 1995). Such problems are rarely observed in non-continuous activities, such as lotteries, in which gambling is undertaken less frequently and where outcomes are often unknown for days. Consequently, it is important to recognise that the overall social and economic impact of expansion of the gambling industry will be considerably greater if the expanded activities are continuous rather than non-continuous.

5.2 SUMMARY OF TREATMENT EFFECTIVENESS

The primary measure of treatment success was if treatment seekers did not, after one year, revert back to gambling fulltime. Treatment seekers may have relapsed once or twice, or reported that their gambling was controlled (approximately once

or twice per month – which had to be confirmed by a significant other), but if they did not revert back to gambling fulltime, at the end of one year, they were considered to be a successfully treated gambler. While a longer follow-up period may yield different results, the current study focused on treatment results after one year.

25% of treatment seekers reported that they reverted back to gambling fulltime which leaves the success rate of the treatment at 75%. While 80% did not relapse (gamble) during the six-week treatment programme, the number of treatment seekers without any gambling relapses during each follow-up period declined, and those falling back into gambling increased as time went on. After one year 47% of treatment seekers managed not to revert back to gambling – total abstinence. As anticipated, gamblers experienced an overall reduction in gambling participation, debt and expenditure and an overall improvement in vocational functioning.

It appeared that after the six-week discharge to the one year follow-up, belonging to Gamblers Anonymous assisted treatment seekers in abstaining from gambling and also in having fewer relapses. Banning/self-exclusion seemed to have little effect on abstaining and relapsing.

Approximately the same number of males and females reverted back to gambling after one year. As the treatment programme is so personal in nature and takes into account the gender of a person it has proven equally effective for both males and females. The programme therefore adequately addresses the gender component. No correlation between age and treatment effectiveness were found and the programme is therefore considered effective for all race groups. As well as being gender and age sensitive the programme also has the same success rate among all race groups. There is also no difference between persons with different levels of education in terms of failing treatment and reverting back to fulltime gambling. The attendance of a family member or concerned other at the fourth session, indicative of family or other support, correlates positively with

treatment success. This indicates that respondents with family support at the fourth session were more likely to abstain and not revert back to gambling. Even though problem severity presented not statistically significant with treatment success, it was a borderline figure (0.064), very close to the pre-decided significance level (0.05). Where individuals entered treatment with one or other substance abuse problem, especially alcohol, substituting one addiction for another, is one reality which cannot be ignored.

It is important to note the lasting and devastating effects of pathological gambling on marital and family relationships, even after the gambler has stopped gambling. One third of treatment seekers reported no improvement in these relationships and 20% reported a relationship break-up/separation or divorce after the gambler has stopped gambling.

From the above discussion it is clear that certain variables certainly had an influence on treatment effectiveness. These are as follows:

- Participation in Gamblers Anonymous (the more likely an individual is to belong to Gamblers Anonymous, the better the prognosis).
- Attendance and support of family member or concerned other at fourth session (gamblers with family or concerned other support are more likely to be successful in recovery).
- Problem severity (the more severe the gambling problem, the poorer the prognosis).

5.3 CONCLUSIONS AND IMPLICATIONS FOR BEST PRACTICES

5.3.1 Conclusions

The treatment of gambling related disorders, especially in South Africa, is at an early stage of development. Consequently, treatment providers should consider the findings reported here and the discussion about the implications for best practices a buffet of options to consider for the National Responsible Gambling Programme.

In summary, gambling is a complex, multi-dimensional activity that is unlikely to be explained by any single theory. Instead, this research is best served by a biopsychosocial model that stresses the individual and idiosyncratic nature of the development of gambling problems and emphasis on the role of contextual factors internal and external to the process of gambling itself. It seems that gamblers are first influenced by sociological factors; for example, the availability of gambling opportunities, attitudes and habits of parents, friends and peer groups as well as a lack of alternative activities. During the middle stages of development, there are many factors which heavily influence the maintenance of gambling behaviour. Three of these factors are schedules of reinforcement, the “escape” qualities of gambling and cognitive biases. While it remains unclear exactly how some people come to gamble excessively, it is agreed that persistent gambling eventually leads to a desperate “spiral of options” (Lesieur, 1984), where gambling is largely maintained by the desire to win money, recover losses and pay back debts. Gambling is thus a complex, multidimensional activity that is unlikely to be explained by any single theory. Examining gambling and problem gambling as a biopsychosocial behaviour makes it evident that individual differences and broader contextual factors must be considered and not ignored. This study provides evidence that a narrow focus upon one theoretical perspective in research and clinical interventions may, in many cases, not be justified. As Gambino and Shaffer (1979) pointed out over two decades ago, individuals are self-determining agents, and therefore, a taxonomy of situations must be taken into consideration.

According to Blaszczynski and Nower (2001) the majority of studies report findings that are based on samples of gamblers compared to control groups. Until recently, little consideration appears to have been directed beyond gender and age toward determining whether or not intragroup differences exist among pathological gamblers. In most cases samples are regarded as homogeneous in type. Single domain models that assume pathological gamblers form a homogeneous population may no longer be adequate in the face of data that putatively demonstrates gambling to be a heterogeneous and multidimensional

disorder, the end result of a complex interaction of genetic, biological, psychological and environmental factors. Simple consideration of gambling as an addiction or as a compulsive or impulse control disorder is too limiting in scope. There is a need to identify clinically distinct subgroups of gamblers who exhibit common, overt cardinal symptoms, but, at the same time, differ significantly with respect to key variables that are of aetiological relevance and determine approaches to management and prognosis; premorbid psychopathology, childhood history and neurobiological maturity (Blaszczynski, et al, 2001).

5.3.2 Implications for best practice

There is evidence in this study to support the perspective that pathological gambling is a multidimensional disorder and that certain sub-groups of gamblers have distinct gambling behaviours. The following discussion on implications and intervention for best practice is based on the model developed by Blaszczynski, et al, 2001.

The “Pathways Model” is a preliminary, empirically testable schema that hypothesizes the existence of three subgroups of pathological gamblers (Blaszczynski, et al, 2001). All three are subject to ecological variables, operant and classical conditioning, and cognitive processes. The strength of this model is its recognition that a proportion of gamblers are essentially “normal” in character: that is, they do not show signs of premorbid psychological disturbance but simply lose control over gambling in response to the effects of conditioning and distorted cognitions surrounding probability of winning. Their “pathological gambling” is a transient state where fluctuations between heavy and excessive gambling are observed, a condition which also may remit spontaneously or with minimal interventions. Pathway 1 gamblers may achieve sustained controlled gambling in post-intervention.

The model also acknowledges a second subgroup characterized by disturbed family and personal histories, poor coping and problem-solving skills, affective instability due to both biological and psychosocial deficits and later onset of gambling. Gambling is pursued as a means of emotional escape through

dissociation or a medium aimed at regulating negative mood states or physiological states of hyper- or hypo-arousal.

The third group in this schema is characterized by a biological vulnerability toward impulsivity, early onset, attentional deficits, antisocial traits and poor response to treatment. Dysfunctional neurological structures and functions and dysregulation of neurotransmitter systems underpin this vulnerability.

From a clinical perspective, each pathway contains different implications for choice of management strategies and treatment interventions. Clinical observations supported by empirical data suggest that Pathway 3 gamblers are typified by an antisocial impulsivist personality dimension manifesting a wide range of multiple dysfunctional behaviour including substance abuse, criminal offences and social instability. These clinical features correlate with early onset gambling, more severe gambling related problems, general psychopathology and salient features of attention deficit hyperactivity disorder.

If biological correlates contribute to the aetiology of the disorder in cases of such impulsive gamblers, clinicians must be cognisant of the need to attend to problems related to attention and organizational deficits, emotional lability, stress intolerance, poor problem solving and coping skills. Issues of compliance and attrition from treatment also need to be highlighted given the tendency for impulsive gamblers to be inconsistent, unreliable and intolerant of boredom. These gamblers may require intensive cognitive-behavioural interventions aimed at impulse control administered over longer terms.

In contrast, the treatment needs of this group differ significantly from depressed or anxious gamblers who seek emotional solace through the dissociation associated by repetitive electronic gaming machine play (Anderson & Brown, 1984). Depression or anxiety may result from experienced trauma or loss (Taber, McCormick & Ramirez, 1987), or be reactive to a current stressor. Psychotherapeutic strategies designed to enhance coping skills, deal with stress-

related issues, and the provision of non-judgemental support are relevant to these cases. Both Pathways 2 and 3 gamblers may require medication to balance their neurochemistry: however, the onset of the disorder, and its severity, course and prognosis of the emotionally vulnerable gamblers differ from that of the impulsive gambler. An understanding of the essential differences defining subgroups of gamblers will, therefore, be important in dictating the necessary and appropriate form of intervention required.

5.4 PREVENTION

Since sociological factors appear to be critical in the acquisition of gambling behaviour, prevention needs to be aimed at the social and situational antecedents. This can be approached from a number of levels (for example, societal, school, family, individual). Some of which may be more practical than others. Since problem gamblers start gambling at a significantly earlier age than non-problem gamblers, legislation should be firmer against young people gambling (i.e. below 18 years of age). A “blanket ban” on gambling would, in most cases, reduce acquisition until at least late adolescence. Both parents and peers may model gambling; therefore, the family’s role in maintaining gambling behaviour should be addressed in therapy and prevention plans should aim to increase the gambler’s contact with non-gambling peers. Also evidence or knowledge of a gambler’s own negative thoughts or feelings about gambling behaviour, and irrational biases may provide useful cues for behaviour modification (Stumphauzer, 1980).

These findings have led to suggestions to enhance educational awareness of the dangers of gambling not only amongst children and adolescents but also parents, guardians and teachers. Although recommendations of the nature have typically tended to focus upon the need for greater awareness of the “true” odds and the unprofitability of gambling, Griffiths, et al. (2001), believes that this approach needs to be applied with caution. It is quite possible for education to have the opposite effect; namely, to increase students’ knowledge of how to gamble. In addition, it is questionable whether knowing the true odds has a significant effect

upon dissuading people from gambling, given that many problem gamblers are well educated and have, in some cases, some knowledge of basic mathematics. For many, the belief that they are inherently lucky or different from other helps maintain their interest in gambling. Accordingly, educational campaigns that focus upon the negative consequences of gambling and alternatives to it may have greater success. While these sorts of campaigns are unlikely to prevent gambling in all young people, they might reduce (a) the total number of adolescents who start to gamble and (b) the amount of time an adolescent spends on gambling.

The fact that some gamblers are socially rewarded for gambling cannot be altered directly, but more adaptive personal and social skills can be taught as responses to stress (i.e. emotional antecedents); for example, relaxation, assertion and social skills training (Stumphauzer, 1980). Alternatively, where people seek the company of other gamblers as a way to escape from unpleasant feeling states or life stress, the development of alternative interests, hobbies and social networks should be afforded priority during intervention. This approach could also be extended to people who gamble alone. An essential aspect of treatment should be to identify and address the factors that are antecedents to gambling, those that provide the underlying motivation and social and cultural context in which the behaviour has developed. Only when these are addressed can treatments be extended to more specific psychological aspects of the behaviour itself. This is because these broader social and structural factors influence a person's exposure to gambling, their opportunities to gamble and their ability to recover (Griffiths, et al, 2001). Detailed analysis of the person's daily schedule and the nature and extent of available social supports is essential during treatment.

5.5 RECOMMENDATIONS TO THE TREATMENT PROGRAMME

5.5.1 Caring for a syndrome

Gambling disorders have both unique and shared elements (Shaffer & Korn, 2002). For example, pathological gambling has unique elements (e.g., betting increasing amounts of money); it also shares signs and symptoms with other disorders (e.g., anxiety, depression, impulsivity, substance abuse).

Consequently, pathological gambling is best thought of as a syndrome. Since syndromes are multidimensional, these disorders typically do not respond favourably to a single treatment modality. From this perspective, the most effective treatments for gambling problems reflect a multimodal approach that rests upon patient-treatment matching (Shaffer, et al, 2002). Multidimensional treatments include various combinations of psychotherapy, psychopharmacology, financial, educational and self-help interventions.

Brief therapy, cognitive insight, financial issues, family involvement, relapse prevention, motivational issues, stage change matching and twelve-step facilitation are promising interventions included in this six session treatment programme. I would like, however, to suggest the following options which could potentially enhance treatment effectiveness to the existing programme:

5.5.1.1 Diagnostic criteria

The only screening tool presently included in the treatment programme is the DSM-IV diagnostic criteria. I did, however, feel that only one screening tool was not sufficient and decided to include two other screening tools in this programme for the purpose of this study – the South Oaks Gambling Screen and the Gamblers Anonymous 20 Questions – which enabled me with making a more accurate assessment. Other new assessment instruments for gambling disorders are appearing regularly and is an excellent method of gathering formal necessary information, for example the Massachusetts Gambling Screen (MAGS), which is the first instrument to introduce weighted items to gambling assessment; that is the MAGS recognizes that some symptoms are more important than others (Shaffer, et al, 2002). One of the most promising of the new instruments for identifying gambling and comorbid psychiatric disorders is the Composite International Diagnostic Interview (CIDI) (Kessler, 2000); this measure is endorsed by the World Health Organization and is now part of a United States national comorbidity survey. Pathological gambling can co-exist with substance abuse, mental illness and other addictive disorders, although these relationships and the pathogenesis are incompletely understood. Nevertheless, it is prudent for

clinicians to consider and screen for other mental disorders such as alcohol and drug problems, mood, anxiety and stress disorders as well as suicide risk. A referral to an appropriate mental health specialist for indepth clinical assessment of a possible comorbid condition may be required.

5.5.1.2 Family counseling

Many families spend enormous energy and are saddened and become emotionally damaged in their fruitless efforts to help an individual in the grip of compulsive gambling. They may not have the gambling problem, but they are suffering from it, which very often has negative long term effects (even after the gambler has stopped gambling) on the relationship and could manifest in broken relationships and divorce. They lack the insight needed to deal with this problem and its consequences effectively. As with other disorders, involving family and significant others in the treatment services provided to disordered gamblers holds the potential to improve treatment outcomes and sustain behaviour changes. Very often the family needs to get help for the suffering they are experiencing before the gambler will seek help. Even though the fourth session of the treatment programme involves the family or concerned other, I found this not sufficient to address the emotional “recovery” of the family. As the present study also indicated, family attendance at the fourth session correlates positively with treatment success. Consideration and recognition should be given to the important role the family is playing in treatment success in addressing their needs through a series of separate individual counseling sessions where issues such as education and insight into problem gambling, co-dependency, dysfunctional relationships, loss of family income, neglect, violence and abuse, emotional support as well as problem management strategies will be addressed.

5.5.1.3 Financial counseling

Most gamblers entering treatment present with severe financial problems, with some facing financial sequestration. This adds excess pressure and gambling remains an option to solve his financial problems “the big win will solve all my problems”. Gamblers also become desensitized to the value of money and

budgeting is quite unknown to them. Even though the treatment programme includes dealing with a financial pay-back plan, some of the gamblers' debt can be very complicated and should be dealt with by a professional in the field of finances. Financial counseling can assist people with gambling-related debt to initiate a financial plan, learn budget management and develop a payment plan (Shaffer, et al, 2002). Since a preoccupation with money and credit is central to the disordered gamblers' experience, it is essential to address their financial obligations and responsibilities during treatment. By diminishing these very real and pressing problems, treatment can reduce the stress and anxiety associated with financial debt. By developing a carefully and realistically crafted financial plan, people with gambling problems can stimulate and maintain a sense of personal control and the consequent sense of hopefulness that it encourages.

5.5.1.4 Treatment effectiveness feedback

As part of ensuring and sustaining an excellent standard of counselling service a "Treatment Effectiveness Feedback Form" (completed by the gambler or family in counselling) should be included at the end of the treatment programme. This type of feedback would also provide regulators and industry with concrete information on the effectiveness of the service provided and assist with keeping important statistical information. This should include aspects such as comments on the gambler's own progress, aftercare utilization and any suggestions to the content of the programme.

5.5.1.5 Self-help guides

In addition to counseling, the use of more comprehensive self-help guides and other general addictive gambling information to gamblers and their families or significant others, should be considered. For example, the Harvard Medical School's Division on Addictions and the Massachusetts Council for Compulsive Gambling have developed a "Tool Kit" for distribution to people who contacted the Massachusetts Council's hotline (Shaffer, et al, 2002). This type of resource provides treatment seekers with an enduring hard-copy of information and strategies designed to help them acquire and maintain non-problematic gambling

behaviours including abstinence from gambling. Self-help guides also can be helpful and instructive to concerned others.

5.5.1.6 Problem solving training

The development of problem solving skills can assist individuals struggling against their impulses to gamble excessively to feel improved control over their gambling risks and consequences. Problem solving strategies address therapeutic themes that include dealing with gambling urges, deciding about limits on the time and money spent gambling, resolving difficulties with family members and finding suitable solutions to gambling debts. The problem solving process involves a number of steps: identifying the problem accurately, collecting specific information about the problem, generating different options, exploring consequences by listing advantages and disadvantages for each, and then implementing and evaluating the preferred solution (Goldfried & Davison, 1976). There is also a range of social and life skills that can benefit a gambler in recovery. These include communication, assertiveness, numeracy skills, refusal skills, as well as the self-management of stress, anger and anxiety. Therapeutic life skills training also includes relaxation, physical activity and meditation.

5.5.1.7 Treatment of problem gambling in special populations

Special population segments represent groups of individuals with particular or distinctive treatment needs. These needs might be related to the influence of culture, gender, age or social economic status as these alone or in combination apply to their gambling behaviour, mental well-being and overall health recovery. Special populations are an emerging area of public health interest from both a prevention and treatment perspective (Korn & Shaffer, 1999b). As practitioners and researchers gain experience with these diverse groups, improved treatment strategies likely will evolve reflecting scientifically validated research. However, at this early stage of my understanding, clinicians and counsellors should be encouraged to develop enhanced awareness of the complexity and variability of gambling beliefs, practices and vulnerabilities amongst these various populations by developing an improved assessment and understanding of these factors.

5.5.1.8 Gamblers Anonymous

A complementary service commonly employed with problem or pathological gamblers is Gamblers Anonymous (GA) and GAMANON (family support group) who provides a supportive structure to maintain the gains made during the treatment programme and prevent relapse. A major goal of GA is to garner from its members a commitment to abstinence from gambling and a lifelong commitment to the principles of GA and participation in GA meetings. Some GA members have their needs met entirely by GA and do not require counseling. Counselors should require and encourage troubled gamblers to be involved in GA as a component of a comprehensive treatment and aftercare plan (which is included in the programme). In addition, individual counselors should be encouraged to make contact with the GA communities and develop improved working relationships so that the self-help community is aware of the range of services that the NRPG provides as well as strategies that guide these treatments. Such a relationship can be nurtured and holds the potential to yield both anticipated and unanticipated benefits for everyone involved.

5.5.1.9 Women and gambling

There is evidence in this study to support the perspective that women have distinct gambling behaviours, often described as “escape” gambling. Counsellors should attend to the gender differences associated with assessment and treatment, recognizing that women enter the treatment system under different circumstances than their male counterparts. In addition, treatment professionals need to be sensitive to the possible history of trauma, difficult economic realities, and a preference for women-specific treatment settings and programming. The special needs of women or other “escape” gamblers is one aspect that should also be seriously considered by Gamblers Anonymous, as this might explain the high drop-out rate of women in GA.

REFERENCES

1. Abbott, M.W. 2001. What do we know about gambling and problem gambling in New Zealand? Report number seven of the New Zealand Gaming Survey. Wellington: New Zealand Department of Internal Affairs.
2. American Psychiatric Association. 1980. DSM-III: Diagnostic and statistical manual of mental disorders. 3rd ed. Washington, DC: American Psychiatric Association.
3. American Psychiatric Association. 1987. Diagnostic and statistical manual of mental disorders, third edition, revised. Washington DC: American Psychiatric Association.
4. American Psychiatric Association. 1994. Diagnostic and statistical manual of mental disorders. 4th ed. Washington, DC: American Psychiatric Association.
5. American Psychiatric Association. 2000. Diagnostic and statistical manual of mental disorders – text revision. 4th ed. Washington DC: American Psychiatric Association.
6. Anderson, G. & Brown, R.I.F. 1984. Real and laboratory gambling, sensation-seeking and arousal: Towards a Pavlovian component in general theories of gambling and gambling addictions. British Journal of Psychology. 75, 401-411.
7. Beaudoin, C. & Cox, B. 1999. Characteristics of problem gambling in a Canadian context: A preliminary study using a DSM-IV-based questionnaire. Canadian Journal of Psychiatry. 44, 483-487.
8. Blaszczynski, A., McConaghy, N. & Winter, S.W. 1986. Plasma endorphin levels in pathological gambling. Journal of Gambling Behaviour. 2, 14.
9. Blaszczynski, A., Steel, Z. & McConaghy, N. 1997. Impulsivity in pathological gambling : The anti-social impulsivist. Addiction. 92, 75-87.
10. Blaszczynski, A. & McConaghy, N. 1992. Pathological gambling and criminal behaviour. A report to the Australian Institute of Criminology. Canberra: Criminology Research Council.
11. Blaszczynski, A., & Nower, L. 2001. A pathways model of problem and pathological gambling. Addictions. 97, 487-499.
12. Blaszczynski, A., Walker, M., Sagris, A. & Dickerson, M. 1997. Psychological aspects of gambling. Position paper prepared for the Directorate of Social Issues, Australian Psychological Society.

13. Blaszczynski, A. 1998. Overcoming compulsive gambling : A self-help guide using cognitive behavioural techniques. Robinson Publishing Ltd : London.
14. Chantal, Y. & Vallerand, R.J. 1996. Skill versus luck: A motivational analysis of gambling involvement. Journal of Gambling Studies. 12, 407-418.
15. Collins, P. & Barr, G. 2001. Gaming and problem gambling in South Africa : A national study. National Centre for the study of gambling : Cape Town, S.A.
16. Cozby, P.C. 1985. Methods in behavioural research. 3rd ed. Mayfield Publishing Company: London.
17. Crockford, D.N. & el-Guebaly, N. 1998b. Psychiatric comorbidity in pathological gambling: A critical review. Canadian Journal of Psychiatry - Revue Canadienne de Psychiatrie. 43(1), 43-50.
18. Dickerson, M.G. 1989. Gambling: A dependence without a drug. International Review of Psychiatry. 1, 157-172.
19. Dickerson, M.G. 1993. Internal and external determinants of persistent gambling: Problems generalising from one form of gambling to another. Journal of Gambling Studies. 9, 225-245.
20. Dickerson, M.G. 1995. Problem gambling: Future directions in research, treatment, prevention and policy initiatives. In J. O'Connor (Ed.). High stakes in the nineties. (pp. 73-86). Sixth National Conference of the National Association for Gambling Studies, Fremantle, Western Australia.
21. Dickerson, M., Allcock, C., Blaszczynski, A., Nicholls, B., Williams, R. & Maddern, R. 1996a. An examination of the socio-economic effects of gambling on individuals, families and the community including research into the costs of problem gambling in New South Wales. A report to the Casino community Benefit Fund, NSW Government.
22. Dickerson, M.G. 1979. FI schedules and persistence at gambling in the UK betting office. Journal of Applied Behaviour Analysis. 12, 315-323.
23. Dickerson, M.G. & Weeks, D. 1979. Controlled gambling as a therapeutic technique for compulsive gamblers. Journal of Behaviour Therapy & Experimental Psychiatry. 10, 139-141.

24. Dickerson, M.G. 1991. Internal and external determinants of persistent gambling. In N. Heather, W.R. Miller & J. Greeley (Eds.). Self control and the addictive behaviours. Australia : MacMillan.
25. Dickerson, M.G. 1993. Internal and external determinants of persistent gambling: Problems in generalizing from one form of gambling to another. Journal of gambling studies. 9, 225-245.
26. Eber, G. & Shaffer, H.J. 2000. Trends in bio-behavioural gambling studies research: Quantifying citations. Journal of Gambling Studies. 16(4), 461-467.
27. Elia, C. & Jacobs, D.F. 1993. The incidence of pathological gambling among Native Americans treated for alcohol dependence. International Journal of the Addictions. 28(7), 659-666.
28. Elingstad, T.P., Sobell, L.C., Sobell, M.B. & Planthara, P. 2002. Drug treatment outcome methodology (1993-1997): Strengths, weaknesses, and a comparison to the alcohol field. Addictive Behaviours. 27, 319-330.
29. Fishbein, M. & Ajzen, I. 1975. Belief, attitude, intention, and behaviour: An introduction to theory and research. Reading, MA: Addison-Wesley.
30. Gadbury, A. & Ladouceur, R. 1989. Factors related to problem gambling in poker players. Paper presented at the 12th Annual Conference of the National Council on Problem Gambling, Las Vegas, Nevada.
31. Gambino, G. & Shaffer, H. 1979. The concept of paradigm and the treatment of addiction. Professional Psychology. 10, 207-223.
32. Gamblers Anonymous. 2002. 12-step programme (world wide web). Gamblers Anonymous. Retrieved February 2002 from the world wide web: (<http://www.gamblersanonymous.org.recovery.html>).
33. Griffiths, M.D. 1993. Fruit machine gambling: The importance of structural characteristics. Journal of Gambling Studies. 9, 101-120.
34. Griffiths, M. & Delfabbro, P. 2001. The Biopsychosocial approach to gambling: Contextual factors in research and clinical interventions. The Electronic Journal of Gambling Issues. 5, 10/2001.
35. Hardiman, M. 2000. Overcoming addiction: A common sense approach. Crossing Press: USA.
36. Hays, W.L. 1963. Statistics. New York: Holt, Rinehart and Winston.

37. Jacobs, D.F. 1989. A general theory of addictions: Rationale for and evidence supporting a new approach for understanding and treating addictive behaviours. In T.N. Cummings (Ed.). Compulsive gambling: Theory, research and practice. (pp. 35-64). Lexington, MA: Lexington Books.
38. Khantzian, E.J. 1975. Self selection and progression in drug dependence. Psychiatry Digest. 36, 19-22.
39. Khantzian, E.J. 1985. The self-medication hypothesis of addictive disorders: Focus on heroin and cocaine dependence. American Journal of Psychiatry. 142(11), 1259-1264.
40. Khantzian, E.J. 1997. The self-medication hypothesis of substance use disorders: A reconsideration and recent applications. Harvard Review of Psychiatry. 4(5), 231-244.
41. Kessler, R.C. 2000. Personal communication: Boston
42. Korn, D.A. 2000. Expansion of gambling in Canada: Implications for health and social policy. Canadian Medical Association Journal. 163(1), 61-64.
43. Korn, D.A. & Shaffer, H.J. 1999a. Gambling and the health of the public: Adopting a public health perspective. Boston: Harvard Medical School.
44. Korn, D.A. & Shaffer, H.J. 199b. Gambling and the health of the public: Adopting a public health perspective. Journal of Gambling Studies. 15(4), 289-365.
45. Korn, D.A. & Skinner, H.A. 2000, Autumn 2000. Gambling expansion in Canada: An emerging public health issue. CPHA Health Digest. XXIV, 10.
46. Ladouceur, R. & Walker, M. 1996. A cognitive perspective on gambling. In P.M. Salkovkis (Ed.). Trends in cognitive and behavioural therapies. London: John Wiley and Sons.
47. Ladouceur, R. & Walker, M. 1998. The cognitive approach to understanding and treating pathological gambling. In M. Hersen (Ed.). Comprehensive Clinical Psychology. (pp. 588-601). New York: Pergamon.
48. Langer, E.J. 1975. The illusion of control. Journal of Personality and Social Psychology. 32, 311-321.

49. Leedy, P. 1993. Practical research: Planning and design. 5th ed. Macmillan Publishing Company: London.
50. Lesieur, H.R. 1984. The chase: Career of the compulsive gambler. 2nd ed. Rochester, Vermont: Schenkman Books Inc.
51. Lesieur, H.R. & Blume, S. 1987. The South Oaks Gambling Screen (SOGS): A new instrument for the identification of pathological gamblers. American Journal of Psychiatry. 144, 1184-1188.
52. Lesieur, H & Blume, S.B. 1993. Revising the South Oaks Gambling Screen in different settings. Journal of Gambling Studies. 9(3), 213-223.
53. Loughnan, T., Pierce, M. & Sagris, A. 1997. The Maroondah Assessment Profile for Problem Gambling (G-Map™): A new direction in problem gambling counseling. Paper presented at the Tenth International Conference on Gambling and Risk-taking. Montreal, Canada.
54. McConaghy, N. 1980. Behavioural completion mechanisms rather than primary drives maintain behavioural patterns. Tivas Nervosa Superior (Praha). 22, 128-151.
55. McConaghy, N., Armstrong, M.S., Blaszczynski, A. & Allcock, C. 1993. Controlled comparison of aversion therapy and imaginal desensitisation in compulsive gambling. British Journal of Psychiatry, 142, 266-372.
56. Meyer, R. 2001. Treatment protocol for the gambling addiction network counsellors. Cape Town: National Centre for the Study of Gambling.
57. Miller, W.R. 2000. Rediscovering fire: Small interventions, large effects. Psychology of Addictive Behaviours. 14(1), 6-18.
58. Moore, T. 1988 June. Evaluating a large systems treatment intervention: An update of the Oregon state-wide evaluation study. Paper presented at the 12th National Conference of Problem Gambling, Las Vegas, NV.
59. National Gambling Board of South Africa. Casinos in the Republic of South Africa. Retrieved November 2002 from the World Wide Web: (<http://www.ngb.org.za>).
60. National Research Council. 1999. Pathological gambling: A critical review. Washington DC.: National Academy Press.
61. National Responsible Gaming Programme. 2002. National quarterly report for the period April - June 2002. National Responsible Gaming Programme, National Gambling Board of South Africa, National Centre for

the Study of Gambling. Retrieved October 2002, from the World Wide Web: (<http://www.responsiblegaming.co.za>)).

62. National Responsible Gaming Programme. 2001. Introducing Africa's first Responsible Gaming Programme: A model public/private sector partnership. Cape Town: Corporate Image.
63. National Steering Committee. 1999. First Nations and Inuit Regional Health Survey. St. Regis, Quebec: First Nations and Inuit Regional Health Survey.
64. O'Conner, J., Dickerson, M. & Phillips, M. 1995. Chasing and its relationship to impaired control over gambling. In J. O'Conner (Ed). High Stakes in the Nineties. (pp. 149-162).
65. Office of Public Health. 1999. Trends in Indian Health. Rochville, Maryland: Indian Health Services.
66. Rush B.R., Hobden, K., Aiken Harris, J. & Shaw Moxam, R. 2000. Client outcomes within the Ontario substance abuse treatment system: Results of a provincial pilot study. Toronto, ON: Centre for Addiction and Mental Health.
67. Salkind, N.J. 2000. Exploring research. 4th ed. Prentice Hall, Upper Saddle River: New Jersey.
68. Sartin, H.G. 1988. WIN therapy: An Alternative diagnostic and treatment procedure for problem gamblers. In W.R. Edington (Ed.). Gambling Research. proceedings of the 7th International Conference on Gambling and Risk Taking. (Vol. 5: Research on Pathological Gambling, pp. 365-391). Reno: University of Nevada.
69. Seager, C.P. 1970. Treatment of compulsive gamblers by electric aversion. British Journal of Psychiatry. 117, 545-553.
70. Shaffer, H.J. & Hall, M.N. 2002. Longitudinal patterns of gambling and drinking problems among casino employees. Journal of Social Psychology. 142(4), 405-424.
71. Shaffer, H.J. 1997. The psychology of stage change. In J.G. Langrod (Ed.). Substance abuse: a comprehensive textbook. 3rd ed. pp. 100-106. Baltimore: Williams & Wilkins.
72. Shaffer, H.J., Hall, M.N. & Vander Bilt, J. 1997a. Estimating the prevalence of disordered gambling in the United States and Canada: A meta-analysis. Boston: Presidents and Fellows of Harvard College.

73. Shaffer, H.J., Hall, M.N. & Vander Bilt, J. 1997b. Programme evaluation: A practical guide to discovering what works. (on line). Harvard University and Brown University. Retrieved 2000, from the World Wide Web: (<http://www.hms.harvard.edu/doa/evaluationguide.htm>)
74. Shaffer, H.J. & Jones, S.B. 1989. Quitting cocaine: The struggle against impulse. Lexington, MA.: Lexington Books.
75. Shaffer, H.J. & Korn, D.A. 2002. Gambling and related mental disorders: A public health analysis. Annual Review of Public Health. (Vol. 23, pp. 171-212). Palo Alto: Annual Review Inc.
76. Shaffer, H.J., LaBrie, R.A., LaPlante, D.A. & Kidman, R.C. 2002. The Iowa department of public health gambling treatment services: Four years of evidence. Boston: Harvard Medical School.
77. Shaffer, H.J. & Zinberg, N.E. 1985. The social psychology of intoxicant use: The natural history of social settings and social control. Bulletin of the Society of Psychologists in the Addictive Behaviours. 4, 49-55.
78. Sharpe, L. & Tarrier, N. 1993. Towards a cognitive-behavioural theory of problem gambling. British Journal of Psychiatry. 162, 407-412.
79. Skinner, H.A. 1999. Gambling: Achieving the right balance. Journal of Gambling Studies. 15(4), 285-287.
80. Stinchfield, R.D. & Winters, K.C. 1996. Treatment effectiveness of six state-supported compulsive gambling treatment programs in Minnesota. Minneapolis, MN: Department of Psychiatry, University of Minnesota.
81. Stinchfield, R. 2002. Reliability, validity and classification accuracy of the South Oaks Gambling Screen (SOGS). Addictive Behaviours. 27, 1-19.
82. Stumphauzer, J.S. 1980. Learning to drink: Adolescents and alcohol. Addictive Behaviours. 5, 277-283.
83. Taber, J.L., McCormick, R.A. & Ramirez, L.E. 1987. The prevalence and impact of major life stressors among pathological gamblers. International Journal of the Addictions. 22, 44-48.
84. Tavares, H., Zilberman, M.L., Beites, F.J. & Gentil, V. 2001. Gender differences in gambling progression. Journal of Gambling Studies. 17(2), 151-159.
85. Teitelbaum, S., Drew Edwards, M.D. & Gold, M.S. 1999. Normal gambling vs. pathological or compulsive gambling. Courtesy of [Lifescape.com](http://www.lifescape.com). Department of Psychiatry : University of Florida Brian Institute.

86. Terre Blanche, M.T. & Durrheim, 1999. Research in practice. University of Cape Town: Cape Town Press.
87. Toneatto, T., Blitz-Miller, T., Calderwood, K., Dragonetti, R. & Tsanos, A. 1997. Cognitive distortions in heavy gambling. Journal of Gambling Studies. 12(2), 253-266.
88. Turner, N.E. & Fritz, B. 2001. The Effect of Skilled Gamblers on the success of less skilled gamblers. The Electronic Journal of Gambling Issues. 5, 10/2001.
89. Volberg, R.A. 2000. The future of gambling in the United Kingdom: Increased access creates more problem gamblers. BMJ 320(7249), 1556.
90. Volberg, R.A. & Steadman, H.J. 1989. Refining prevalence estimates of pathological gambling. American Journal of Psychiatry, 145, 502-505.
91. Volberg, R.A. & Steadman, H.J. 1988. Refining estimates of pathological gambling in New Jersey and Maryland. American Journal of Psychiatry. 145, 502-505.
92. Walker, M.B. 1985. Explanations for gambling. In G.T. Caldwell, B. Haig, M.G. Dickerson & L. Sylvan (Eds). Gambling in Australia. (pp. 146-162). Sydney: Croom Helm.
93. Walker, M.B. 1992. The psychology of gambling. Oxford: Pergamon Press.
94. Wardman, D., el-Guebaly, N. & Hodgins, D. 2001. Problem and pathological gambling in North American Aboriginal populations: A review of the empirical literature. Journal of Gambling Studies. 17, 81-100.
95. Weinstein, D. & Deitch, L. 1974. The impact of legalized gambling: The socio-economic consequences of lotteries and off-track betting. New York: Praeger Publications.
96. Welman, J.C. & Kruger, S.J. 2001. Research methodology. 2nd ed. Oxford University Press: South Africa, Cape Town.
97. Winer, B.J. 1971. Statistical principles in experimental design. 2nd ed. Tokyo: McGraw-Hill.
98. Zinberg, N.E. 1974. High states: A beginning study. Drug Abuse Council Publication No. SS-3. Washington, DC: The Drug Abuse Council, Inc.

99. Zinberg, N.E. 1975. Addiction and ego function. Psychoanalytic Study of the Child. 30, 567-588.
100. Zinberg, N.E. & Fraser, K.M. 1979. The role of the social setting in the prevention and treatment of alcoholism. In N. Mello (Ed.). The Diagnosis and Treatment of Alcoholism. (pp. 359-385). New York: McGraw-Hill Book Company.
101. Zinberg, N.E. & Shaffer, H.J. 1985. The social psychology of intoxicant use: The interaction of personality and social setting. In H.J. Shaffer (Ed.). The Addictions: Multidisciplinary Perspectives and Treatments. Lexington, MA: Lexington Books.
102. Zinberg, N.E. & Shaffer, H.J. 1990. Essential factors of a rational policy on intoxicant use. Journal of Drug Issues. 20(4), 619-627.

ANNEXURE A**SOGS QUESTIONNAIRE – EARLY RECOGNITION GAMBLING TEST**

(South Oaks Gambling Screen: Developed by H. Lesieur & S. Blume, 1987; adapted by M. Prins)

NAME:

DATE:

1. Below you will find the most common forms of gambling. Write down which forms of gambling you have ever done in you life. You can fill in: “never”, “less than once a week” or “once a week or more”.

	Never	Less than 1 x p.w.	1 x p.w. or more
a. Playing cards for money	-----	-----	-----
b. Betting on horses, dogs or other animals (e.g. tote)	-----	-----	-----
c. Playing at dice; gambling with dice for money (e.g. bluff poker)	-----	-----	-----
d. Casino visit (legal)	-----	-----	-----
e. Playing Golden Ten (legal and illegal)	-----	-----	-----
f. Lotteries (local and regional), e.g. state lottery, tote national lottery, TV programmes	-----	-----	-----
g. Participation in bingo and keno evenings	-----	-----	-----
h. Trading in shares and options	-----	-----	-----
i. Playing slot machines, e.g. fruit machines	-----	-----	-----
j. Any other game or activity in which betting money is involved such as	-----	-----	-----

2. What is the biggest amount of money you have ever gambled with in one day?
- not applicable
 - R1 or less
 - R1 – R10
 - R10 – R100
 - R100 – R1 000
 - over R10 000
3. Do/Did your parents have gambling problems?
- both father and mother
 - father only
 - mother only
 - neither
4. Do you sometimes to back the next day in an attempt to recoup the money you lost?
- never
 - sometimes
 - usually, especially losing
 - always after losing
 - not applicable
5. Have you ever said you have won money when in reality you had lost?
- never
 - occasionally
 - yes, often
 - not applicable
6. Do you sometimes think you have a gambling problem?
- no
 - no. for I don't gamble
 - yes, in the past, but not now
 - yes
7. Have you ever gambled away more money than you intended?
- yes
 - no
 - not applicable
8. Have people ever made critical remarks about your gambling?
- yes
 - no
 - not applicable
9. Have you ever felt guilty about your method of gambling?
- yes
 - no
 - not applicable

- | | | | | |
|-----|--|-------|----------------|----------------|
| 10. | Have you ever considered giving up gambling and had the feeling at the same time that you would fail to? | ----- | yes | |
| | | ----- | no | |
| | | ----- | not applicable | |
| 11. | Have you ever kept entrance tickets, membership cards for casinos, lottery tickets, gambling money (borrowed, saved or won) hidden away from people in your immediate environment? | ----- | yes | |
| | | ----- | no | |
| | | ----- | not applicable | |
| 12. | Have you ever argued with people you live with about how you manage your money? | ----- | yes | |
| | | ----- | no | |
| | | ----- | not applicable | |
| 13. | (Only if you answered question 12 with "yes")
Do differences of opinion on money also lead to remarks about your gambling behaviour? | ----- | yes | |
| | | ----- | no | |
| | | ----- | not applicable | |
| 14. | Have you ever borrowed money from others without paying it back because of gambling? | ----- | yes | |
| | | ----- | no | |
| | | ----- | not applicable | |
| 15. | Have you ever been absent from work (or school) due to gambling? | ----- | yes | |
| | | ----- | no | |
| | | ----- | not applicable | |
| 16. | When you borrow money for gambling or to repay gambling debts, where or from whom do you borrow? | | | |
| | | Yes | No | Not applicable |
| a. | Household money | ----- | ----- | ----- |
| b. | Partner's money | ----- | ----- | ----- |
| c. | Other family members' or friends' money | ----- | ----- | ----- |
| d. | Bank | ----- | ----- | ----- |
| e. | Other money lenders | ----- | ----- | ----- |
| f. | Money from loan sharks | ----- | ----- | ----- |
| g. | Sale of personal and/or family effects | ----- | ----- | ----- |

		Yes	No	Not applicable
h.	From the pawnbroker	----	----	----
i.	Cashing false cheques	----	----	----
j.	Revolving credit	----	----	----
k.	Revolving credit with casinos	----	----	----

ANNEXURE B**GAMBLERS ANONYMOUS 20 QUESTIONS**

- | | | |
|-----|--|---------------|
| 1. | Have you ever lost your sense of time while gambling? | <i>yes/no</i> |
| 2. | Does gambling make your home life miserable? | <i>yes/no</i> |
| 3. | Is gambling influencing your daily work? | <i>yes/no</i> |
| 4. | Do you ever feel regret after gambling? | <i>yes/no</i> |
| 5. | Do you ever gamble to make money in order to pay debts or solve other financial problems? | <i>yes/no</i> |
| 6. | Does gambling decrease your efficiency? | <i>yes/no</i> |
| 7. | When you lose, do you have the feeling that you have to go back as soon as possible to make good on your losses? | <i>yes/no</i> |
| 8. | When you win, do you feel an urge to go back and win more? | <i>yes/no</i> |
| 9. | Do you usually play until you have gambled away your last rand? | <i>yes/no</i> |
| 10. | Do you sometimes borrow money in order to gamble? | <i>yes/no</i> |
| 11. | Have you ever sold personal belongings to pay for your gambling? | <i>yes/no</i> |
| 12. | Do you hate to use gambling money for normal expenses? | <i>yes/no</i> |
| 13. | Does gambling make you careless? | <i>yes/no</i> |
| 14. | Do you sometimes gamble for longer than you intended? | <i>yes/no</i> |
| 15. | Do you sometimes gamble to escape problems or worries? | <i>yes/no</i> |
| 16. | Have you ever thought about doing something illegal to finance your gambling fever? | <i>yes/no</i> |
| 17. | Do you ever suffer from insomnia because of gambling? | <i>yes/no</i> |
| 18. | Do frustrations, controversy, etc., create in you the urge to go gambling? | <i>yes/no</i> |
| 19. | Do you get your main pleasure in life in gambling? | <i>yes/no</i> |
| 20. | Do you ever consider suicide as an escape for your gambling problems? | <i>yes/no</i> |