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AN EXPLORATORY STUDY OF RESPONSIBLE GAMBLING BEHAVIOUR

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ABSTRACT

In light of the findings of a pilot study by this researcher, entitled *a study of the behaviour and strategies of responsible gamblers*, it is vital that responsible gambling behaviour in the Eastern Cape be researched more thoroughly. The pilot study found that many ordinary gamblers experience cognitive distortions which may predispose them to varying levels of gambling problems, as well as specific biographical attributes that may determine such an outcome. The present study aims to address the limitations and recommendations put forward by the pilot study, namely its relatively small scale, and lack of generalisability as a result of sampling from a single gambling population. This project set out to assess gambling behaviour, and more so responsible gambling practices, to be able to conclude how, and in what form, responsible gambling takes place.

The research was conducted using a sample of one-hundred-and-thirty-seven gamblers from Hemingway's Casino in East London to develop data and establish norms on general gambling behaviour over a week, by administration of a survey questionnaire. The analysis of the data focussed on areas such as the link between gender and gambling behaviour, amount earned and amount spent on gambling, age and gambling trends as well as belief in luck and chances to win. Finally, the strategies (if any) used by gamblers to avoid problem gambling or overspending were assessed, and described by the gamblers themselves, and added to the results of the research.

The results indicate that the majority of gamblers in the Eastern Cape are responsible, but many do still exhibit cognitive distortions and other behaviours that might put them at risk for problem gambling. With these results it is possible to provide basic data and information about the nature of gambling in the East London area that can be added to previous (as well as subsequent) studies, in order to build a clearer and more representative picture of the gambling situation in the Eastern Cape, South Africa.

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INTRODUCTION

In recent years there has been growing interest and research into gambling behaviour (Walker, 1992) as it has been realised that the activity brings with it a host of potential dangers. Even though there have been numerous studies into gambling behaviour, there is more limited information and research available in the South African context.

In an attempt to address this lack of research, four honours students from Rhodes University administered questionnaires to ninety-four participants at the Boardwalk Casino, in Port Elizabeth in 1994, in the form of a pilot study of gambling behaviour. In light of the findings (Harris, 2004), it has been considered essential that gambling in the Eastern Cape be researched more thoroughly since problem gambling could adversely affect the community within which it is situated.

Although limited, the pilot study revealed gambling trends in the Eastern Cape that approximate national statistical averages, suggesting that not only is the social acceptability of gambling in the Eastern Cape on the rise but, with it, proportionate increases in problem and pathological gambling too, as indicated by the literature (Harris, 2004). In a survey undertaken by the National Responsible Gambling Programme (National Responsible Gambling Board, 2004) consisting of 5,816 South Africans living in urban areas "with easy access to commercial gambling", it was found that only 5% of those gambled too much. This figure is encouraging in comparison to international statistics, but the percentage of adults with gambling problems is bound to increase with time as gambling becomes more socially acceptable and accessible (Blaszczynski, 1998). The pilot study also found that many ordinary gamblers hold irrational beliefs. According to Dickerson (1984), these beliefs are called 'cognitive distortions' - which are maintained by biased interpretations of evidence and are a feature of virtually all irresponsible gamblers. Such beliefs predispose the level of problem gambling an individual may develop, and reinforces discrepancies between beliefs and responsible gambling behaviour. It was also found that perceptions of responsibility are markedly influenced by social desirability, having a potentially negative impact on the validity and reliability of results. Gambling,

specifically the stigma associated with problem gambling, makes people wary. According to Bondolfi, Osiek and Ferrero (2000), issues of validity and reliability often threaten research where participants are expected to report on behaviour or activities that are seen to be unacceptable or deviant. Despite an increase in social acceptability, gambling has not yet completely outgrown public suspicions and many still view the activity as morally questionable.

Even though there have been numerous studies into the effects of gambling on individuals and the society within which gambling establishments are situated, gambling research is particularly vulnerable to the specifics and particularities of its subjects. As such, this study aims to address the limitations of the pilot study - specifically its relatively small scale and a lack of generalisability as a result of sampling from a single gambling population; doing so will extend its applicability to the greater Eastern Cape area. This research will begin with a review of the literature surrounding gambling behaviour and then describes the methods and results of this study. Lastly, the discussion will link the literature with the research findings.

1. LITERATURE REVIEW

This chapter will provide a context for understanding gambling behaviour at its various levels, beginning with definitions and the more widely held theories that support them. Following this is a discussion of some of the many negative outcomes experienced by gamblers, as well as forms of behaviour and strategies that lend to these kinds of outcomes. Finally, it will explore the various demographic factors of gamblers, both responsible and irresponsible, and will provide some explanations regarding them.

1.1. DEFINITIONS OF GAMBLING BEHAVIOUR

Broadly speaking, gambling is defined as staking something valuable in the hope of winning a prize where the outcome is unknown to the participants (Promotion of Responsible Gambling in South Africa, 2002). There are many forms of gambling, and they all vary in the extent to which the player can exercise skill to influence the outcome of the game. Some games like bridge and poker are played for money, allowing players to exhibit high levels of skill in their play. By contrast, games such as bingo, the various forms of lotteries, and especially slot machines provide little, if any, opportunity for skill. Most gambling is conducted through legalised and controlled games provided by gambling establishments such as casinos, where a percentage of the money invested is taken as profits or taxes. The result of this is that these games are not fair in the sense that money wagered is equal to expected payoffs. In fact, many slot machines in South Africa are designed or programmed to take up to 90% of all money accepted. Thus, the odds on the money won in relation to the bet varies from game to game, and can range between anything from 1:1 for odds on favourites in horse races through to more than 1,000,000:1 in some lottery games. Thus, gamblers generally have very little control over the outcome of a game and the odds are overwhelmingly stacked in favour of the casino.

For most people in South Africa, gambling is seen and treated like a recreational activity that involves fun, chance and socialising with others. These individuals are aware of the controlled nature of gambling and consider themselves lucky if they win. There are however a small number of people who expect to win, and will become problem or pathological gamblers through

the overspending of money as well as time when gambling. Over the last decade research has identified varying levels of gambling involvement among such individuals. As such, most researchers agree that gambling can best be conceptualised on a continuum ranging from non-gambling, to social and recreational gambling, to problem gambling and to pathological gambling (Hardoon & Derevensky, 2002).

Pathological gambling differs from the recreational or social gambling of most adults, who view it as a form of entertainment and wager only small amounts. Pathological gambling is described as “a chronic and progressive failure to resist impulses to gamble, characterised by undesirable outcomes ranging from borrowing money from family or friends and losing time at work, to being arrested for offences committed to support gambling” (American Psychiatric Association, 1980), and was first included as a mental health diagnosis in 1980 in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM), the official publication of the American Psychiatric Association, classified in the section on disorders of impulse control. A diagnosis for pathological gambling is given if gamblers meet five or more of the following criteria for pathological gambling in the DSM-IV:

- ❖ Preoccupation with past, present, and future gambling experiences and with ways to obtain money for gambling
- ❖ A need to increase the amount of wagers
- ❖ Repeated unsuccessful efforts to cut back or stop
- ❖ Becoming restless or irritable when trying to cut back or stop
- ❖ Gambling to escape from everyday problems or to relieve feelings of helplessness, anxiety, or depression
- ❖ Trying to recoup losses immediately after losing money (chasing losses)
- ❖ Lying about gambling
- ❖ Committing illegal acts to finance gambling
- ❖ Losing or jeopardising a personal relationship, job, or career opportunity because of gambling
- ❖ Requesting gifts or loans to pay gambling debts

* Adapted from the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, (APA, 1994).

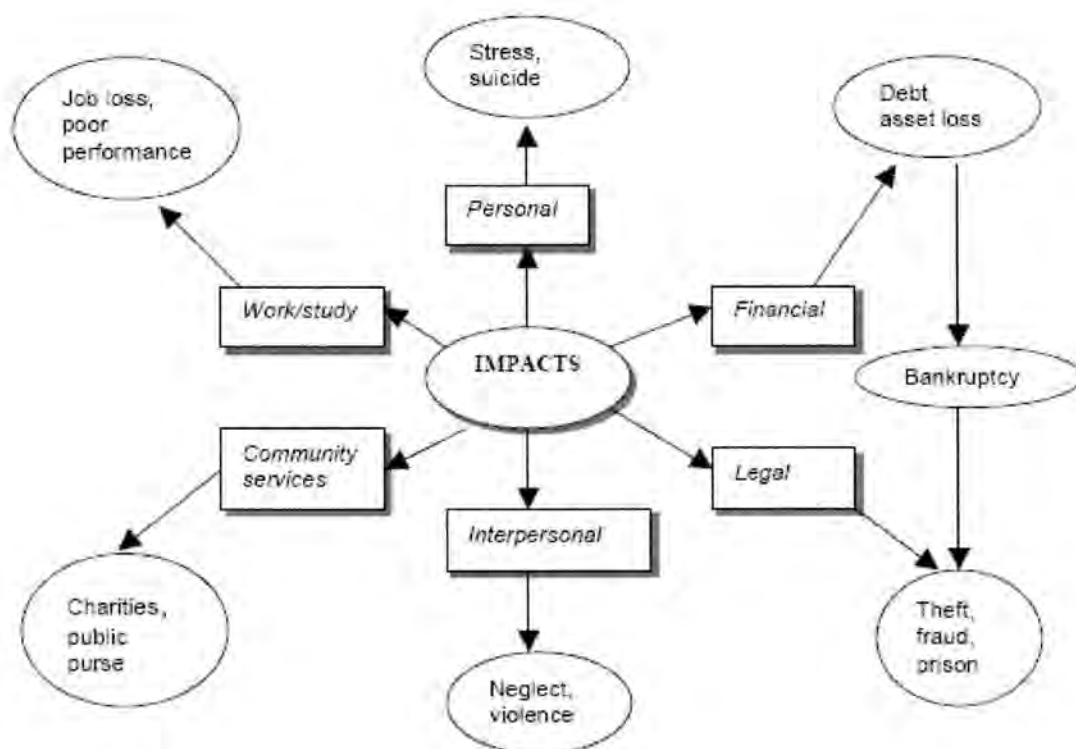
Various terms have been used to describe these individuals, including “compulsive”, “excessive”, “addictive”, “dependent”, “neurotic”, and “pathological” (Blaszczynski, 1998). Although the DSM-IV provides a widely accepted definition of and diagnostic criteria for pathological gambling, the term “problem gambling” is somewhat more difficult to conceptualise and define. In much of the research literature, problem gambling is used to include pathological gambling (Shaffer, LaBrie & Leplante, 2004). In fact, due to the continuum of gambling behaviours, pathological gambling encompasses problem gambling as all pathological gamblers have been problem gamblers at some point. Thus, problem gambling is most commonly characterised as describing those individuals who meet less than five DSM-IV criteria for a diagnosis of pathological gambling (Lesieur & Rosenthal, 1998).

In recent times, there has been a dramatic shift in approaches towards controlling gambling behaviour. The current attitude is one of fostering vigilance and responsibility, and an inundation of awareness and responsibility campaigns stand testament to this. Responsible gambling has no official definition, but a common-sense understanding is that a responsible gambler gambles within their means, keeps track of time whilst gambling, and never disregards familial or occupation responsibilities as a result of their gambling behaviour. Korn, Gibbons, and Azmier (2003), however, argue the term “responsible gambling” has moral connotations and can be ambiguous. The term can imply either informed choice about gambling, advocacy of gambling, or place the responsibility for gambling problems with the individuals who struggle against their impulses. As such, the term “responsible gambler” is an elusive term which needs further and more precise conceptualisation before it will serve as an adequate construct for this type of behaviour.

1.2. IMPACTS OF GAMBLING

The growth of legal gambling in South Africa in recent decades has been stimulated to a large degree by increasing public acceptance of gambling as a form of recreation, and by the promise of substantial economic benefits for the communities in which the gambling occurs. Although legalised gambling usually does have beneficial economic consequences for some communities, problem gambling has resulted in economic, social and personal costs. Estimating these costs has proven extraordinarily difficult, and is currently a subject of heated debate. Without standardised methods of measurement, comparisons are difficult and unreliable. Monetary costs would allow the clearest comparisons, especially in relation to the economic benefits from gambling, but human suffering cannot be measured in terms of money. Also, many of the consequences commonly attributed to problem gambling, such as divorce, child abuse, depression, and so forth, may be the result of many factors that are difficult to untangle. Inevitably, attempts to estimate the costs of problem and pathological gambling are extremely variable. For these reasons literature relating to cost/benefit analyses serve little more than to raise questions regarding ethical gambling policies, and as such it would be best to discuss these impacts in isolation of economic benefits.

In terms of the *Diagnostic and Statistical Manual of Mental Disorders* criteria for pathological gambling, the definition itself includes adverse consequences for the individual, such as crime, financial difficulties, and interference in interpersonal relationships. Accordingly, a pathological gambler may be and often is defined by the presence of at least a few of these consequences (American Psychiatric Association, 1994). The following diagram provides a conceptual framework for, and illustrates the variety of negative impacts of, excessive gambling behaviour.



Source: The Productivity Commission (1999)

Most of the literature regarding the costs of excessive gambling considers consequences for the gambler and those with whom the gambler has most frequent interactions, including family, friends, and close contacts. Although these costs are terrible, they almost always extend far beyond the individual and family to the community at large. What follows is a brief exploration of the literature regarding these negative outcomes.

1.2.1. The individual

Problem and pathological gambling has been found to affect the life of the gambler in varied and profound ways. Although research in this area is sparse, all evidence suggests that the magnitude and extent of the personal consequences of excessive gambling is severe. On an individual level, the problem gambler can experience irritability, extreme moodiness, and problems with personal relationships (including divorce), absenteeism from work, family neglect and bankruptcy. There are also often adverse health consequences such as depression, insomnia, intestinal disorders, migraines and other stress-related disorders related to excessive gambling (Lorenz & Yaffee,

1988). Griffiths (2001) found that pathological gambling is associated with a range of serious health co-morbidities including substance abuse, circulatory disease, gastrointestinal distress, anxiety and depression, and a high risk of suicide (Ladouceur, 2004). Exacerbating the gamblers condition is the dysfunctional family relationships that result from their behaviour, which in turn results in a destructive cycle of self-harm (Frank, Lester & Wexler., 1991). As gambling progresses towards a pathological level, there is often a corresponding increase in depression, shame and guilt.

Research suggests that as many as 20% of people in treatment for, or diagnosed with pathological gambling, may attempt suicide. In a national survey of 500 Gamblers Anonymous members, those assessed as being at highest risk for suicide were more likely to be separated or divorced (24%) and to have relatives who gambled or were alcoholic (60%). Research conducted by Lesieur and Blume (1991) reveal that approximately 17% of gamblers have considered suicide, and 13% of those who had attempted it, had children with some type of addiction. Furthermore, while attempting to stop, pathological gamblers reported at least one physical side-effect, including insomnia, headaches, upset stomach, loss of appetite, physical weakness, heart racing, muscle aches, breathing difficulty and/or chills (Griffiths, 2001). It is suggested that pathological gamblers experience physical withdrawal effects similar to those experienced by substance abuse addicts.

1.2.2. The interpersonal

Research has shown that many families of pathological gamblers suffer from a variety of financial, physical, and emotional problems (Boreham, Dickerson & Harley, 1996). Lorenz and Shuttlesworth (1983) found that many family members had serious emotional problems and had resorted to drinking, smoking, overeating, and impulsive spending. Furthermore, spouses of pathological gamblers suffered from many of the stress-related symptoms that the gamblers themselves experience. These include chronic or severe headaches, stomach problems, dizziness, and breathing difficulties (Lorenz & Yaffee, 1988). In addition, many spouses also evidenced emotional problems of anger, depression, and isolation. Pathological gamblers are purported to

distance themselves from family and friends, who are alternately neglected and manipulated for “bailouts” (Custer & Milt, 1985). The ultimate relationship costs to the gambler typically manifest when the gambler reaches a stage of desperation or hopelessness.

Research by Bland and colleagues (1993) estimated that 23% of the spouses of pathological gamblers were physically and verbally abused, whilst Lorenz and Shuttlesworth (1993) estimated that as much as 50% of spouses experienced physical abuse from the pathological gambler. Rotter (2001) investigated the deterioration of pathological gamblers relationships, and found that 23% of problem and pathological gamblers had affairs; 49% reported problems with sexual relationships; 35% divorced, separated, or remarried; and 80% reported difficulty communicating their feelings with their spouse (Ricketts & Macaskill, 2004).

In a study by Jacobs (1989a), the behaviour of children who characterised their parents as problem or pathological gamblers was compared with those who reported their parents as having no gambling problems. Children of compulsive gamblers were more likely to smoke, drink, and use drugs. Furthermore, they were more likely to describe their childhood as unhappy periods of their lives. Lesieur and Rothschild (1989) found that children of pathological gamblers frequently reported feelings of anger, sadness, and depression. Bland and colleagues (1993) estimate that as many as 17% of children of pathological gamblers are physically and verbally abused, whilst Lorenz and Shuttlesworth (1993) estimate that 10% of children experienced physical abuse from the pathological gambler.

1.2.3. Financial / legal

The financial consequences of excessive gambling can range from bad credit and legal difficulties to complete bankruptcy. Financial losses pose the most immediate threat to the excessive gambler, and as access to money becomes more limited, gamblers often resort to crime in order to pay debts and bookies, to maintain appearances, and to get hold of more money to gamble (Meyer & Fabian, 1992). Several studies have reported pathological gamblers who commit offences and serve prison terms for such offences as fraud, stealing, embezzlement, forgery, robbery, and blackmail (Lesieur & Anderson, 1995).

In the United Kingdom, Fisher (1991) reported that 46% of adolescents surveyed stole money from their family, 12% stole from others, 31% sold their possessions, and 39% gambled with their school lunch or travel money, in order to gamble. In an Australian study (Blaszczynski & McConaghy, 1994a), most of the gamblers reported using their wages to finance gambling, supplemented by credit cards (38.7%), borrowing from friends and relatives (32.9%), and loans from banks and financial institutions (29.8%). In Canada, Ladouceur, Dube and Bujold (1994) found that, on average, the pathological gambler used family savings (90%), borrowed money (83%), or both.

Another cost to the pathological gambler is loss of employment. According to Ladouceur et al., (1994), approximately one-third of gamblers in treatment in Gamblers Anonymous report the loss of their jobs due to gambling. He also found that 28% of the 60 pathological gamblers attending Gamblers Anonymous either reported that they had filed for bankruptcy or reported enormous debt. Although the research in this area is sparse, it suggests that the extent of financial consequences on the pathological gambler and his or her family are severe.

1.2.4. The community

In addition to the costs of problem and pathological gambling on the individual and his or her family, there are broader costs to society. It was estimated that the annual average costs of job loss, unemployment benefits, welfare benefits, poor physical and mental health, and problem or pathological gambling treatment is approximately \$1,200 per pathological gambling per year and approximately \$715 per problem gambler per year. It was further estimated that lifetime costs (bankruptcy, arrests, imprisonment, legal fees for divorce, and so forth) at \$10,550 per pathological gambler, and \$5,130 per problem gambler. From these figures, it is calculated that the aggregate annual costs of problem and pathological gambling caused by the above factors are approximately \$5 billion per year, and \$40 billion in estimated lifetime costs (Lesieur, 1998). This study however focussed on a small number of tangible consequences and did not attempt to estimate the financial costs of any gambling related incidences of theft, embezzlement, suicide, domestic violence, child abuse and neglect, and the non-legal costs of divorce. According to the National Opinion Research Centre (1999):

“The current economic impact of problem and pathological gambling, in terms of population or cost per prevalent case, appears smaller than the impacts of such lethal competitors as alcohol abuse (estimated annual cost of \$166 billion) and heart disease (estimated annual cost of \$125 billion). However, the costs that are measured through health-based estimates do not capture all of the consequences important to the person, family, or society. The burden of family breakdown, for example, is outside of these measures.” (pg. 15).

Although reliable impact assessments in communities within which, and when gambling is introduced, are in most cases culturally and geographically specific, many reveal that the incidence of vagrants, beggars, rape and theft increased significantly (Korn et al., 2003).

1.3. GAMBLING THEORIES

There are many factors believed to play a part in the acquisition, development and maintenance of gambling behaviour. Based on the literature, there is a complex interaction of biological, environmental, and psychological processes that result in gambling and problem gambling behaviour. Blaszczynski (2000) argues that a model of problem or pathological gambling should incorporate biological, personality, developmental, cognitive, learning and environmental factors. However, the overwhelming majority of literature keeps these factors separate and distinct. As such, the following section will address addiction, personality, cognitive and learning/behavioural theories of gambling behaviour individually and systematically.

1.3.1. ADDICTION THEORIES

Preoccupation, tolerance, and other DSM-IV criteria for pathological gambling, such as repeated unsuccessful efforts to stop gambling and becoming restless or irritable when attempting to do so, are indicative of physiological dependence (Rosenthal & Lesieur, 1992). In addition, the self-help community has thought of what it terms compulsive gambling as an uncontrollable emotional illness (Gamblers Anonymous, 1997). As such, many researchers have turned their attention to the extensive body of literature on addictions to explain pathological and problem gambling behaviour. For example, research has begun to explore the possible biochemical basis of excessive gambling and its effects on the brains of pathological gamblers (Comings, 1998). Currently, however, the belief that pathological gambling should be classified as an addiction is almost entirely theoretical. Despite this, DSM nomenclature has highlighted the similarity of pathological gambling to substance abuse since its third edition in 1987 (American Psychiatric Association, 1987, 1994), but it uses only the terms “abuse” or “dependence,” not addiction.

Jacobs (1989b) however, has proposed an interactive model of addiction, defining it as a dependent state acquired by a predisposed person in an attempt to relieve a condition of chronic stress. Using pathological gambling as the prototype addiction, he suggests that two interacting sets of factors (an abnormal physiological arousal state and childhood experiences resulting in a deep sense of personal inadequacy and rejection) in the right environment may produce addiction to any activity or substance that possesses three attributes: (1) it blurs reality by temporarily

diverting the person's attention from the chronic aversive arousal state, (2) it lowers self-criticism and self-consciousness through an internal cognitive shift that deflects preoccupation from one's perceived inadequacies, and (3) it permits complimentary daydreams about oneself through a self-induced dissociative process. The general theory holds that an individual's addictive pattern of behaviour is specifically chosen as a means for entering and maintaining a dissociative-like state. Jacobs also characterises this as a type of self-medicating strategy. Testing this theory on pathological gamblers, persons with other kinds of addictions, and normal control subjects, Jacobs and others have found primarily through self-report research, similar dissociative states that are reported by pathological gamblers, alcoholics, and compulsive overeaters (Kuley & Jacobs, 1988).

1.3.2. PERSONALITY THEORIES

Hardoon and Deverensky (2002), state that personality factors are essential in the study of gambling behaviours as they affect the development and maintenance of certain behaviours. Personality features such as risk-taking, impulsive traits as well as sensation seeking, can all impact on gambling behaviour and the development of problem or pathological gambling.

1.3.2.1. Sensation-seeking

Of the various personality traits attributed to gambling behaviour, perhaps the strongest case has been made for sensation seeking. Sensation seeking is the "need for varied, novel, and complex sensations and experiences, and the willingness to take physical and social risks for the sake of such experience" (Zuckerman, 1979, p.10). That is, people engage in gambling because it has the capacity to create excitement. People seek stimulation and try to optimise their experience by shifting sensations. According to Zuckerman (1979), gamblers should be expected to score higher than non-gamblers on measures of sensation seeking, and Kuley and Jacobs (1988) have provided data that supports this relationship. Excessive sensation-seeking behaviour suggests poor impulse control, and many researchers have investigated the association between problem or pathological gambling behaviour and impulse control disorders (Kuley & Jacobs, 1988).

1.3.2.2. Impulse control

An impulse refers to an “incitement to action arising from a state of mind or some external stimulus”; or “a sudden inclination to act, without conscious thought”; or “a motive or tendency coming from within” (*Oxford English Dictionary*, 2nd edition, 1989). The essential feature of an impulse control disorder, as defined by DSM-IV, is “the failure to resist an impulse, drive, or temptation to perform an act that is harmful to the person or to others” (American Psychiatric Association, 1994, pg. 609). This essentially means a loss of control over behaviour. Existing literature on pathological and problem gambling uses many terms to describe impulsive behaviours from a variety of perspectives, including “sensation-seeking,” “behavioural disinhibition,” and “risk-taking” (Lopes, 1987). There is substantial literature suggesting that there is ample consensus as to the accuracy of these perspectives. (Davis & Brisset, 1995). For example, behavioural disinhibition—the inability or unwillingness to inhibit behavioural impulses—has been associated with gambling. (Castellani & Rugle, 1995). In a study of cocaine treatment-seekers (Steinberg et al., 1992), the only thing that differentiated those with gambling problems from those without problems was a measure of disinhibition. In a study comparing a group of pathological gamblers in treatment to a control group, Specker and colleagues (1996) found that a significantly higher proportion of pathological gamblers had at least one other impulse control disorder. Furthermore, Cunningham-Williams et al. (1998) have found increased antisocial behaviours and a history of criminal offences among pathological gamblers – suggesting disinhibitory tendencies; while Castellani and Rugle (1995) have found elevated rates of childhood and adult attention-deficit hyperactivity disorder (ADHD). Gambling and psychopathology is discussed further in the section on co-morbidity.

1.3.2.3. Risk-taking

Gambling is neither a financially nor a psychologically risk free experience. In addition to the possibility that gamblers will lose their money, they also risk experiencing a variety of adverse biological, psychological, and social consequences from gambling (American Psychiatric Association, 1994). Risk-taking underlies many human traits that have high significance for evolutionary survival, such as wanting and seeking food (Neese & Berridge, 1997). Moreover, risk-taking is reinforced by the emotional experiences that follow, such as relief from boredom,

feelings of accomplishment, and the “rush” associated with seeking excitement. However, individuals vary considerably in the extent to which they take risks. Although exceptions exist, games with the highest “action,” such as high-stakes poker and dice games, serve as more powerful stimuli to accelerate a player’s risk-taking by increasing the payoff if the bet is won. Even those not normally inclined to buy a lottery ticket, for example, often may do so when several million dollars in winnings are at stake (Clotfelter & Cook, 1989). The simple association between gambling and action, including the prospects of “winning big,” which characterise most popular gambling activities, can maintain stable gambling behaviours despite incredible odds against winning (Lopes, 1987).

1.3.2.4. Extroversion

Eysenck (1967) has underpinned introversion and extroversion psycho-physiologically, providing some insight into personality traits of such gamblers. Introverts are easily aroused and are generally more cortically aroused than extroverts are. Thus, introverts condition rapidly and extinguish slowly. Generally, punishment exerts a greater influence over the introvert. By contrast, extroverts crave excitement, enjoy noisy, active environments, and are more likely to be impulsive and act spontaneously. Importantly, rewards exert a greater influence than punishment over the extrovert. According to the characteristics presented, it is suggested that the extrovert should enjoy gambling more. The extrovert craves excitement and there is adequate evidence to suggest that, to the gambler, the gambling is exciting (Dickerson 1984). Furthermore, since the extrovert is more influenced by rewards, the steady trickle of rewards in repetitive games such as slot machines and horse betting should be sufficient to keep the extrovert involved. The introvert will focus on the losses and can be expected to leave the game early. Thus, gambling can meet a need in the extrovert that is not present in the introvert.

1.3.2.5. Locus of control

Locus of control is one personality dimension heavily used in research. The central idea is that reinforcement which is perceived to be under the control of the individual will increase the habit strength of the reinforced behaviour, whereas reinforcement which is perceived to be independent of the individual will not increase habit strength. Rotter, with whose name internal-external locus of control has become associated, defined external locus of control as follows:

“When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his actions, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual, we have labelled this a belief in external control” (Rotter 1966, p.1).

With regard to gambling, it seems clear that an internal locus of control would predispose the individual to avoid gambling whereas an external locus of control would be congruent with the activity. However, a confounding factor is whether the external locus of control precedes the gambling, or whether the gambling preceded the external locus of control.

1.3.3. COGNITIVE THEORIES

The cognitive perspective provides some explanations for the regular gamblers, as well as the individual gamblers perseverance despite repeated failures whilst gambling. The cognitive perspective says that the regular gambler maintains a set of beliefs – many of which are false (irrational thoughts, erroneous cognitions and misperceptions) - that include the illusion of control (Langer, 1975) and the misperception of the independence of chance events (Ladouceur et al., 1996).

“The underlying assumption is that the motivational component of the gambling activity, namely the hope of overall monetary gain and the desire to beat the game, combines with these erroneous beliefs and propels the individual to repeatedly engage in the activity despite losses” (Ladouceur & Walker, 1996).

1.3.3.1. Illusion of control

Most gamblers believe that they have some skill or ability to influence the outcome of a chance event (Blaszczynski, 1998). For instance, the slot machine player believes that pressing the button with a certain pressure will influence the spin. Langer (1975) called this belief of the ability to alter the outcome of chance events the “illusion of control”. Letarte, Ladouceur and Mayrand (1985) have demonstrated the illusion of control experimentally in roulette. They found that roulette players who believed that strategies of play may influence the outcome of a game also believed that their method of play in an actual game influenced the outcome in 44% of instances. By contrast, players who believed that chance is the main factor in roulette reported much less influence over outcomes (14%).

Walker (1992) investigated these faulty cognitions in slot machine players. He concluded that it is the erroneous cognitions that maintain an individual's gambling behaviour despite repeated losses. The occasional large payoff of the slot machine provides sufficient reinforcement for players who inaccurately believe they can influence the outcome and will inevitably win.

Griffiths (1994) further investigated the role of cognitive bias and skill in gambling behaviour and found that regular gamblers made significantly more irrational verbalizations than non-regular gamblers (personification of the machine [e.g. ‘the machine likes me’] and references to the ‘number system’ [e.g. ‘I got a 2 there’]).

1.3.3.2. Biased evaluation of outcomes

The illusion of control may be maintained by another aspect of self deception: biased evaluation of outcomes. Biased evaluation is based on the premise that individuals are biased to choose beliefs that best suit their interest. Successful outcomes when gambling are attributed to factors internal to the person such as skill and effort, whereas failures are attributed to factors beyond personal control such as obstructions and bad luck. In other words, wins are taken as evidence of skill in selection (thereby discounting chance factors) whereas losses are given more thought and chance factors emphasised in explaining the losses. This biased evaluation of outcomes will allow the losing gambler to continue to believe in his or her ability to beat the system despite the monetary losses (Ross & Sicoly, 1979). In the area of gambling, the role of biased evaluation of outcomes has been demonstrated for sports betting in particular (Gilovich, 1983) but also for games of chance in general (Gilovich & Douglas, 1986).

1.3.3.3. The gamblers fallacy

The gamblers fallacy is the most common cognitive distortion (Constable, 2003). It says that something is more likely to happen in the future if it hasn't happened in a while. Conversely, something is less likely to happen in the future if it has recently happened frequently. People generally have a strong need to impose order or meaning on random processes, and researchers have investigated whether people can generate random sequences of binary events (for example, flipping a coin). Results show that they are often poor at both recognizing and creating such sequences (Wagenaar, 1988), may impose too many alternations on a sequence, or may equate randomness with a balance of event frequencies (Wagenaar, 1972). These tendencies contribute to the gambler's fallacy, which dictates that past losing events are less likely to occur in the future (Cook and Clotfelter, 1993). For example, after several heads have appeared sequentially in the tossing of a coin, it is hard for many to resist the temptation to believe that the next toss will not be heads once again, even though the odds are still 50 percent heads versus 50 percent tails. In addition to trying to identify predictable patterns in random sequences, people also try to control random outcomes. Langer (1975) refers to this effect as the illusion of control. Gamblers have a variety of methods for exerting their control in gambling situations. For example, Henslin (1967) noted that some gamblers believe they can influence the outcomes of a die roll by tossing

it softly for a low number and hard when a high number is desired. Keren and Wagenaar (1985) found that blackjack players would often switch to new tables after a streak of losses in order to change their luck. Other blackjack players would try to *interfere* with the shuffled order of cards by drawing an extra card that they would normally never draw. In this way, they believed they could break an unlucky predetermined pattern and put themselves on a winning streak. The attempt to impose order on random sequences also relates to overestimating the importance of minimal skill involved in some types of gambling. This was described by Gilovich et al. (1985) who claim that the "hot hand," apparent in basketball when a player's performance is perceived to be significantly better than expected, may be no more than a long sequence of randomly generated events. That is, players occasionally may perform better than expected simply due to chance, and to believe otherwise may be a cognitive distortion. However, playing basketball involves skill. So, although a successful string of free throws may be the result of chance, it is also possible that a player's shooting on a particular day may have been much more skilful than normal and due to little if any chance at all. As previously indicated, some forms of gambling (e.g., cards and track betting) involve both chance and limited skill. Cognitive distortions can occur when gamblers over- or underestimate the chance and the skill involved. Other forms of gambling, such as slot machines, involve no skill at all but can nonetheless affect illusions of control. Griffiths (1994) asked those who gambled frequently and infrequently, "Is there any skill involved in playing the slot machine?" Those who gambled infrequently tended to say, "mostly chance," whereas frequent gamblers often said, "equal chance and skill." When asked, "How skillful do you think you are compared with the average person?" frequent gamblers thought they were often above average in skill, whereas infrequent gamblers said they were either below average or totally unskilled.

1.3.3.4. The near miss

Another important mechanism is the psychology of the “near-miss”. When the outcome of a gamble is “close” to that on which the gambler put his or her money, an overly optimistic assessment of chance of future success is often produced (Gilovich, 1983). It is suggested that near-wins serve to confirm beliefs about the gambler’s ability to predict outcomes. There is also the idea that near-wins serve as reinforcers of gambling behaviour, much in the same way as actual wins do (Elster & Jorgen, 1999). Another feature of the near-miss is described by Kahneman and Tversky (1982), who believe that near wins produce what they call the “cognitive regret”, and suggest that the stronger the regret, the stronger the urge to gamble again.

Interestingly, Strickland and Grote (xxxx) demonstrated that by having more winning symbols on the first reel to stop and least winning symbols on the last reel to stop on slot machines, players could be induced to persist longer in playing a machine. This feature is standard in slot machines and is presumed to be effective because it induces the belief that success is imminent. The near miss is evident also in lottery, where buyers frequently report the extent by which they “missed” the winning numbers.

1.3.4. LEARNING AND BEHAVIOURAL THEORIES

1.3.4.1. Classical conditioning

Many researchers have noted that the sequence of outcomes in some forms of gambling (e.g., slot machines) is quite similar to a partial reinforcement schedule (Knapp, 1976). Winning, for example, represents a positive reinforcement. With partial reinforcement, rewards occur with some wagers, but not all. Gamblers are uncertain about which bets will produce rewards. In some forms of partial reinforcement, rewards come only after a certain number of responses (bets), but the number of responses is always changing. This is called a variable ratio schedule of reinforcement (Skinner, 1969). Variable ratio schedules of reinforcement do not produce learning as quickly as fixed ratio schedules of positive reinforcement (e.g., winning every bet), but after learning has occurred, extinction of behaviours acquired via variable ratio schedules of reinforcement is more difficult than with any other type of reinforcement schedule. This phenomenon may explain people’s persistence in gambling despite large losses (Skinner, 1969).

Furthermore, the greater the size of the rewards, the more resistant the behaviour is to extinction, a result that suggests gamblers who experience large wins early in their gambling careers may be most susceptible to addiction. Some theorists have pointed out that gambling can provide reinforcement even in the absence of a win. Reid (1986) noted that near misses or a loss that were “close” to being wins also encouraged gambling. Not surprisingly, some slot machines are designed to ensure a higher than chance frequency of near misses. Such reinforcement can occur at no expense to the casino. Finally, the casino environment itself provides reinforcing effects, such as flashing lights, ringing bells, bright lighting and colour schemes, and the clanging of coins as they fall into the winning collection bins of slot machines (Knapp, 1976). People are often “primed” when casinos give away rolls of free coins, or allow people to gamble without charge for limited periods of time. For all of these reasons, excessive gambling may be viewed as a conditioned response to powerful reinforcers.

1.4. DEMOGRAPHIC FACTORS

1.4.1. GENDER

The DSM-IV reports that the rate of pathological gambling is as much as twice as high among men as among women (American Psychiatric Association, 1994), and further studies by Cunningham-Williams et al. (1998) have found rates that support this. Hardoon and Derevensky (2002) have also found that men exhibit more gambling problems than women, start gambling at a younger age, gamble on more games, and on average spend more time and money gambling. They speculate that gambling allows males to display their masculinity in a social environment by exhibiting 'courage and bravery' and this is why gambling appears to be more popular among them. In terms of the variety of gambling activities available, research has shown that females prefer scratch tickets and lotteries, whereas males prefer sports betting and card games (p. 27). Women, however, appear to experience the onset of problem gambling earlier in the course of their gambling disorder than men (Mark & Lesieur, 1992), and recent research indicates that the problem is steadily growing among the female population (Crisp, Thomas, Jackson & Smith, 2000).

The current clinical picture of pathological gamblers in recovery programmes such as 'Gamblers Anonymous' suggests that men are less likely to ask for or acknowledge that they need help for their gambling problems. Research conducted by Crisp et al. (2000) states that women are twice as likely to seek help as men are and it is argued that help-seeking by men is incongruent with gender roles. It is further suggested that masculinity has come to be associated with restrictive emotionality resulting in many men having difficulty identifying and expressing their affective reactions. These fears can lead to men avoiding therapy or help seeking behaviour (Crips et al., 2000).

1.4.2. AGE

Gambling research of youth gamblers suggests that youth gambling is the fastest growing addiction among adolescents today, and adolescents are particularly susceptible to the development of gambling-related problems. The literature suggests that a large percentage of adolescents are gambling at most legal gambling establishments, despite age prohibitions, as well as engaging in non-regulated and illegal gambling activities. However, more youth gamble illegally than those gambling legally (Schissel, 2001). Problem gambling prevalence rates are 2 to 4 times greater than those of adults (Gupta & Derevensky, 1998a). Also, adolescent problem gamblers report beginning gambling at earlier ages -approximately 10 years of age (Wynne et al., 1996), in comparison with adults who report starting gambling at ages of around 19. Studies reveal that gamblers, especially pathological and problem gamblers who begin gambling as children or adolescents, are frequently introduced to gambling by family members or their peers (Jacobs, 1989). Often the first exposure to gambling for youths is gambling in a relaxed family setting with cards, dice, and board games. Other forms of gambling exposure reported by adolescents include playing lotteries, playing games of skill such as bowling or billiards for money, sports betting, racetrack betting, and gambling in casinos (Kuley & Jacobs, 1988). Evidence is increasingly beginning to support the hypothesis that youth move more rapidly from social gambling to problem gambling (Derevensky & Gupta, 1996). Adolescent problem gamblers also remain at increased risk for the development of multiple addictions (Winters & Anderson, 2000). As with adults, youth problem gamblers engage in delinquency; abuse cigarettes, alcohol, and drugs; and demonstrate significant impairment in family and peer relationships and social and school performance (Lightsey, 2002). Adolescents with gambling problems, as with adults, are often preoccupied with gambling, planning their next gambling activity, lying to their family and friends, and obtaining money with which to gamble (Hardoon & Derevensky, 2002). As a result, most areas of problem gamblers lives, especially the youth gamblers' lives, can be affected by excessive gambling behaviour (Nower et al, 2004).

As with Youth gambling, there has been relatively little research on problem gambling in the elderly. While pathological gambling is found proportionately more often among the youth, there are growing numbers of elderly problem and pathological gamblers as well (Kausch, 2004). This

growth will likely continue as the population ages as a whole and as opportunities for legalised gambling continue to expand as is the case in many countries around the world (Ladouceur, 2004). Many old age homes or centres are beginning to offer outings to gambling establishments during leisure excursions. The premise is that gambling is a social activity where a level of excitement can be experienced by elderly people (Kausch, 2004). However, as has been the experience with adults and the youth, people who are socio-economically marginalised tend to spend a higher relative proportion of their money than richer people. For elderly people this poses huge consequences as the majority of elderly do not have large disposable incomes and as such cannot afford to spend money where the returns are never assured (Schissel, 2001). The perception of gaining back a sense of control, power and having the opportunity to socialise with new people makes gambling a very attractive option for many people, but especially people who have low levels of personal power and social position, thus making the elderly likely candidates for developing problem gambling (Kausch, 2004). As with problem gambling among the youth, more research, especially in a South African context, needs to take place for a real understanding of elderly gambling and problem gambling behaviour to be achieved.

1.4.3. SOCIO-ECONOMIC STATUS

The literature indicates a tendency for lower-income persons to be overrepresented among pathological and problem gamblers. It is suggested that for the poor, as well as people with limited education, gambling can lead to perceived promises of unattainable wealth; it can appear to offer a solution to many of life's social and financial problems.

According to Schissel (2001), gambling is a form of regressive taxation that tends to draw proportionately more revenues from the poorer segments of the society. Gambling draws "public revenue in excessive amounts from the ranks of the poorest segments of the society and channels that money into general public coffers..." (pg. 4). Several studies have indicated that although poor people do not gamble more in absolute monetary value than their richer counterparts, they do spend a higher proportion of their incomes than wealthier gamblers, and tend to view

gambling as a means of making money rather than just another leisure activity (Harris, 2004). This means that the poor are paying a proportionately heavier tax than are people with higher income, and although gambling is a voluntary activity, poor people see gambling as a potential escape from poverty (Schissel, 2001. pg 14).

2. METHODOLOGY

2.1. Sample

The aim of this research is to look at the behaviour of gamblers and the strategies they utilise to avoid over-spending money at the casino, as well as other harmful gambling outcomes. In total, 137 respondents were given questionnaires to complete (Appendix). Although many respondents were just visiting the area, the sample comprised mostly of people living in and around East London. The 137 respondents that completed the questionnaires were between the ages of 18 and 70. The average income bracket of the sample was 0 – 5000 rand per month. Individuals were purposively selected, and data collection took place on alternate days and nights, over a two week period. As a result, sampling bias should be at a minimum as different days and times attract gamblers with different expectations and attitudes toward the activity. Theoretically, one is likely to find poorer gamblers gambling to make money on the morning of a weekday, whilst more affluent gamblers would visit the casino on a Saturday evening for fun and relaxation. The sampling procedure was also decided upon for the compatibility it would provide between this study and the results of the pilot study.

2.2. Recruitment

The floor manager at Hemingway's Casino was identified as a Gatekeeper, and provided the necessary permission to conduct the research on condition that the researcher signs a confidentiality agreement. As the original questionnaire had previously been reviewed by the National Responsible Gambling Board, it was felt that the minor modifications made would not warrant another assessment.

The respondents were approached by the researcher and two assistants just having entering the casino doors, and were invited to take part in the study. The nature and aims of the research were clearly explicated, and issues of confidentiality and anonymity were addressed before participants proceeded to fill out the questionnaire. All efforts have been taken to ensure that these principles of confidentiality and anonymity were adhered to.

2.3. The Instrument

The questionnaire for this study was based on a slightly modified version of that used in the pilot study (Harris, 2004). It invited respondents to specify their gambling behaviour according to the multiple-response questions on the questionnaire, as well as their strategy and choices whilst playing games of chance. A modified version of the *Eastern Cape Gambling and Betting Board's Gamblers Anonymous 20 Questions* (National Responsible Gambling Board, 2004) was incorporated to highlight potential problem gambling behaviour. Although control studies by the NRGP suggests that even a single affirmative may possibly indicate a gambling problem, the purpose of this study was not to diagnose problem gamblers, but merely to infer something about their level of gambling from their strategic and behavioural choices. The questionnaire was composed as follows:

- 6 questions relating to biographical information of the respondents, including: gender, age range, occupation, monthly income, place of residence and expectations for that gambling session.
- Twenty-eight questions making use of a forced choice Likert scale response format with the categories: strongly agree, agree, disagree, and strongly disagree. These questions were structured in such a way as to assess the extent of the participants' gambling, as well as their cognitive distortions.
- Three questions regarding frequency of gambling, choice of game, and average amount spent per gambling session. Combining frequency of gambling and average amount spent with monthly income allowed a determination of percentage of income gambled by participants.
- One qualitative question asking respondents to specify strategies (if any) that they employ to ensure adherence to personal limits and avoidance of pitfalls associated with problem gambling.

The questionnaire was pre-coded, each Likert-scale question making provision for various responses, and respondents were required to mark the answer of their choice with a tick or cross, using the code below when required:

1	Strongly agree
2	Agree
3	Disagree
4	Strongly disagree

2.4. Procedure

Overall, 212 patrons were approached over a two week period and asked if they would complete an anonymous questionnaire. Of the 212 individuals asked, 137 agreed to participate. The most common reason for study refusal was a time constraint, although some of these individuals were hostile towards the researcher and it is inferred that the hostility is possibly projected suspicion on the part of the individual.

Data was entered into an Excel spreadsheet, and later imported into Statistica 7. After cleaning and coding the data, a range of statistical analyses were conducted in order to investigate relationships and differences between responses to questions. Analyses included: correlations, Chi-square tests and contingency tables, and Analysis of Variance. Where necessary, multivariate data analysis techniques of data grouping and data reduction were used to more accurately explain trends in the data.

2.4.1. Data processing

Quantitative data was analysed using a statistical package (Statistica). Frequency tables were utilized for all variables except those qualitative questions regarding gambling strategies and patron's expectations of the gambling session. Cross-tabulations were performed to elicit information about the relationships between specific variables; for example, the relationship between alcohol consumed and time spent and/or money gambled. Differences among age, gender and occupation, among other demographic variables, as well as between high and low gambling, were evaluated using a chi-square test for categorical data. Although a forced-choice Likert-scale was used, the 'strongly agree' and 'agree' responses were collapsed into a 'positive response' category in some instances, to better highlight trends. The same was done with the 'strongly disagree' and 'disagree' categories.

Qualitative questions were analysed using content analysis. This traditional method essentially comprises a close reading of the interview data plus the researcher's judgment. The overall purpose of this approach is to identify specific characteristics of communications and to explore the content of the text. According to Gordon (1978) this process is a four-step procedure: (1) listen and read critically; (2) ask probing questions of the data; (3) Look for meaningful relationships; and (4) synthesise.

2.5. Methodological issues

Gambling research is a sensitive area, and as such, various methodological problems should be noted in order to try and preserve the validity of such a study. The validity and reliability of self-report data have been issues of recurrent interest in psychology, particularly when dealing with subjects such as gambling. Gambling, specifically the stigma associated with problem gambling, makes people wary. Discussing social desirability in terms of drug use, Becker (1963, pg. 168), says that the problem of validity and reliability ‘...seems even greater when the behaviours on which the respondents are being asked to report can be labelled deviant or illegal rather than those considered to be normal, acceptable or public’. Sudman and Bradburn (1974) point out that depending on the social desirability of questions asked, surveys using the interview method tend to report more socially accepting and reliable responses than those using self-report questionnaires. Whitehead and Smart (1972) believe that all these types of surveys have done is little more than acknowledge an awareness that the issues of validity and reliability exist, and few studies have systematically tested for validity and reliability. In the few instances that the data obtained from self-report questionnaires were tested, it was found that there is good reason to have faith in the credibility of the data (Smart, 1975). It has been noted that social desirability can be a confounding factor in such studies, and particular pains were taken in that study to ensure the anonymity of the respondents and the confidentiality of their responses in order to encourage honesty. Employed in the present study were similar strategies although it seems that the biases inherent in this type of research can never be completely eliminated.

2.5.1. Ecological Validity

Gambling occurs in specific environments, usually where considerable monetary stakes are involved. Thus, there is a great danger that studies conducted in simulated gambling environments for bogus money, small prizes, etcetera, will yield nothing of relevance to the real gambling of genuine gamblers in their natural environments (Anderson & Brown, 1984). Anderson, Brown and Dickerson point out that few studies using simulated gambling environments have attempted to verify that the pleasure, excitement and expectations felt in the genuine gambling environment are replicated in the simulated one.

In one of their studies, they measured the heart rates of students playing blackjack in a simulated casino environment and genuine gamblers playing blackjack in both a real casino and the simulated casino in which the students played. Results revealed that the heart rate increase of student novice blackjack in a simulated casino is small compared to the heart rate response of genuine blackjack gamblers in the casino. Furthermore, the blackjack gamblers did not find the simulated casino especially arousing despite the variety of props including an experienced casino dealer. These data are consistent with the interpretation that genuine gambling environments are significantly more exciting than the simulations used in laboratory experiments. Anderson and Brown point to a number of ways in which gambling in the laboratory situation is different from gambling in its natural environment. First of all the aspirations of gamblers in their natural environment may be quite different: a trip to the Bahamas if they win (by comparison, students' aspirations may be a percentage of credit towards their course mark or perhaps R50 or R100 if they win the game). Secondly, real gambling suggests the risk of personal monetary loss whereas laboratory gambling usually does not. Finally, laboratory studies usually ignore personality differences and the way in which those differences interact with the actual gambling behaviour.

2.5.2. Biased sampling

Biased sampling poses a major threat to valid gambling research. Much of the research on the basic question of why problem gamblers risk such great losses is conducted retrospectively with people receiving therapy for their problem. Many studies are based on questionnaires completed by members of Gamblers Anonymous or Gam-Anon. Others use gamblers in treatment to analyse the differences between social and problem gamblers. The use of gamblers in treatment or gamblers who may not have gambled for many years, for studies of causes or even descriptions of the phenomena of excessive gambling, brings with it the risk of two kinds of errors: errors of memory and errors of interpretation. When research is conducted using retrospective data, there is always the possibility that errors of memory will influence the study. As is the case with gambling research, this is a complication which should not be over-looked. Often gamblers appear to be lying when attempting to answer questions relating to their gambling behaviour, after the fact. In many cases, these "deceptions" have become "real" to the

gambler. Errors of interpretation pose even greater risks. Since nearly all treatments take place within a medical model of pathological gambling, one can expect that the gambler's experience will be reinterpreted in the rhetoric of pathological gambling. This point has been emphasised by Oldman (1978), in particular. Oldman argues that the idea of "compulsion to gamble" and "compulsive gambler" are not ones which are used by gamblers or croupiers to explain gambling behaviour. According to Oldman it is more appropriate to speak of habitual gambling and the financial losses that might entailed. The impact of a transition, from the language of the world of gambling and from the gamblers' own concepts of themselves within that world, to the language of the medical and psychiatric world and a reinterpreted concept of oneself as ill, may have major consequences for the results of surveys and the questionnaires. For example, the blackjack player may believe that he has an edge over the dealer (Thorp, 1962). During the period of long sessions and escalated gambling, the player may believe that winning is inevitable in the long run. However, as the losses mount, the gambler may become desperate, distressed and depressed. He or she may become preoccupied with the problem of recouping losses, may change tactics, may even change to another form of gambling. In treatment, the same gambler may conceptualise his gambling as compulsive (it was not), out of control (it was not), as an escape from depression (the depression was a consequence not a cause), and himself as impulsive (nearly all of his behaviour was planned), thoughtless about his family (another consequence), and as addicted to gambling (despite the absence of a substance). If such a gambler fills out a questionnaire on almost any aspect of his gambling, the information given will have been distorted.

3. RESULTS AND DISCUSSION

3.1. DEMOGRAPHICS

Fig 1.1 shows that fifty-three males ($n = 53$) and seventy-three females ($n = 73$) participated in the survey - although some participants failed to specify their **gender** on the questionnaire. Even though every effort was taken to ensure that the sample was biographically representative of the casino population, the literature reveals that a larger male gambling population should be expected, and this discrepancy may be due to biased sampling.

Category	Count	Cumulative Count	Percent	Cumulative Percent
Male	53	53	38.68613	38.6861
Female	73	126	53.28467	91.9708
Missing	11	137	8.02920	100.0000

Fig 1.1.

The mean **age** group was 31 – 40 years, whilst the mode was 21 – 30 years. On average, participants had only 1 year of tertiary education. According to the literature, education has a moderately strong relationship to the risk for problem and pathological gambling. People who have completed only high school or less are overrepresented among pathological and problem gamblers. Low income earners are thus more vulnerable to a number of risk factors including, co-morbid substance use, lower education levels, poorer mental health and perhaps most significantly, the misplaced hope in the chance of a once off escape from poverty.

In terms of **occupation**, by far the biggest majority were students (18%); followed by the unemployed (5%), the self-employed (3%), housewives (2%), and pensioners (2%). A large proportion of (mostly) day-time gamblers are expected to be students as it was Christmas holidays and fewer students are expected to work. The unemployed, on the other hand, are found to spend their holidays gambling in the hope of making money as opposed to searching for work. Their reason for gambling is necessity. It is predicted that the role of gambling for both the housewife and the pensioner are the same, and that both engage in the activity to

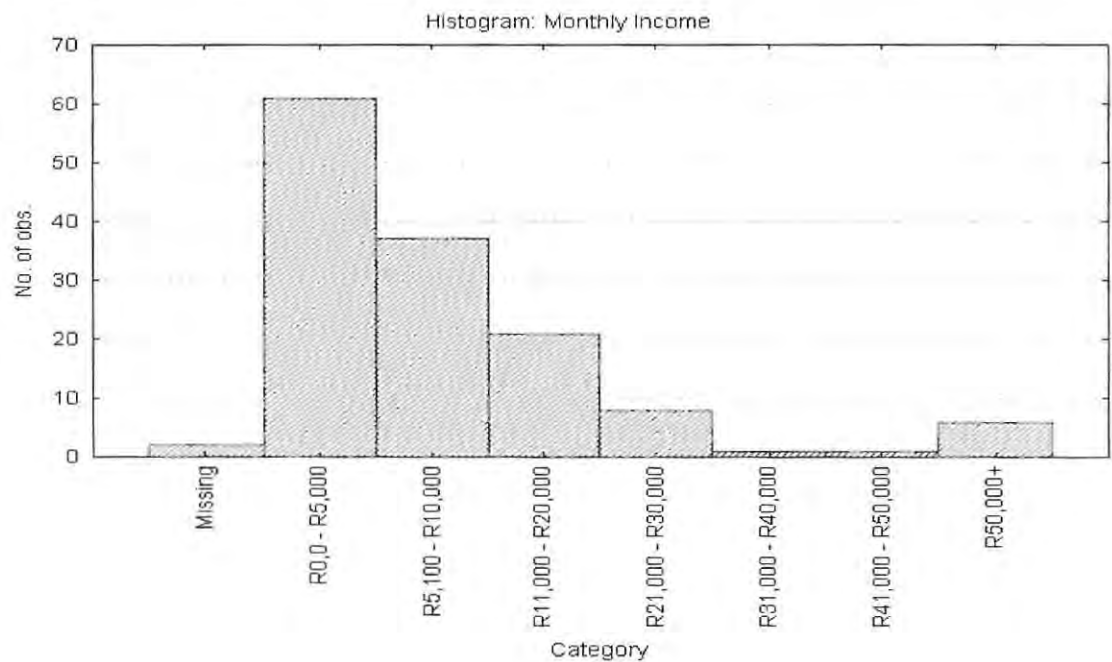
escape the existential boredom that often accompanies these associated lifestyles by seeking activities that provide a good deal of social interaction. These results are consistent with the pilot study (Harris, 2004), which also revealed that housewives, nurses, pensioners, students, and the self-employed gamble most frequently.

The fact that self-employed individuals gamble frequently raises some questions. Why is it that people who are self-employed gamble more than people of other occupations? The answer – self-employment sounds more socially acceptable than unemployment. It is thus suspected that some of these respondents may have given socially desirable responses. Many individuals who indicated that they were self-employed also gave unrealistically large salaries. This is not to say that all participants who indicated that they are self-employed are unemployed. Unemployed individuals could easily fake a particular occupation. However, self-employment is very general; it does not give too much away about the nature of their “work”, and covers a number of possibilities why they might be gambling during working hours. Another question of interest is how do self-employed individuals earn such a large income, especially when they spend their working day gambling? It is suggested that these incomes are again socially desirable responses - compensation for their insecurities regarding their probable meagre income. Of course, these interpretations are merely speculation. They are, however, fairly consistent and have some face validity.

The single most apparent feature of the gambling population's demographics is its monthly **income**. Gambling was seen by many to be a recreational activity involving chance but understood to have unfair odds against the gambler. When people begin to gamble money they cannot afford, the activity no longer becomes about entertainment, but about money. Given that the rate of success for any particular gambler is small, lower income gamblers who wager large proportions of their salary on the activity put themselves at great risk of financial ruin. The previously discussed literature stated that those people in the lower income brackets of society are most at risk for developing problem gambling (Schissel, 2001). The amount spent and frequency of gambling is seen to be good indicators of potential problem gambling.

By dividing all the questionnaire income responses into seven broad categories, there showed some tendency for lower-income persons to be overrepresented among the gambling population (fig 1.2).

Fig.1.2.



44% of the total respondents in the low income category earn between zero and five-thousand rand a month, of which 20% gamble weekly, 34% gamble monthly, and 44% gamble yearly. 43% of this group only spend between R10 and R50 a session. However, a small number (13%) may spend anything between R151 and R200 a session. This means that there are a number of low income gamblers who might spend as much as a third of their total monthly income on gambling.

The previous graph shows an interesting trend. Gamblers in the R0 – R5,000 category gamble most frequently, those in the R5,100 – R10,000 category gamble second most, the R11,000 – R20,000 category gamble third most, and interestingly, those in the R50,000+

category gamble fourth most. The drop in gambling activity among the R31,000 – R50,000 categories raises some questions. It is proposed that this pattern is indicative of the rich-poor divide inherent in society. Another alternative - that a divide exists amongst those who gamble for entertainment (and who can afford it), and those who gamble in the hope to make money - is not unlikely. Those in the middle income categories may on one hand realise that gambling is not a solution to their financial problems and, on the other, have less disposable income to spend on such activities than the high income gamblers.

Unsurprisingly, results pertaining to occupation relate directly to monthly income, and certain occupational roles were consistently found to correlate with particular income ranges. It is significant to note that most people fell into the lower income categories, and that this correlates with occupations most frequently stated. For example, housewives, pensioners and students are not traditionally high paying occupations, which correlate with lower levels of monthly income. This justifies why the majority of gamblers fall within the R0 – R5000 income category.

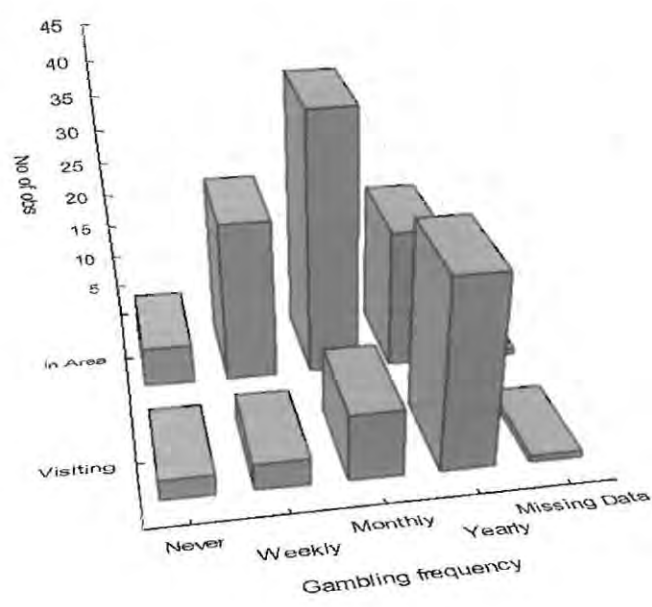
Participants were asked whether they live in the area, or if they were visiting. Walker (2002) found that over 60% of problem gamblers live within 5 miles of their gambling establishment, suggesting that gamblers visiting the casino would likely be there for leisure rather than to make money. As a result, it was predicted that those who were visiting were more likely to indicate that they gambled for entertainment rather than for money than those who lived in the area. Results show that 66% indicated that they live in the area, whilst the remaining 34% were just visiting - the majority coming from Johannesburg and Pretoria for the Christmas holidays (fig 1.3.).



Fig 1.3.

Walker's suggestion that proximity affects gambling behaviour is put to the test by cross-tabulating respondents given reasons for gambling, and whether they live in the area or were visiting. The general trend does appear to support the theory, albeit evidence is only anecdotal given the relatively small sample size. 34% of the local group expected to win

versus 24% of the visiting group. On the other hand, 5% of the local group expected to lose versus the 4% of the visiting group. As mentioned in the literature, such expectations are often consistently self-serving, implying that local gamblers do indeed tend to gamble for money, whilst visitors appear to go to casinos for leisure or to pass time.



A comparison of the gambling frequency of respondents living in the area, versus those just visiting East London.

3.2. GAMBLING BEHAVIOUR

3.2.1. FREQUENCY

The results show that 36% of the participants gamble, on average, every month; an equal percentage gamble yearly. Interestingly, 6% report that they never gamble. In order to participate in this research, respondents would be required to enter the casino. As such, unless these participants are accompanying family or friends that gamble, this inconsistency could be the result of self-reporting error, deception, or even a socially desirable response. However, it is likely the former. Lastly, 21% gamble weekly, and it is this group that is at exponentially higher risk of developing problem gambling behaviours. No respondents indicated that they gambled daily. Refer to the following graph.

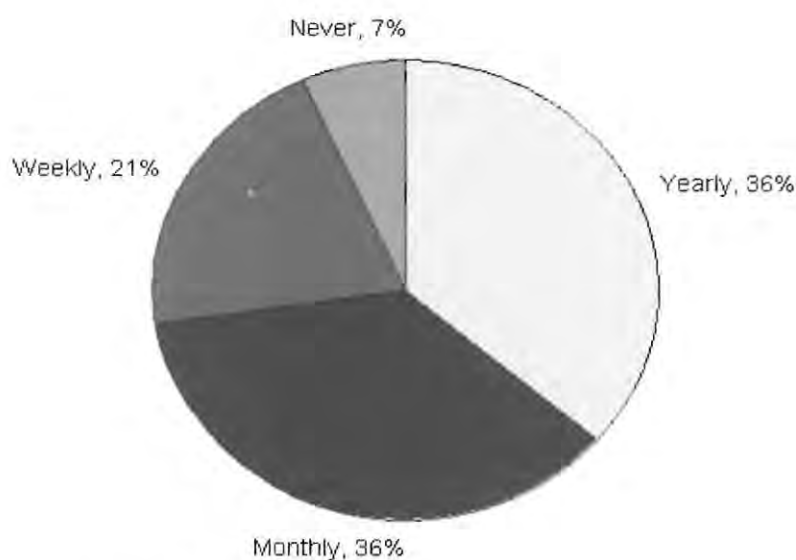
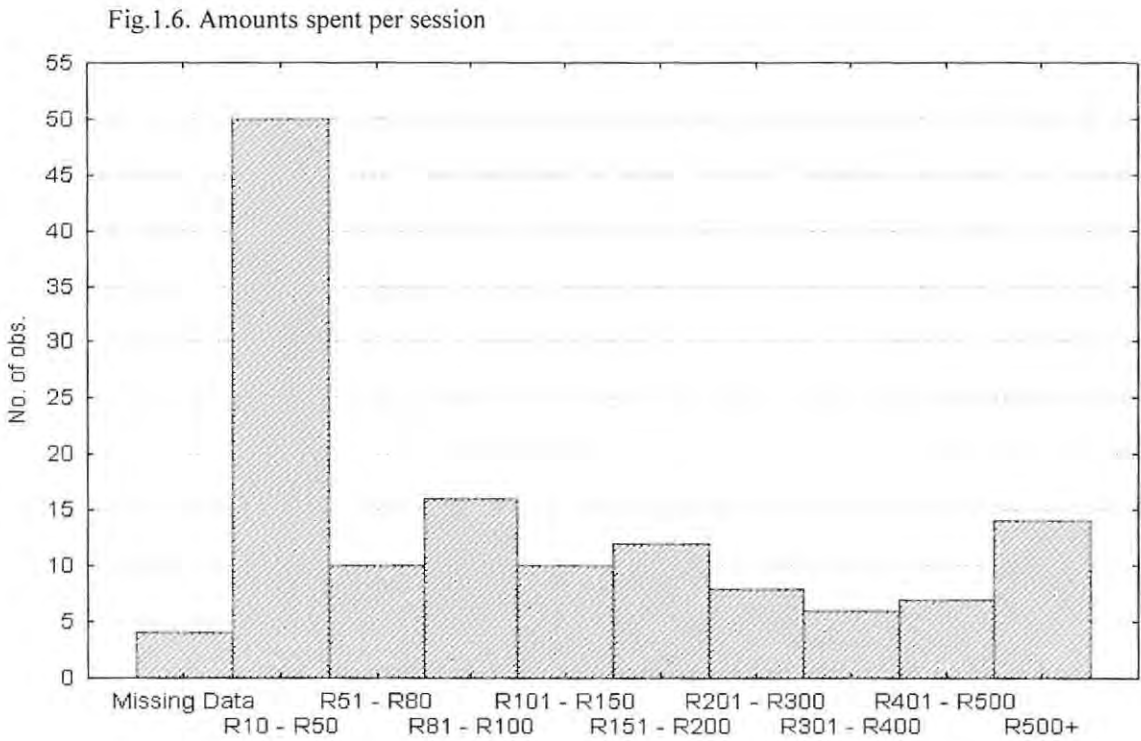


Fig.1.5. Gambling frequency

3.2.2. AMOUNT SPENT

36% of the sample gambled approximately R150 – R200 a session; 12% gambled between R81 – R100; 10% of the sample gambled more than R500, and 9% spent between R151 – R200 a

session. 7% gambled between R51 – 80 and R101 – R150 respectively. A further 6% spent between R201 – R300 a session, 5% gambled R401 – R500, and 4% gambled R301 – R400. Refer to the following graph.



Consistent with the literature, males tended to spend larger amounts, and gamble more frequently, than their female counterparts. Staggering 30% increases over female gambling, males are without a doubt the group at higher risk of problem gambling.

3.2.3. REASONS FOR GAMBLING

89% of the respondents stated that they gamble for entertainment, which is reinforced by the 85% of respondents who saw gambling as just another form of leisure activity. Of the respondents that agreed that gambling was entertainment, only 23% stated that they gambled to make money. This means that 77% of the people who gambled for entertainment were not exclusively trying to make money from gambling. In other words, it was seen to be a fun activity

rather than a money making enterprise. Only 30% of the whole sample stated that they gambled to make money. Refer to the following graphs.

I gamble exclusively to make money

Category	Count	Cumulative Count	Percent	Cumulative Percent
Missing Data	3	3	2.18978	2.1898
Strongly Agree	16	19	11.67883	13.8686
Agree	24	43	17.51825	31.3869
Disagree	40	83	29.19708	60.5839
Strongly Disagree	54	137	39.41606	100.0000

I gamble purely for entertainment

Category	Count	Cumulative Count	Percent	Cumulative Percent
Strongly Agree	66	66	48.17518	48.1752
Agree	56	122	40.87591	89.0511
Disagree	6	128	4.37956	93.4307
Strongly Disagree	9	137	6.56934	100.0000

93% of gamblers under the age of 20 years old saw gambling exclusively as entertainment, whereas approximately 20% of gamblers between the ages of 21 and 50 consider gambling to be a potential way to make money. Thus, the middle aged population see gambling more as a way to make money than the young and elderly gamblers. This contradicts the pilot study (Harris, 2004) findings asserting that the elderly gamble to make money - in order to regain self-control and confidence and alleviate poverty. The preferred interpretation is that the elderly gamble for the social interaction and meaning it creates. Interestingly, no significant differences in the amounts spent on gambling sessions between entertainment and money-making gamblers was found.

3.2.4. GAMES OF CHOICE

Participants were asked to indicate the games they prefer to play. They were given the opportunity to choose multiple games, which include: lotto, cards, tables, slots, and scratch

cards. The results show that slots are by far the most popular game – played by 92% of the entire sample. On average, most participants preferred to play a combination of slots, cards, and/or lotto, with every third player opting for the lotto. As far as money spent and gambling frequency is concerned, no significant correlation with specific games was found, although slot players are likely to play larger sums of money than the R5 cost of a scratch card.

3.3. BELIEFS

Some of the beliefs explored in this research are, respondent's perceived chances of winning, their belief in luck and skill in gambling outcomes, as well as the odds against the player. Inferences that can be drawn from these include possible cognitive distortions, the role heavy gambling plays in shaping gamblers beliefs, and behavioural changes as a result of gambling involvement. What was found were generally positive results with only a small percentage of respondents entertaining contradictory behaviour and distorted beliefs.

Gambling explicitly involves risking money in order to win money on an outcome that is usually wholly determined by chance. However, gambling is constructed in order that the majority of the public who gamble must inevitably lose. Thus, although some gamblers will win, the expectation of nearly all gamblers should be that they will lose. When asked what their **expectations** were for the day at the casino, respondents gave a variety of different responses. These were then broken down into 9 appropriate categories. The four most frequently occurring responses were: "to win" (31%), "to have fun" (28%), "no expectations" (9%), and "to lose" (5%). Essentially, for every gambler that expects to lose, 6 believe they will win. The question that arises is, on what are these gamblers basing their expectations? Of course, whatever the answer, it is such beliefs that make the prospect of gambling as a means of getting rich quick so viable. This section will take a closer look at the beliefs and perceptions of gamblers, in order to determine what impact they have on their behaviour.

3.3.1. LUCK versus SKILL

The **belief in luck** and its ability to produce a win or favourable results can be an example of a cognitive distortion as seen in the literature reviewed (Walker, 2002). The irrational belief in luck can become problematic when a player relies on luck to allow them to win. As luck has never been proven to exist, this belief can be classified as irrational, and its presence can escalate the chance that problematic gambling habits will emerge.

I believe in luck

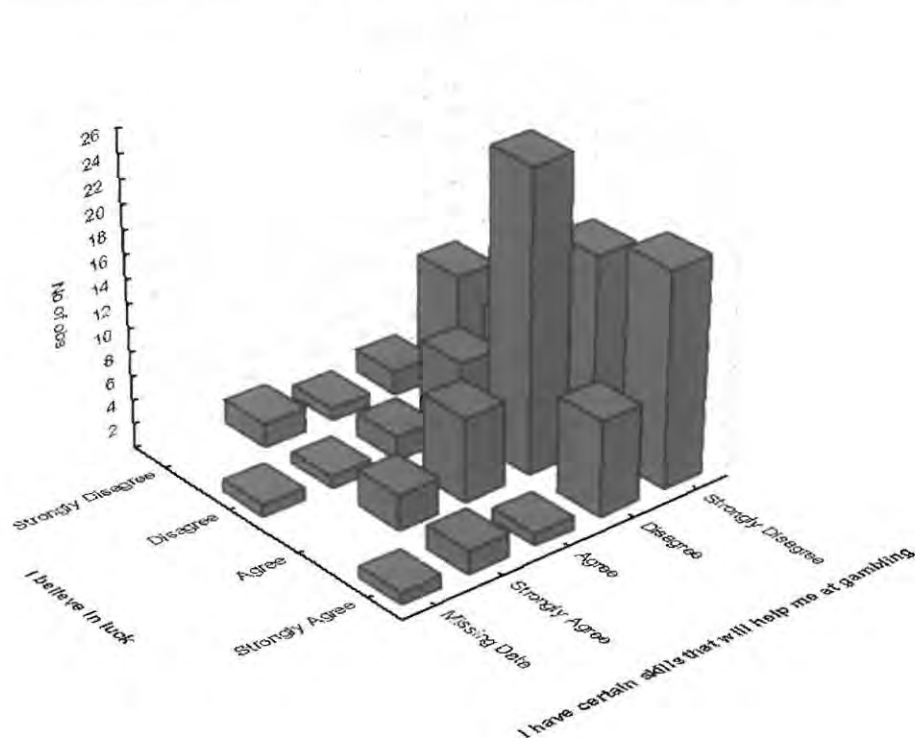
Category	Count	Cumulative Count	Percent	Cumulative Percent
Strongly Agree	42	42	30.65693	30.6569
Agree	58	100	42.33577	72.9927
Disagree	17	117	12.40876	85.4015
Strongly Disagree	20	137	14.59854	100.0000

73% of the sample believes in luck, while 83% believe that the **odds are against the player**. This means that although many players believe in luck, they also understand that the likelihood of them winning is small, as the odds are in favour of the casino.

The odds are against the player and in favour of the casino

Category	Count	Cumulative Count	Percent	Cumulative Percent
Missing Data	3	3	2.18978	2.1898
Strongly Agree	74	77	54.01460	56.2044
Agree	40	117	29.19708	85.4015
Disagree	12	129	8.75912	94.1606
Strongly Disagree	8	137	5.83942	100.0000

The following graph shows an interesting trend. It would appear that the less skills one has that will assist in gambling, the greater a belief in luck, and vice versa.



There are a number of plausible explanations for this phenomenon. Firstly, a disbelief in luck presupposes a rational mind that clearly understands the obvious lack of exercisable skill in gambling. On the other hand, reliance on luck implies superstitious beliefs. In general, superstitious beliefs are most common in situations involving a high degree of risk, chance, and uncertainty, and during times of personal or social stress or crisis, when events seem to be beyond human control (Walker, 2002). Thus, this belief in luck might be seen as compensation for what is clearly a lack of control over events. Such individuals would probably make reference to outcomes with descriptions such as 'lucky' or 'unlucky'. Furthermore, when problem gamblers begin to experience crisis as a result of the loss of large amounts of money, their reliance on luck and other superstitious beliefs intensifies. 48% of the respondents, who believe that the odds are against the player, also believe that they had a good chance of winning and believe in luck. These players must be acknowledged, as they believe their luck will carry them beyond the odds of the casino. This shows that some players who do believe that their luck will enable them to win could be affected by erroneous beliefs or false assumptions on the part of that particular gambler. Thus, many of the players that believe in luck create a group where both rational as well as erroneous beliefs collude.

3.3.2. SKILL

18% of the sample believed that they had skills to win at gambling, and as such 90% of these people believed that they had good chances to win. In other words, more of the people who believe that they have skills to win believe that they have a good chance of winning, compared to only 48% of luck players who believe the same. This suggests that more people have an internal locus of control (they have power to influence their environment as opposed to it influencing them).

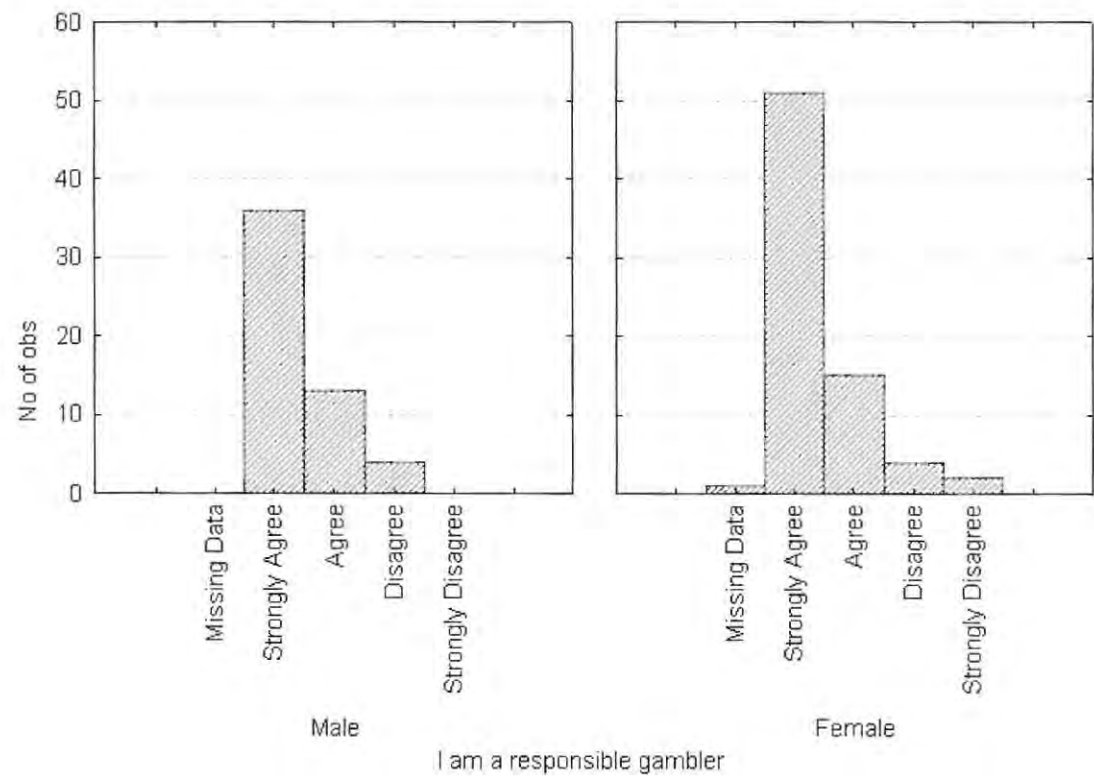
There is however evidence of cognitive distortions among the skill group. Gambling on most games and for most of the time is pure chance and cannot be controlled very often; the exceptions being certain cards games like poker, where skill can produce a winning hand. The rest of gambling activities such as slots, lotto and scratch cards involve chance and cannot be

rationally controlled by the use of any skill. As a result, it is alarming that 40% of lotto players and 28% of slots players believe that they skills to win. This is clearly evidence of erroneous cognition, as no skill can possibly be involved in the spinning of the wheel of a slot machine. Yet, only 46% of card players believed they had skills to win, and this type of game affords the player the greatest opportunity to exercise it.

3.4. RESPONSIBILITY

88% of the respondents believe they are **responsible gamblers**, while 9% believe they are irresponsible. This is an encouraging figure, but one that requires further investigation. Broken down by gender, 93% of men believe they are responsible, whilst 90% of women believe that they are responsible. The following graph shows their respective responses.

Fig 1.4



This result contradicts the literature that asserts that men are at twice the risk of irresponsible or problem gambling than women (Crisp, 2000). It would appear then that 3% more women in the sample perceive themselves to gamble irresponsibly. This could mean that women believe themselves to be irresponsible and admit it, whereby men might be giving socially desirable responses. As it was noted earlier that men were found to be spending more money gambling than women, it was concluded that men were somewhat more irresponsible in that respect.

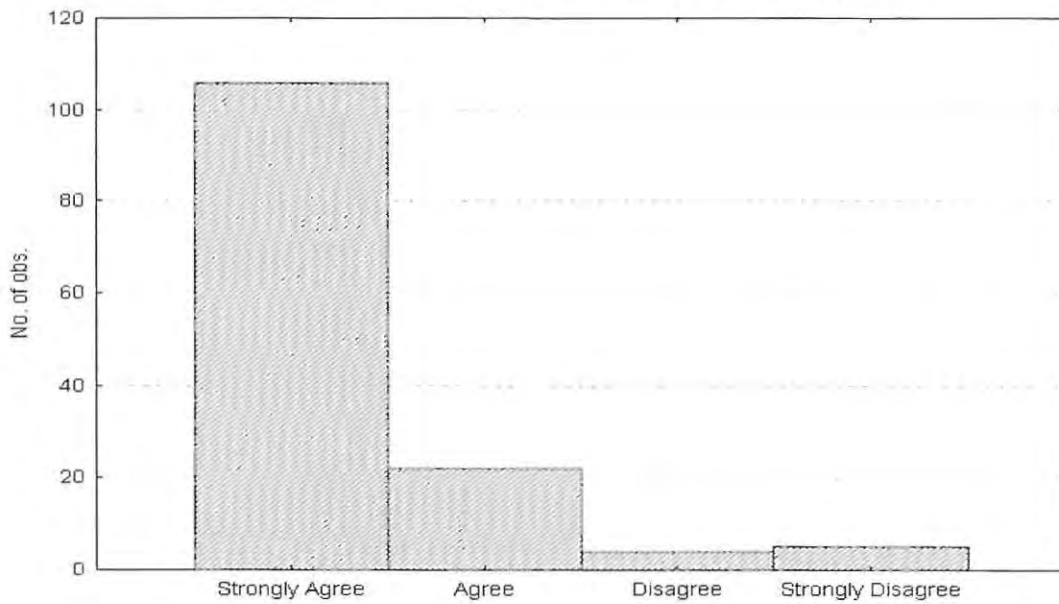
Of the total respondents who believe they are responsible, 22% chase losses, 4% put gambling before their families, and 22% also believe the activity cannot become addictive. In many instances, these behaviours cluster together, with the result that a small proportion of the sample group have met enough criteria to warrant a clinical diagnosis of problem gambling behaviour. These trends will be discussed in more detail later in this section.

Broken down according to age, it is noted that only 6% of the under 20 year old group and 8% of the 21 – 30 year old group considered themselves to be irresponsible gamblers. While 10% of the 31 – 40 year old group and 4% of the 41 – 50 year old group consider themselves to be irresponsible in this regard. The two most interesting groups are the 51 – 60 and 61 – 70 year old groups. 21% and 20% of these groups respectively believe themselves to be irresponsible gamblers. 0% of the 70+ group reported any problems.

3.4.1. FAMILIAL RESPONSIBILITY

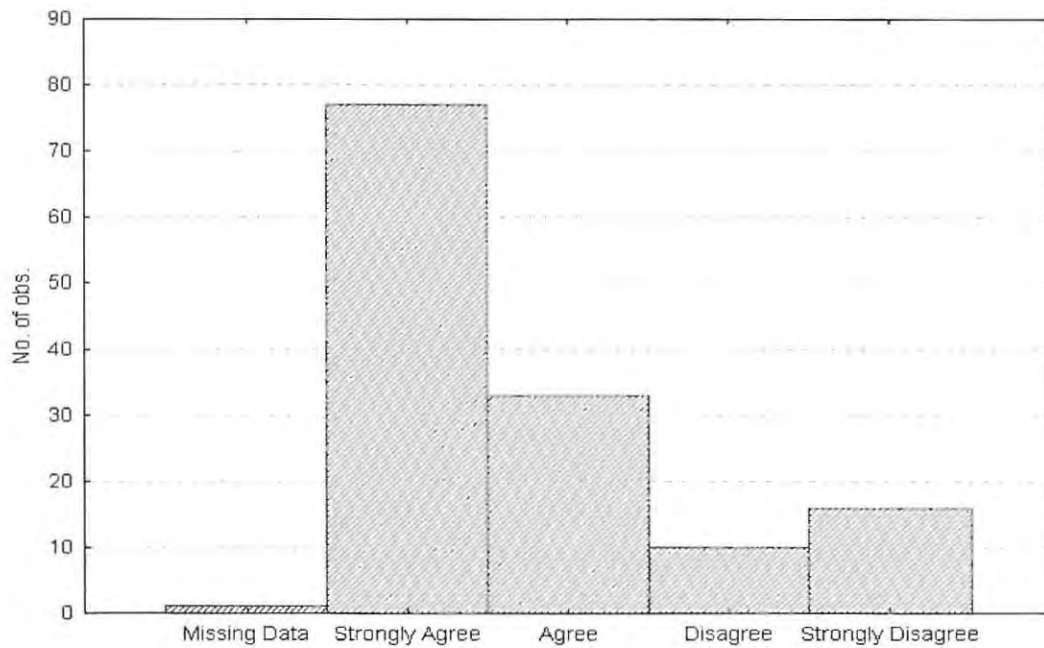
The literature reviewed discussed the neglect and abuse of close family members by problem and pathological gamblers. Although it was predicted that only a small minority of gamblers would ever admit to this, the question ‘have you ever put gambling before your family considerations’ was included anyway to see what kind of responses would be received. The results confirmed this prediction, and only 7% of the respondents admitted to putting gambling before their family. The following two graphs show a note-worthy inconsistency.

I have never put gambling before family considerations?



The following graph shows a slightly different picture to that above. 19% of respondents indicated that they have family or friends who worry about their gambling behaviour.

My family and friends do not worry about my gambling



What these two graphs illustrate is a degree of bias on the part of some gamblers. If 93% of gamblers believe they put family considerations before gambling, why are as much as a fifth of the samples family and friends concerned? Familial concern is an objective symptom of problematic behaviour, which is often dismissed in the subjective mind of gamblers that may believe their family and friends are over-reacting. The following sections will deal with responsibility in other areas, such as occupation and finances, which may help to make sense of these results.

3.4.2. OCCUPATIONAL RESPONSIBILITY

The literature strongly emphasises the degree to which gambling can take its toll on social and occupational aspects of the gamblers life. As a result, an investigation into the occupational functioning of the gamblers was undertaken. While it is difficult to determine the degree to which social desirability has distorted accurate responses, 91% of the self-reported responsible gamblers indicated that they had never missed work to gambling, and this is fairly consistent with the results of the pilot study. Socially desirable responses or not, this result at the very least shows that “responsible” gamblers consider missing work to gamble to be problematic and unacceptable. Of the self-reported irresponsible gamblers, 30% stated that they had missed work to go gambling on occasion. Thus, there exists a clear link between occupational responsibility and responsible gambling, and the current DSM nomenclature reflects this.

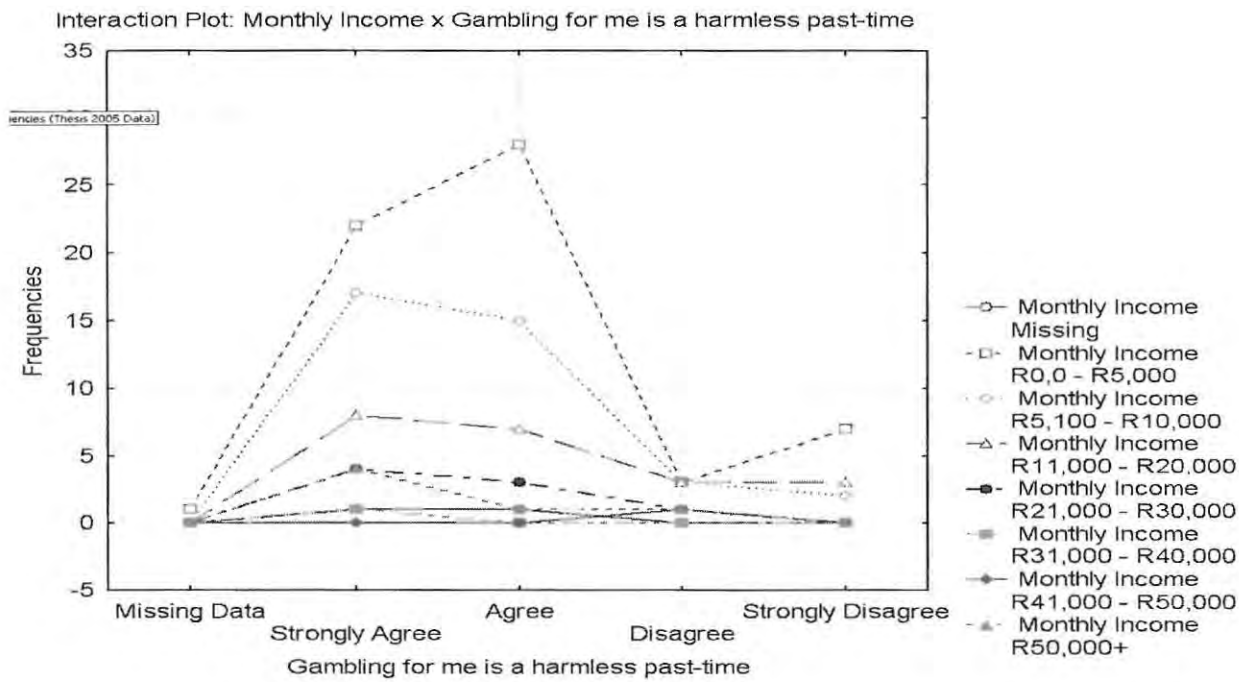
Another interesting relationship exists with regard to responsibility and occupation. As with the pilot study, it was found that individuals of particular occupations tended to exhibit greater responsibility. Of the respondents in the following categories, 100% of nurses reported responsible beliefs and behaviour. This might be understood if one considers the nurses role as one requiring specific strategies developed in order to cope with tremendous responsibility. The 100% agreement rate of pensioners can also be understood in terms of financial constraints and a life time of acquired wisdom. Finally, a significant majority of housewives belief they are responsible, and they all reported having a strategy. It could be inferred that these women have more time than most people to develop strategies because their children, family, and society expects responsibility and discipline from them.

3.4.3. FINANCIAL RESPONSIBILITY

The literature reviewed discussed how debt and bankruptcy could occur as a result of problem gambling (Promotion of responsible Gambling in South Africa, 2002). Like occupational responsibility, financial responsibility poses a great immediate risk to the gambler and their family. As such, gamblers were asked a number of questions relating to this, such as whether they had ever been in debt as a result of their gambling; whether they could control the amount they spend while gambling; and whether their family's financial security had ever been threatened as a result of their gambling.

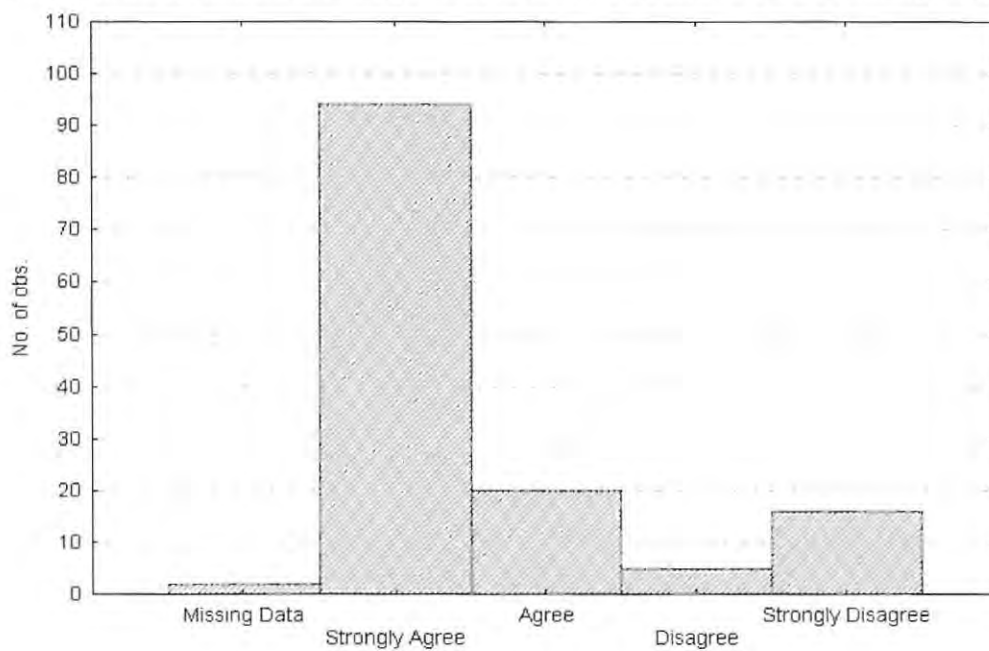
Of those gamblers who consider themselves to be responsible, 72% say that their financial security has never been threatened as a result of their gambling. 81% of these respondents say that their family and friends have never worried about their financial security, and 64% say that they have never been in debt as a result of their gambling behaviour. What this means is that of these responsible gamblers, approximately two-thirds have a strategy that appears to keep their financial security secure.

The following graph, however, shows that many of these gamblers are in fact at significant risk. As discussed earlier, gamblers with lower incomes tend to gamble proportionate larger amounts of it. Although also a representation of the proportion of gamblers with lower incomes in the sample, the graph also shows that a higher relative percentage of gamblers believe that gambling is a harmless past time for them. As discussed earlier in the literature, such a belief (especially amongst the lower income group) is indicative of self-serving beliefs born out of desperation or misplaced hope at best. If subjective perceptions were to reflect the empirical reality, gamblers with the higher incomes would perhaps report gambling to be harmless, whilst the lower income group would exercise greater caution.



Many problem gamblers go to desperate lengths to obtain money with which to gamble, and this often results in them dipping into family savings, their children's university funds, and any other immediately obtainable sources of money. Refer to the graph below.

My families' financial security has never been threatened as a result of my gambling



In contrast to irresponsible gamblers, who often jeopardise their families financial security, normal or recreational gamblers report having a simple financial strategy of paying for bills, food and other essential outgoings prior to determining the amount available for gambling (see more regarding strategies in the following section). While only a small handful of irresponsible gamblers reported experiencing guilt in response to the loss of large sums of money, 67% of the responsible gamblers in the sample reported that they feel guilty if they overspend, and these also happen to be gamblers with strategies.

3.5. STRATEGY

The literature reviewed states that strategies should be employed by gamblers to avoid being caught up in the excitement of gambling and losing control of their behaviour as a result (Ladouceur, 2004). Thus, the following section investigates whether responsible and irresponsible gamblers alike employ strategies to avoid these outcomes. The results confirmed the literature. A sample total of 76% reported having a strategy to avoid overspending. The three main strategies utilised by gamblers, as found in the literature, are:

- 1) Limit the amount of money spent
- 2) Set limits on play time
- 3) Set limits on alcohol consumption

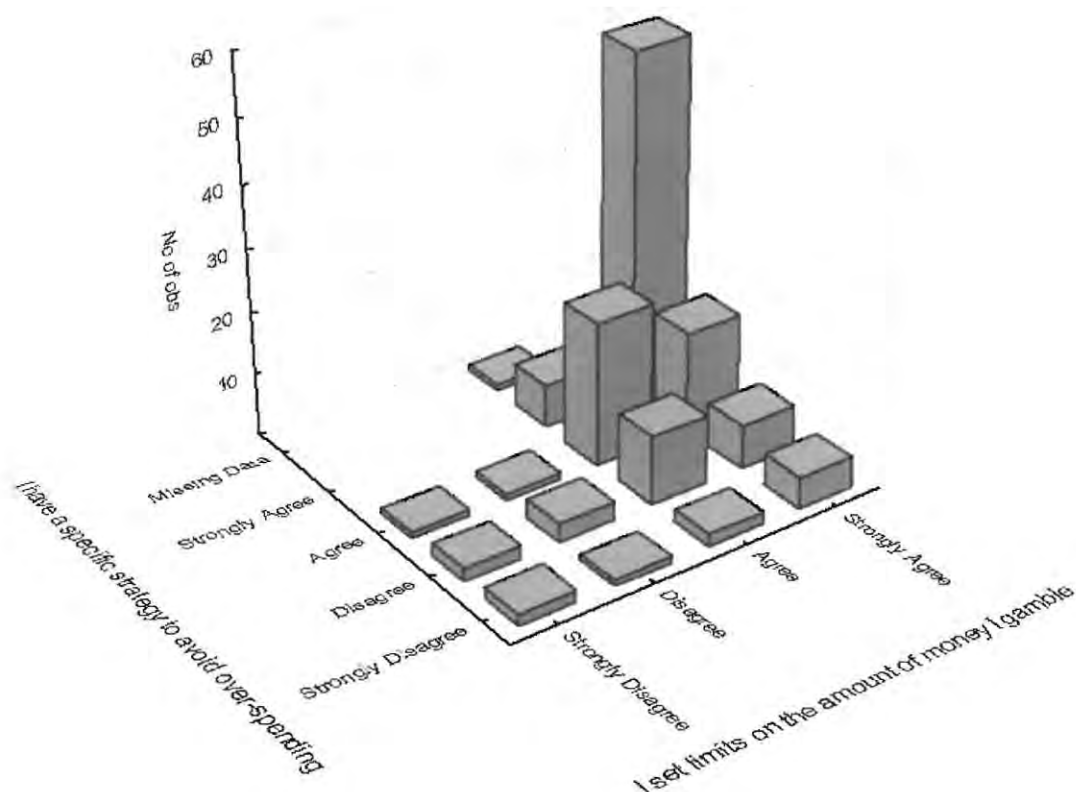
70% of the gamblers who believe themselves to be responsible indicated that they have a specific strategy to avoid over-spending while gambling. The remaining 30% may believe a strategy is not necessary, but it calls their level of responsibility into question. Only 6% of the irresponsible gamblers reported having a specific strategy. With such a large majority of self-reported responsible gamblers having a strategy, there is significant evidence to suggest that utilising strategies is an effective means of avoiding problem gambling.

One of the main purposes of this research was to determine if any strategies are employed by gamblers to help them avoid problem gambling behaviour. As a result, literature pertaining to responsible gambling practices was consulted. The most easily available and commonly utilised strategies were: Limiting time gambling, limiting the amount of money spent, and monitoring alcohol consumption in the casino. Thus, part of the questionnaire attempted to gauge whether, and to what degree, participants used these strategies.

75% of the sample stated that they had specific strategies to avoid problem gambling. Of this group of players utilising strategies, 91% adhere strictly to their limits. This shows that a significant amount of players realise the importance of their strategies, and respect the possibility of problem gambling.

3.5.1. AMOUNT LIMITS

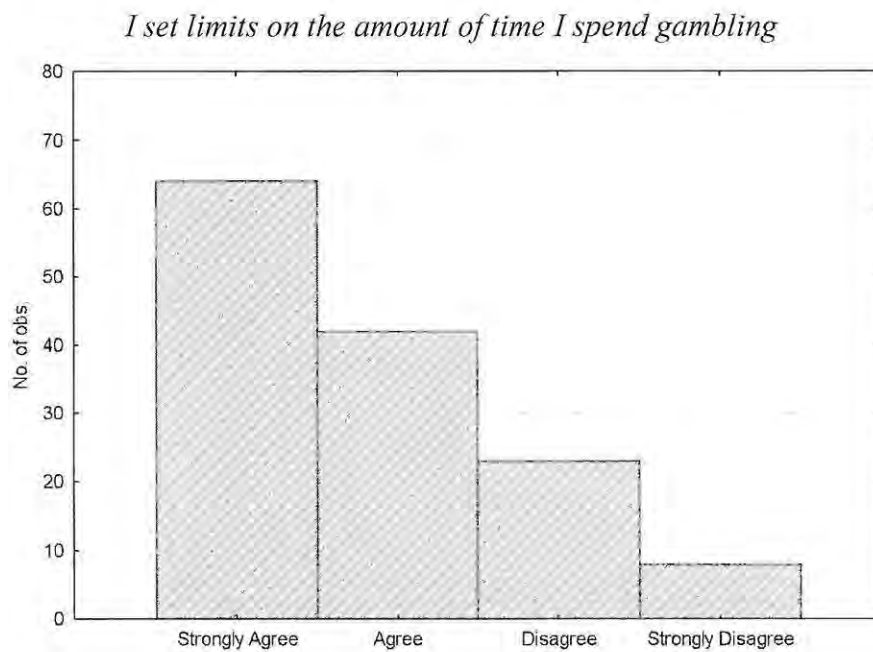
Strategy Players – I set limits on money I gamble



Of players that have a strategy, 74% set limits on the amount of money they spend while gambling, with 100% of people adhering to their limited amounts of money. The sample stated that they adhered to their amount limits by leaving all other money (not allocated to gambling) at home, as well as leaving credit and debit cards, as well as cheque books behind to avoid using savings or other important money for gambling. Of course, like all other aspects of gambling behaviour, there is paradoxical behaviour, as well as strategy. For example, 12% of those who believe they control how much they spend gambling will spend more money to recover their losses should they begin losing. Chasing losses is one of the biggest reasons for continued, problematic gambling behaviour, and usually leads the gambler down a path of spiralling desperation. In terms of the literature and the results reviewed, an effective strategy in itself would simply be to avoid chasing losses.

3.5.2. TIME LIMITS

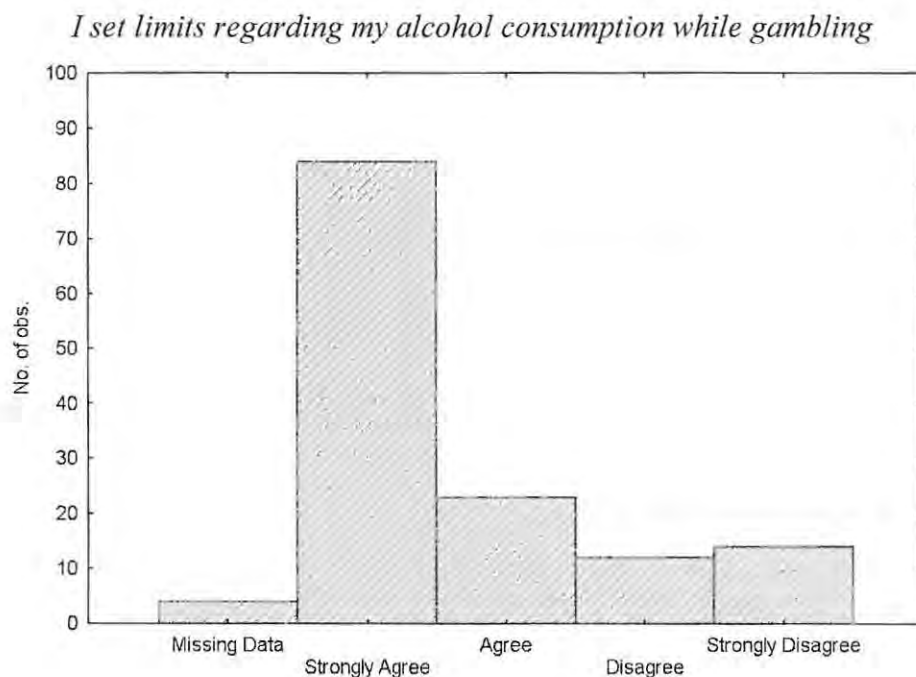
Of those players with a strategy, 62% stated that they set limits on the amount of time spent gambling. Such a strategy helps the gambler avoid staying longer than expected, spending more than intended, and missing other important appointments or familial duties. 100% of this group adhered to this limit. The sample stated that they managed to adhere to the time limits they set by constantly staying aware of the time. In order to do this, they would ensure they always wore a watch while gambling, and would refer to it consistently.



3.5.3. ALCOHOL LIMITS

Of the respondents with a strategy, 60% set limits on the amount of alcohol they consume while gambling. As indicated by the literature, alcohol can reduce inhibition, increase self-confidence, as well as increase the subjective perception of having control over uncontrollable events -thus increasing the possibility of irresponsible behaviour. 91% of players that limit their alcohol consumption adhere to it. Many casinos offer free drinks, especially to high-rollers.

As a result, players should be made aware of the effects of alcohol during risk-taking activities such as gambling, where it can adversely affect rational thinking. Although perhaps an exaggeration, selling alcohol to gamblers could be as detrimental as selling alcohol to racing-car drivers. Refer to the following graph.



3.5.4. ALTERNATIVE STRATEGIES

A qualitative question was included in the questionnaire to determine if any specific strategies were used by our respondents besides alcohol, time and amount limits. Two commonly occurring strategies were ‘leave all credit cards at home’ and, more interesting, ‘gamble with your head’. The sample felt that if you gambled with your head – sensibly and logically – one would not get caught up in the excitement and fall victim to the “fever”. It is easy to become overwhelmed with emotion and gamble more, or for longer, than intended, and the majority of gamblers appear to be aware of this.

4. CONCLUSION

The results found that being considered a responsible gambler is socially desirable, and therefore serves as a confounding factor in most gambling research. In the case of self-declared responsible gamblers, 'actions speak louder than words.' The difference between responsible and irresponsible gambler's responses suggests that responsible gamblers tend to have a strategy (which they stick to), and maintain the safety of their finances through these strategies – even during an impulse event such as gambling. Furthermore, these respondents appear to have more stable and realistic beliefs about gambling, and have normal guilty cognitions concerning overspending or reckless gambling behaviour. Those who are responsible tend to gamble purely for entertainment, whereas gambling functions more as a release for the pathological gambler (who often experiences associated feelings of tension, shame and guilt).

It was found that gamblers (responsible or otherwise) often entertain contradictory beliefs. The amount of distortion inherent predisposes the level of gambling problem an individual may have. For example, individuals who believe they have skills and play games of chance, exhibit stronger pathological tendencies. A further discrepancy between beliefs and actual behaviour calls the quality of self-report data into question, and necessitates alternative methods of gambling inquiry. This research highlights the fact that perceptions of responsibility are highly influenced by social desirability, and in the pathological gamblers case, serves as a denial which only exacerbates cognitive distortions. Belief in luck skews rational perceptions and cognitive processes regarding the individual's ability to gamble responsibly. The gamblers beliefs are manifested in their behaviour, and it is suggested that future attitudinal research pays more attention to participant's behaviour when attempting to make sense of their beliefs and attitudes. Further research must endeavour to make sense of gambling behaviour without having to rely on self-report data. This is not to say that self-report data is invalid. It is useful, but must be considered in relation to other empirical evidence.

Furthermore, in retrospect, there were a number of methodological issues with the research questionnaire. Acquaintance with the literature has revealed numerous areas not addressed in this project. Problem and pathological gambling involves processes beyond the individual's awareness, and it is not enough to merely hold a common sense view of the phenomenon. As such, the following section will briefly point out what were felt to be limitations, as well as recommendations for addressing these concerns.

4.1. PRACTICAL RECOMMENDATIONS

1. The easy availability of automated teller machines (ATM's) and credit machines encourages some gamblers to wager more money than they intended. It is recommended that these machines be made unavailable in areas where gambling takes place.
2. It is recommended that policies and procedures are put in place to ensure the safety of children at casinos, and to prevent underage gambling. Although this issue appears to be well dealt with at Hemingway's casino, it is likely a problem at many others.
3. Responsible gambling should be encouraged through posters, radio, and other forms of public media, at the casinos expense. It is suggested that casinos should be taxed for this purpose.
4. Students should be warned of the dangers of gambling, beginning at pre-school and continuing through university.

5. METHODOLOGICAL ISSUES

5.1. LIMITATIONS OF PRESENT RESEARCH

A strict critical evaluation of this study reveals certain limitations which, arguably, do not significantly detract from the studies findings. These limitations and moderating factors are described below.

1. Whilst this is the second such study in the Eastern Cape it is by no means an accurate or truthful account of the real gambling picture in South Africa. Although the sample size was increased since the last study, it is still plagued by methodological issues.
2. The most obvious problem encountered was that of biased sampling. Getting a truly representative sample of the gambling population is a tricky business at best. Reasons for gambling, as well as the types of gamblers expected to play at the Casino at various times of the day vacillate in the extreme.
3. The study was also plagued (like the previous one) by issues of social desirability. There is currently no known way of addressing this issue when self-report questionnaires are the method. Many gamblers (particularly the problem ones) lie when filling out questionnaires in order to protect themselves from perceived judgement from others.
4. Time constraints meant that the questionnaire had to be kept short and a more careful plan to ensure representativeness was made impossible. Important questions were removed from the questionnaire in order to keep it a tolerable length.

5.2. RECOMMENDATIONS FOR FUTURE RESEARCH

In light of the above limitations the following recommendations for future research are proposed:

1. The sample size must be increased considerably.
2. A more careful sampling action plan must be established. With the help of casino employees, more time, as well as a more thorough review of demographic trends, the issue of sampling bias can be largely dealt with.
3. Self-report questionnaires always open research up to socially desirable responses, especially when the questions are personal in nature. Questions should either be phrased more sensitively (at the possible expense of validity), or other methods of inquiry should be utilised. Triangulation is suggested for future gambling research in this area.
4. Gamblers are generally unsympathetic towards filling out questionnaires and would, in most cases, rather be gambling. As a result longer questionnaires are not plausible.

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APPENDIX

The following questionnaire is in aid of psychology masters research at Rhodes University. Although biographical data is being recorded, this is purely for statistical reasons and the survey is COMPLETELY ANONYMOUS AND CONFIDENTIAL. Please fill in the answers as honestly as possible. This survey is intended to be approximately 5 minutes in length. Thank you for your time and participation.

Biographical Information

Gender (please circle): M F

Age (please tick): 10 – 20 years old

21 – 30

31 – 40

41 – 50

51 – 60

61 – 70

70 +

Occupation (please specify):

Monthly income (please tick): R0, 00 – R5, 000

R5, 100 – R10, 000

R11, 000 – R20, 000

R21, 000 – R30, 000

R31, 000 – R40, 000

R41, 000 – R50, 000

R50, 000+

Do you reside in the area; do you live in another town\city and are in town on business or just visiting? (please specify):

With regards to gambling, what are your expectations for today at this casino?

Please indicate how much these statements apply to you
(please circle)

1 = Strongly Agree 2 = Agree 3 = Disagree 4 = Strongly Disagree

1. I gamble purely for entertainment or leisure

1

2

3

4

2. I can control how much I spend on gambling

1

2

3

4

3. My family considerations come before gambling

1

2

3

4

4. Gambling can become an addiction if not controlled

1

2

3

4

5. I believe in luck

1

2

3

4

6. I have a specific strategy to avoid over-spending while gambling

1

2

3

4

7. Gambling is just one form of leisure activity

1

2

3

4

8. I set limits on the amount of money I gamble

1

2

3

4

9. I set limits on the amount of time I spend gambling

1

2

3

4

10. I do adhere to my above stated limits			
1	2	3	4

11. I can stop gambling if I so choose			
1	2	3	4

12. Most people gamble more irresponsibly than I do			
1	2	3	4

13. I allocate a specific amount of money purely for gambling to avoid over-spending			
1	2	3	4

14. Gambling is exciting cause it holds the possibility of getting rich quick			
1	2	3	4

15. I have never been in debt as a result of my gambling behaviour			
1	2	3	4

16. I set limits regarding my alcohol consumption while gambling			
1	2	3	4

17. I have never missed work to go gambling			
1	2	3	4

18. I consciously keep track of time while gambling			
1	2	3	4

19. I gamble exclusively to make money			
1	2	3	4

20. Gambling for me is a harmless past-time			
1	2	3	4

21. My family and friends do not worry about my gambling			
1	2	3	4

22. I am a responsible gambler			
1	2	3	4

23. I don't believe in chance, everything happens for a reason			
1	2	3	4

24. I have a good chance of winning today			
1	2	3	4

25. I have certain skills that will help me at gambling			
1	2	3	4

26. My family's financial security is never threatened by my gambling			
1	2	3	4

27. If I am losing while gambling, I spend more money to recover my losses			
1	2	3	4

28. I believe that the chances to win are usually against the player and in favour of the casino			
1	2	3	4

How often do you gamble on average? (please tick):

☐ Daily
☐ Weekly
☐ Monthly
☐ Yearly
☐ Never

Which of the following do you participate in? (tick as many as apply to you):

- ☐ Slots
- ☐ Cards \ Tables
- ☐ Lotto
- ☐ Scratch cards
- ☐ Sports betting

On average, how much money would you spend on a gambling session (please tick):

- ☐ R10 – R50
- ☐ R51 – R80
- ☐ R81 – R100
- ☐ R101 – R150
- ☐ R151 – R200
- ☐ R201 – R300
- ☐ R301 – R400
- ☐ R401 – R500
- ☐ R500+

If you indicated that you have a specific strategy to avoid over-spending and to avoid problem gambling, please indicate what these strategies are and how you use them

END OF SURVEY

Once again, thank you for your time and honest participation.



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