International Journal of
Psychotherapy, Counselling and Psychiatry:
Theory Research & Clinical Practice (Volume III)
URL: http://ijpcp.com/

Gambling Disorder: An Overview with Emphasis on Psychological Treatments

Audrey F. Ashubwe

Dedan Kimathi University of Technology
Email: faithonyango@yahoo.com

Pamela W. Miano

Dedan Kimathi University of Technology
Email: pmiano23@gmail.com

Abstract

Gambling disorder is also referred to as "The Hidden Addiction''. Gambling is defined simply as wagering for money and was previously thought to be an adult disorder. Recent studies show that it is twice as rampant in adolescents as it is in adults. The prevalence of gambling at Kisii University Eldoret campus student population in Kenya has been shown to be high and about 60% of students have gambled at least once while attending this University. Gambling Disorder has been found to exist with other mental health disorders like anxiety disorders, mood disorders, Substance Use Disorders, etc. This comorbidity further complicates its treatment.

In Kenya examples of sports betting and lotteries which act as strong lures for gambling are Mcheza, Sports pesa, Lotto, Bet yetu, Pambazuka e.t.c. These promise great financial rewards. The three subtypes of gambling identified by Blaszczynski and Nower are the behaviourally conditioned, the emotionally vulnerable and the biologically vulnerable. Five motives have also been proposed for the same.

Treatment of this disorder involves pharmacological and psychological treatments. This paper reviews the available literature on the psychological treatments for Gambling Disorder. Some of the effective psychological treatments for Gambling Disorder include Cognitive Behavioural Therapy, Motivational Interviewing, Solution Focused Therapy, Group therapy, Self Help treatment and Harm reduction.

Keywords: Gambling disorder, Psychological treatments, Adolescents, Youth

Introduction

The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) recognizes Gambling Disorder and classifies it under the Non – Substance Related Disorders. It is the first addiction classified in the DSM-5 that is behavioural. It is currently also referred to as Problem Gambling (Chu & Clark, 2015). For a Gambling Disorder diagnosis, one must exhibit at least four of the nine gambling related problems listed in the DSM-5 for a 12 months period. The specifications for this disorder are episodic/ persistent, stages of remission and current severity (APA, 2013). According to the American Psychiatric Association (APA) (2000), pathological gambling typically involves constant and

23 April 2018 e-ISSN No: 25904272

repeated maladaptive gambling behaviour. This causes significant harmful financial, psychosocial, physical and legal consequences (APA, 2000). Simply defined, gambling is wagering for money (Derevensky, 2015) and is referred to as a hidden addiction (Derevensky & Gilbeau, 2015).

Gambling was previously thought to be an activity that only adults engaged in. Studies in the last 50 years have shown that this is no longer the case. Adolescents too are continuously taking part in gambling (Derevensky, 2012). Studies have shown that the rate of pathological and problem gambling in adults is almost two times less than it is in adolescents. In addition, the earlier the age at which one starts to gamble, the more severe the negative consequences as well as the chances of continued gambling later in life (George & Mulari, 2005). Adolescents gamble in regulated or licensed venues despite being under age and not being allowed to do so. They are also involved in unregulated gambling which they do with their peers (Derevensky, 2012). Gambling behaviour in adolescents ranges from non – disordered through to recreational or social gambling to gambling that is compulsive, problematic, pathological and disordered (Derevensky & Gilbeau, 2015). Typically, adolescents engage in gambling activities that include playing cards for money, board games, betting on games with their peers, playing video games, sports wagering etc. An increasing number are now using their smart-phones or the internet as a platform to gamble (McBride & Derevensky, 2012). It is an incapacitating disorder that affects many different areas of ones' life. Those who suffer from it have an increased risk of death through suicide (George & Mulari, 2005), steal money from their parents and shoplift (Derevensky & Gupta, 2004). Adolescents with gambling disorders are preoccupied with gambling, they continue to engage in it despite the repeated losses and often attempt to recover their losses. This causes them to lie to their friends, family and peers about their activities; and their efforts to reduce gambling result in depression and anxiety. This is because gambling is exciting and the more the adolescent wagers, the greater the adrenaline rush that they experience (Derevensky & Gupta, 2004).

Betting is not only prevalent among adolescents, but it is also a growing concern amongst university students with a large number of students between the ages of 18 and 24 engaging in gambling behaviours. Koross (2016) conducted a study to investigate the popularity of betting among Kenyan university students, their motives for betting and whether it had an influence on their behaviour. The findings indicated that betting was prevalent among university students and their main motives were to attain money and for enjoyment purposes. An effect on the students' behaviours was also noted in the study such as spending lots of time gambling rather than attending classes as well as incurring debts to finance their gambling. Amongst university students, ownership of mobile phones provides an easy route to sports betting due to increased accessibility to online sites. Some students spend their University tuition fees on betting and as a result of losing bets, there have been dire consequences such as failing to sit for examinations, discontinuation of one's university education or in some instances committing suicide (Koross, 2016).

Peltzer and Pengpid (2014) conducted a cross-sectional study to investigate the gambling behaviour of university students across 23 low and middle income and emerging countries. Findings indicated that there are several risk

behaviours associated with gambling among university students. These risk behaviours included tobacco use, sexual risk behaviour, not always abiding to driving speed limits and engaging in physical fights. Comorbid mental health disorders such as PTSD symptoms and depression were also noted.

In adults, absenteeism at work, loss of jobs, poor performance in the workplace and family problems are common outcomes (Grant, Odlaug & Scheribe, 2014). Other problems include legal problems, debt and bankruptcy as well as psychological distress (Petry, Stinson & Grant, 2005)

Prevalence

The lifetime prevalence of pathological gambling in the US has been estimated at 0.42 % (Petry, et al, 2005) which is close to the prevalence reported in Western European countries (Costes, Pousset, Eroukmanoff, Le Nezet, Richard, Guignard, Beck & Arwidson, 2011). According to the DSM-5, the prevalence rate of Gambling Disorder in the general population is approximately 0.4% - 1.0 %. In females it is about 0.2% while in males it is about 0.6% (APA, 2013). Derevensky (2012) indicates that male adolescents appear to be engaged more actively in gambling than their female counterparts. The likelihood of older adolescence taking part in gambling is also higher than that for younger adolescents. Females tend to begin gambling later in life. However, they have been shown to progress faster into addiction (George & Mulari, 2005).

In addition, ones' socio- economic status (SES), ethnicity, and close physical proximity to the locations in which gambling occurs, influence the prevalence as well as the attractiveness of each type of gambling activity (Derevensky, 2012). Those from a lower socioeconomic class tend to have higher rates of gambling (van Wormer & Davis, 2013). In lifetime prevalence rates of pathological gambling among African Americans, Whites and Hispanics are about 0.9 %, 0.4% and 0.3% respectively (APA, 2013). Research findings from the United States, Norway, Canada, The United Kingdom and Australia reveal that 63 – 82% of 12 – 17 year olds are involved in gambling each year (Monaghan, Derevensky, & Sklar, 2008). Typically, a child will have their first gambling experience at the age of 12 years. That is at a slightly younger average age than that at which they begin the use of tobacco, alcohol or other drugs (Jacobs, 2004).

Co-Morbidity

Gambling Disorder is a heterogeneous condition; primarily because many individuals with Gambling Disorder have other coexisting mental health disorders which include anxiety, substance use, mood disorders (Felicity, Lorains, Cowlishaw & Thomas, 2011), Antisocial Personality Disorder and Impulse Control Disorder (Chou & Afifi, 2011). In a study on university students, comorbid mental health disorders such as PTSD symptoms and depression were also noted (Peltzer & Pengpid, 2014). The presence of these comorbid psychological conditions further complicates the clinical picture of individuals with Gambling Disorder.

Different Types of Games

Not all the gambling games have the same structure and therefore addiction potential. The traditional lotteries are considered less addictive, the scratch card lotteries as moderately addictive while the slot machines are considered to be highly addictive since

they use the variable reinforcement schedule and immediate feedback (Beck, Richard, Guignard, Le Nézet, & Spilka, 2015).

Psychological theories and reasons for Gambling

Binde (2012, p. 84) identifies five motives for gambling: the dream of hitting the jackpot, social rewards, intellectual challenge, mood change and the chance of winning. Some of the theories that have suggested reasons for gambling include the behavioural theories which indicate that gambling is as a result of positive reinforcements. Slot machines seem to be designed to use operant conditioning. Players are rewarded occasionally with small prizes and this motivates them to keep playing. The initial win keeps them playing despite later loses in the hope that the next time they shall win. They eventually get hooked to the game and regardless of whether they win or lose (van Wormer & Davis, 2013). According to the psychoanalytic theories, gambling is viewed as self - punishment because of the high risk frequent losses. This is as a result of unresolved guilt or immature and childlike behaviour that an individual uses to try and delay autoerotic satisfaction (Escandon & Galvez, 2013). The Cognitive-Behavioural theories (CBT) propose that problems are caused and perpetuated by maladaptive thinking and individuals' bad habits (van Wormer & Davis, 2013).

Risk Factors

In order to understand the complexity of problem gambling, clinicians need to adopt a bio-psycho-social-environmental outlook. It is now recognized that not all adolescents that are involved in gambling develop the disorder in the same way. This suggests that the risk factors for individuals also differ. However, whatever the risk factors, they are the same as those often associated with other addictive and mental health disorders (APA, 2013). The developmental period of adolescence is a period that is associated with behaviour that is likely to involve risk taking (Chambers, Taylor & Potenza, 2003). Studies indicate that most adolescents will take part in gambling to some degree if a chance is presented (Gupta & Derevensky, 2000).

Twin studies by Slutske, Zhu, Meier and Martin (2010) indicate that the influence of genetic factors in the risk of developing Disordered Gambling could be more than that of environmental factors. Experiencing trauma at an early age and being genetically predisposed has been found to make some individuals neurologically vulnerable to the disorganizing consequences of addiction. Cumulatively, these effects can lead to changes in the structure of the brain, its function and response to further stress. These individuals are therefore more vulnerable to addiction. There is rapid neuroplasticity in the adolescent brain which facilitates learning but also makes the brain vulnerable to high risk behaviour and brain damage that results from the same (Winters & Arria, 2011). Another reason for the inability of adolescents to resist peer pressure and engage in risky behaviour like gambling, is that the prefrontal cortex which is associated with self- awareness, novelty seeking and judgment is not fully mature until after the age of 20 years (van Wormer & Davis, 2013). In addition, dopamine has been implicated in making some individuals susceptible to Gambling Disorder. When the brains of non-addicted control group were compared with those of the addicted individuals, it was found that winning causes less activation in the pleasure regions of the addicted individuals. Also noted was the increase in

activation in men of dopamine pleasure circuit when playing video games which was absent in women (Linden, 2011). This could explain the differences between males and females in their preferred modes of gambling.

Studies by Parker, Summerfeldt, Kloosterman, Keefer and Taylor (2013) indicate that having a learning disorder puts adolescents at a doubled risk of developing disordered gambling compared to those who do not have learning disorders. In addition, if adolescents have other psychiatric, medical or substance use disorders, they are at high risk of developing problem gambling (Wilber & Potenza, 2006). Furthermore, maladaptive beliefs are risk factors in problem gambling. Adolescents have wrong beliefs that they can control themselves at the slot machines or that gambling involves some skill (Delfabbro, Lamos, King & Puglies, 2009). Faregh and Derevensky (2011) indicate that there is a risk of children with ADHD developing Gambling Disorder. Adolescents have resorted to gambling because of the perception they have that it is an easy way of getting wealth without having to work hard for it. A number of adolescents even indicated that their preferred vocation is to become a professional gambler (McBride & Derevensky, 2012).

The earlier the age at which one starts to gamble, the higher the risk of developing a gambling problem. Socially, it has been shown that the onset of gambling is increased in individuals from low socioeconomic status backgrounds especially the impulsive youth (Auger, Lo, Cantinotti & Loughlin, 2010). The environmental risk factors for youth developing problem gambling are low social bonding, neighborhood, peer, family, social and personal competence. Children with a parent who has a gambling problem, poor parental discipline and supervision contribute to youth gambling problems. Furthermore, many youth indicate that their first experience in gambling was with a family member at home (Lussier, Derevensky, Gupta & Vitaro, 2013). For others, gambling is used for socialization, as a way to relieve stress and boredom (Derevensky & Gilbeau, 2015). Other risk factors are discussed in detail later during the discussion of the different developmental pathways for Gambling Disorder.

Protective Factors

Resilience and family cohesion have been identified as protective factors for adolescent gambling (Dickson, Derevensky & Gupta, 2008). Positive social bonding (school connectedness and family cohesion), social and personal competence are believed to be the resource factors that may reduce the chances of youth engagement in gambling (Lussier et. al., 2013).

Screening and Assessment

Some of the instruments that can be used to assess gambling addiction are the DSM-5 (APA, 2013), Canadian Adolescent Gambling Inventory (CAGI), (Wiebe, Wynne, Stinchfield & Tremblay, 2007), South Oaks Gambling Screen – Revised for Adolescents (SOGS –RA), (Winters, Stinchfield & Fulkerson, 1993), DSM IV – J (Fisher, 1992) and DSM IV- MR –J (Fisher, 2000), Gambling Activities Questionnaire (Gupta & Derevensky, 1996), The Lie/ Bet questionnaire (Johnson, Hamer, Nora, Tan, Eistenstein & Englehart, 1988) and Twenty Questions of Gamblers Anonymous (Parker et. al., 2012).

The Pathways Model of Gambling

Blaszczynski and Nower (2002) suggest that there are pathways through which Gambling

Disorder develops. Each of these isolates specific predisposing factors as well as consequences as a result of gambling. The model identifies the following three subtypes of gamblers; the behaviourally conditioned, the emotionally vulnerable and the biologically vulnerable.

Pathway 1: The Behaviourally Conditioned Gamblers.

These gamblers do not have any previous psychopathology. They are regular gamblers who may gamble occasionally while at other times they gamble excessively. Conditioning plays a role in their gambling pattern and so do their distorted cognitions about winning. They also gamble because of poor decision making and not because of lack of control (Gupta, Nower, Derevensky, Blaszczynski, Faregh, & Temcheff, 2013). The reasons these individuals begin gambling are related to socialization, entertainment and excitement (Allami & Vitaro, 2015).This is similar to the type of gamblers known as casual social gamblers who gamble mostly for recreational purposes (Koross, 2016). Individuals with this subtype respond well to treatment and are good candidates for prevention strategies (Allami & Vitaro, 2015).

Pathway 2: The Emotionally Vulnerable Gamblers.

These individuals have vulnerabilities to the same ecological risk factors and processes of conditioning as those of Pathway 1. However in addition, these individuals often are members of dysfunctional families, have experienced major traumas in their lives and have depression and / or anxiety (Gupta et. al, 2013). These gamblers therefore gamble in an attempt to cope with their emotional problems (Allami & Vitaro, 2015). This is similar to the type of gamblers known as escape gamblers for whom gambling produces a numbing effect that helps them escape from feelings of anxiety or depression (Koross, 2016). Emotionally vulnerable gamblers have been found to be abusers of drugs prior to developing Gambling Disorder. They use both the drugs and gambling as a means of providing arousal or escape from their aversive emotional states (Jacobs, 2004). Individuals of this subtype are more resistant to treatment because there are underlying emotional issues that need to be addressed as the gambling problem is tackled (Allami & Vitaro, 2015).They have symptoms of depression, are dependent on substances and anxious as they chase their losses. The substance abuse also needed to be addressed and this makes treatment more complex than that for Pathway 1 individuals (Gupta et. al, 2013).

Pathway 3: The Biologically Vulnerable Gamblers.

Individuals in this group have similar biological and psychosocial vulnerabilities to those in Pathway 2. However, the differences between the two are that in addition, individuals in this subgroup have antisocial personality behaviours and traits, a number of maladaptive behaviours, are impulsive and show attention deficits (Gupta et. al, 2013). This relates to the type of gambler referred to as the antisocial gambler, who gambles to make money and also tends to scam people in order to do so (Koross, 2016). Brain regions that are associated with control of impulse are affected. There is suggestion of genetic vulnerability because these individuals also have a history of antisocial behaviour in their families (Allami & Vitaro, 2015). These individuals display behavioural problems that are not related to the type of gambling that they are involved in (Blaszczynski, Steel, & McConaghy, 1997). Furthermore, individuals in this group are involved in drug abuse and experimentation, criminality that is not related to gambling as well as have poor

interpersonal relations (Gupta et. al, 2013). There is poor treatment outcome with individuals in this subgroup. They do not adhere to treatment and respond poorly to any intervention given the severity of their problem (Blaszczynski & Nower, 2002).

Treatment

Very few pathological gamblers and those that are at risk of developing Gambling Disorder seek treatment despite the fact that it is available. Paradoxically, those who seek treatment often do so for other comorbid disorders (Winters & Kushner, 2003). Reasons for not seeking treatment included denial and shame associated with having a gambling problem. Furthermore, a number would like to resolve the problem by themselves while others do not trust the therapists that they go to (van Wormer and Davis, 2013). Another possible reason would be the focal point of the clinicians tend to be focussing on teenagers' with other comorbid disorders such as substance abuse than gambling addiction (Wilber & Potenza, 2006). Clinical support suggests that disordered gambling is an episodic disorder as opposed to the progressive and continuous nature that it was previously thought to be. This could be another reason why many youth do not seek treatment; they could be correcting their behaviours in between the gambling episodes (Derevensky & Gilbeau, 2015)

Gambling Disorder appears to begin in early adolescence; the Identity vs. Role confusion stage (12 -17 years). According to Erickson's psychosocial theory of development, if the crisis at a particular stage is not resolved or its resolution is put on hold, the individuals' maturity level becomes inconsistent with their chronological age (van Wormer & Davis, 2013). An addiction counsellor needs to keep this in mind as they plan for the treatment of an adolescent.

In addition, when conducting interventions in the youth, Jacqueline Wallen (1993) in her developmental theory suggests that one must proceed differently; that is, more slowly than they would with adults (Wallen, 1993). Moreover, different approaches may be necessary for different adolescents depending on their level of maturation and development. Treatment for a 14 year old would differ from that of an 18 year old (Wilber & Potenza, 2006). Some individuals may need to be admitted into a hospital or institution so that they are away from the situations that tempt them to gamble. Education on values is helpful as a preventive measure (Escandon & Galvez, 2013).

Since the causes of Gambling Disorder are varied, there is no single treatment approach that will work universally for all individuals that require help (Blaszczynski & Nower, 2002). In the treatment of adolescence and youth, there are no specific treatments that have been empirically validated. Therefore, treatments used are similar to those that are used for adults. Some of the approaches include psychological, pharmacological, addiction based models biological/ genetic, self - help models (Ladouceur, Fournier, Lafond, Boudreault, Goulet, Sévigny, Simoneau, & Giroux, 2015) and Motivational Interviewing (Pasche, Sinclair, Collins, Pretorius, Grant and Stein, 2013).This paper focuses on the psychological treatment approaches to Gambling Disorder. They include:-

1. Cognitive – Behavioural Therapy (CBT).

Cognitive behavioural techniques have been found to be effective in the treatment of

Gambling Disorder and many therapists prefer to use CBT (Derevensky & Gilbeau, 2015). Rash and Petry (2014) conducted a systematic review of psychological treatments for Gambling Disorder. Their findings indicated that cognitive-behavioural interventions were the most common amongst extensive therapies.

CBT advocates that the situation can be changed by a change in thinking which can lead one to behave differently. For problem gamblers it can be applied in the following ways:-

a) Reinforcement: problem gamblers can be rewarded during periods of abstinence.
b) Modelling: a problem gambler who joins a group like Gamblers Anonymous is likely to be motivated to abstain from gambling or maintain their recovery when they interact with other group members that have abstained for a long time. These group members model the benefits of abstinence.
c) Conditioned responding: when problem gamblers are helped to identify potential triggers and devise ways to diffuse them, they are likely to abstain from gambling.
d) Cognitive factors: the ABC model can be used to challenge cognitive distortions of individuals with Gambling Disorder. By re-evaluating their beliefs, they can change the consequences of maladaptive thoughts.
e) Relaxation training and desensitization help individuals with Gambling Disorder to prepare mentally to overcome the temptation to gamble.

A counsellor can also use CBT to teach individuals with gambling disorder intrapersonal and interpersonal coping skills either in individual or in group therapy. Emphasis should also be on relapse prevention and contingency management (van Wormer and Davis, 2013).

However for adolescents, in addition, it is necessary to help them understand their erroneous cognitions, laws of probability and independence of events. Focus should also be on underlying motivations that lead to gambling which include anxiety, depressive symptoms, somatic disorders, personal, academic and family problems, high risk taking, mood disorders, poor coping skills etc. Most importantly, the reduction of barriers to accessing treatment must be considered before establishing Best Practices (Derevensky & Gilbeau, 2015). CBT can also be used in group therapy to treat Gambling Disorders.

2. Motivational interviewing (M I)

According to Hodgins and Diskin (2008), M I is the treatment of choice for a gambling addiction counsellor. One of the reasons would be client who seeks therapy urgently wants to straighten out their lives and be free of the problems brought about by gambling. They are therefore highly motivated to change. Thus, M I is often quite effective with such a population. Motivational Interviewing targets the ambivalence that clients with Gambling Disorder often experience towards change. It addresses the problems of these individuals thereby increasing their motivation to change as well as making them self-efficacious in tackling problems. It has also been used successfully in individuals that have gambling problems and do not meet the criteria for Gambling Disorder (Rash & Petry, 2014). The aim for using MI for these individuals is they will not progress to Gambling Disorder (Yau & Potenza, 2015). Studies by Josephson, Carlbring, Forsberg and Rosendahl (2016)

found that MI was more useful than Cognitive Behavorial Group therapy (CBGT) in the treatment of individuals in whom Gambling Disorder is comorbid with risky alcohol intake.

3. Solution Focused Therapy (SFT).

SFT has been found to treat Gambling Disorder. According to SFT, addiction affects people differently. It is therefore important to help individuals define how they conceptualize their problems and the goals that they need to have in order to bring about change. Some techniques used by SFT include the use of miracle questions, coping questions and scaling questions. Therapists highlight past successes and strengths and avoid addressing issues that were previously considered problematic (van Wormer & Davis, 2013).

4. Gamblers Anonymous

Group treatments for Gambling Disorder are based on the treatments that are used for alcoholism, with members attending group therapy and Gamblers Anonymous meetings. Gamblers Anonymous also apply the disease model similar to Alcoholics Anonymous approach and thus view gambling as a life-long affliction (Rash & Petry, 2014). This is a cost effective method of delivering treatment. Adolescents get to learn from other members' experiences. Gambling Anonymous (GA) groups use the 20 gambling questions to assess whether one is a compulsive gambler (van Wormer & Davis, 2013).

Rash and Petry's (2014) review indicated that early dropout was common except for those with more severe gambling or interested in abstinence. With those who combined Gambling Anonymous and professional treatment, there were greater gains in reducing gambling. However, Gambling Anonymous is not usually a desirable resource for many seeking help with gambling addictions and thus overall commitment is low.

5. Self – help treatment

Studies by Suurvali, Hodgins, Toneatto and Cunningham (2008) indicate that only about 29% of those with problem gambling have sought formal assistance for their problem. However, when informal assistance for example the use of internet or self-help books was availed, the number seeking treatment rose to approximately 53%. A study by Hodgins, Currie and el-Guebaly (2001) showed that using a self-help treatment workbook or manual combined with telephone interviews from a clinician who is specialized in dealing with gambling problem would yields a decrease in gambling habits. These results are noted up to two years after treatment ended. A Cognitive Behavioural approach created by Centre quebecois d'excellence pour la prevention et le traitement du jeu (CQEPT) at Universite level called JEu me questionne (JMQ) is an example of such an approach. The phone interviews use principles from the Motivating Interviewing approach. Other self-help materials include video and audio materials (Ladouceur et al, 2015). Self-help treatments may reach a wide range of people seeking treatment other than those professionally delivered as there are less perceived obstacles such as stigma and cost (Rash & Petry, 2014).

6. Harm reduction approach

This approach recommends that youth need to be aware of the risks that are associated with gambling. They also need to be helped to develop skills in critical thinking that helps

them remain in control whenever the situation they are in. At risk, youth need to be identified and programs that target harm reduction developed at community as well as school levels. Also, parents need to monitor their children when using the internet and be sensitive to the marketing strategies used to lure youth to gambling (van Wormer & Davis, 2013).

Conclusion

Internet gambling is a fast growing industry that adolescents increasingly are engaged in. This is a discreet method of gambling and probably easier for youth to engage in because some of the places like the casinos at which gambling takes place restrict their entry. Internet is easily available and accessible even by the use of mobile phones which many of the youth own. In Kenya new gambling sites are increasingly being introduced and advertised in the media. They include those for Mcheza, Betin that sponsor KTN news sports section, Sports pesa, Lotto, Betway, Pambazuka `the 100 million shillings National lottery' and Bet yetu which promise great financial rewards. Recently introduced is the Mega Dollar lottery which assures of a chance to win every 4 minutes.

Regarding treatment, it should be noted that individuals with severe problems are the ones who seek formal treatment whereas those with less severe problems tend to engage in natural recovery as a result of conscious decision to do so (Suurvali et. al., 2008). Some individuals with Gambling Disorder do recover without formal treatment and do not require it (Swan & Hodgins, 2015). Nonetheless, gambling addiction needs to be assessed and monitored considering that there are many different avenues through which an individual can get hooked to the behaviour as well as range of risk factors that make one susceptible to become addicted. Gambling Disorder is now aligned with substance use disorders in the DSM 5 (it was previously under Impulse Control Disorders in the earlier DSM publications) thus indicating that more professionals would need to consider it as an addiction in their treatment (APA, 2000, 2013; Rash & Petry, 2014).

References

Allami,Y. &Vitaro, B. (2015). Pathways Model to Problem Gambling: Clinical Implications for Treatment and Prevention among Adolescents. *Journal of Gambling Studies, 6 (2),*13-19.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental Disorders: DSM-IV-TR* (4th Ed.). Washington, DC: APA.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th Ed.). Arlington, VA, American Psychiatric Publishing

Auger, N., Lo E., Cantinotti, M., & Loughlin, J. (2010). Impulsivity and socio-economic status interact to increase the risk of gambling onset among youth. *Addiction, 105* (12), 2176-2183. DOI: 10.1111/j.1360-0443.2010.03100.x

Beck, F., Richard, J. B., Guignard, R., Le Nézet. O., & Spilka. S. (2015). Les niveaux d'usage des drogues illicitesen France en 2014.*Tendances*, (99), 8-herault.gouv.fr

Binde. P. (2012). Why People Gamble: A model with five motivational dimensions. *International Gambling*

Studies, *13*(1), 81-97, DOI: 10.1080/14459795.

Blaszczynski, A. P., & Nower, L. (2002). A pathways model of problem and pathological gambling. *Addiction, 97*, 487–499.

Blaszczynski, A. P., Steel, Z., & McConaghy, N. (1997). Impulsivity in pathological gambling: The antisocial impulsivist. *Addiction, 92*, 75–87.

Chambers, R. A, Taylor. J. R, & Potenza, M. N. (2003). Developmental neurocircuitry of motivation in adolescence: A critical period of addiction vulnerability. *American Journal of Psychiatry, 160*(6), 1041–1052.

Chou, K.L., & Afifi, T.O. (2011). Disordered (pathologic or problem) gambling and axis I psychiatric disorders: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *American Journal of Epidemiology*, 173(11), 1289-1297. DOI: 10.1093

Chu, S., & Clark, L. (2015). Cognitive and Neurobiological Aspects of Problem Gambling: Relevance to Treatment; *Canadian Journal of Addiction, 6,* (2), 62-71

Costes, J. M., Pousset, M., Eroukmanoff. V., Le Nezet, O., Richard, J.B., Guignard. R., Beck, F., & Arwidson, P. (2011). Les niveaux et pratiques des jeux de hasard et d'argenten 2010.*Tendances, 77*(1), 8.

Delfabbro, P., Lambos. C, King, D., & Puglies. S. (2009). Knowledge and beliefs about gambling in Australian secondary school students and their implications for education strategies. *Journal of Gambling Studies, 25* (4), 523-539.

Derevensky J. L., & Gilbeau. L. (2015). Adolescent gambling: twenty-five years of research. *Canadian Journal of Addiction.6* (2), 4- 12.

Derevensky, J. L., & Gupta, R. (2004). Adolescents with gambling problems: A review of our current knowledge. *e-Gambling: The Electronic Journal of Gambling Issues,10*, 119–140.

Derevensky, J. L. (2012). *Teen Gambling: Understanding a Growing Epidemic*. New York, Rowman & Littlefield Publishing, Spain.

Dickson, L., Derevensky, J. L., & Gupta, R. (2008). Youth gambling problems: An examination of risk and protective factors. *International Gambling Studies*, *8*(1), 25-47.

Diskin, K. M, & Hodgins, D.C. (2009). A randomized controlled trial of a single session motivational intervention for concerned gamblers. *Behaviour Research and Therapy, 47* (5), 382-388.

Escandon, R., & Galvez, C. (2013). *Free from addictions; In the face of drugs, AIDS and other enemies of society.* 3rd ed. Madrid: Editorial Safeliz team.

Faregh, N., & Derevensky, J. L. (2011). Gambling behaviour among adolescents with Attention Deficit/Hyperactivity Disorder. *Journal of Gambling Studies, 27*, 243-256. Doi:10.1007/s10899-010-9211-3

Felicity, K., Lorains. F. K., Cowlishaw. S., & Thomas. S. A. (2011). Prevalence of comorbid disorders in problem and pathological gambling: systematic review and meta-analysis

of population surveys. *Addiction, 106*, (3), 490–498. DOI: 10.1111/j.1360-0443.2010.03300.x

Fisher, S. (1992). Measuring pathological gambling in children: The case of fruit machines in the U.K. *Journal of Gambling Studies, 8*, 263–285.

Fisher, S. (2000). Developing the DSM-IV-MR-J criteria to identify adolescent problem gambling in non-clinical populations. *Journal of Gambling Studies, 16*, 253–273.

George. S., & Murali.V. (2005). Pathological gambling: an overview of assessment and treatment. *Advances in Psychiatric Treatment*, (6), 450-456; DOI: 10.1192/apt.11.6.450

Grant, J. E., Odlaug. B. L., & Schreiber, L. R.(2014). Pharmacological treatments in pathological gambling. *British Journal of Clinical Pharmacology, 77*(2), 375-81. Doi: 10.1111/j.1365-2125.2012.04457.x.

Gupta, R. & Derevensky, J. L. (1996). The relationship between gambling and video-game playing behaviour in children and adolescents. *Journal of Gambling Studies, 12* (4), 375-394.

Gupta, R., & Derevensky, J. L. (2000). Adolescents with gambling problems: From research to treatment. *Journal of Gambling Studies, 16*, (2/3), 315–342

Gupta, R., Nower. L., Derevensky, J. L., Blaszczynski. A., Faregh. N., &Temcheff., C. (2013). Problem Gambling in Adolescents: An Examination of the Pathways Model. *Journal of Gambling Studies, 29* (3), 575-588; 10.1007/s10899-012-9322-0

Hodgins, D. C., Currie. S. R. & el-Guebaly. N. (2001). Motivational enhancement and self-help treatments for problem gambling. *Journal of Consulting and Clinical Psychology, 69*, 50-57.

Jacobs, D. F. (2004). Youth gambling in North America: Long-term trends and future prospects. In: Derevensky. J. L, Gupta. R, editors. *Gambling Problems in Youth: Theoretical and Applied Perspectives*. New York, NY: Klewer Academic/Plenum Publishers; 1–24

Johnson, E., Hamer. R., Nora. R., Tan, B., Eisenstein, N. & Englehart, C. (1988). The lie/ bet questionnaire for screening pathological gamblers. *Psychological Reports, 80*, 80 – 88.

Josephson, H., Carlbring, P, Forsberg. L & Rosendahl, L. (2016), People with gambling disorder and risky alcohol habits benefit more from motivational interviewing than from cognitive behavioral group therapy. *PeerJ* 4:e1899; DOI 10.7717/peerj.1899

Koross, R. (2016). University Students Gambling: Examining the Effects of Betting on Kenyan University Students' Behavior. *International Journal of Liberal Arts and Social Science. 4, 8*

Ladouceur, R., Fournier. P., Lafond. S., Boudreault. C., Goulet. A., Sévigny. S., Simoneau, H., & Giroux, I. (2015). Impacts of a Self-Help Treatment Program for Problem Gamblers. *Canadian Journal of Addiction, 6*(2), 37 – 44.

Linden, D. J. (2011). *The compass of pleasure.* New York: Viking

Lussier, I. D., Derevensky, J.L., Gupta. R., & Vitaro, F. (2013). Risk,

compensatory, protective, and vulnerability factors related to youth gambling problems. *Psychology of Addictive Behaviors*, *28*(2), 404-413. doi.org/10.1037/a0034259.

Mcbride, J., & Derevensky. J. L. (2012). Internet gambling and risk-taking among students: An exploratory study. *Journal of Behavioral Addictions,1*(2), 50–58. DOI: 10.1556/JBA.1.2012.2.2

Monaghan, S., Derevensky, J. L., & Sklar. A. (2008). Impact of gambling advertisements and marketing on children and adolescents: Policy recommendations to minimise harm. *Journal of Gambling Issues*, *22*, 252-274.DOI: 10.4309/jgi.2008.22.7

Parker, J. D., Summerfeldt, L. J., Kloosterman, P.H., Keefer, K.V., & Taylor, R. N. (2013). Gambling behaviour in adolescents with learning disorders. *Journal of gambling studies*, *29* (2), 231-239.

Pasche, S. C., Sinclair, H., Collins, P., Pretorius, A., Grant, J. E., & Stein, D. J. (2013). The effectiveness of a cognitive-behavioral intervention for pathological gambling: A country-wide study**.** *Annals of Clinical Psychiatry*, *25*, 4

Peltzer, K & Pengpid, S (2014). Gambling Behaviour and Psychosocial Correlates among University Students in 23 Low, Middle and Emerging Economy Countries. *Mediterranean Journal of Social Sciences 66*(5), 564-574

Petry, N. M., Stinson, F. S., & Grant, B. F. (2005). Comorbidity of DSM-IV Pathological Gambling and Other Psychiatric Disorders: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of Clinical Psychiatry*, *66*(5), 564-574

Rash, C. J & Petry, N. M. (2014). Psychological treatments for gambling disorder. *Psychology research and behavior management*. 7, 285 – 295.

Slutske, W. S, Zhu, G., Meier, M. H., & Martin, N. G. (2010). Genetic and Environmental Influences on Disordered Gambling in Men and Women. *Arch Gen Psychiatry*. 2010; 67(6):624-630. doi:10.1001/archgenpsychiatry.51

Suurvali, H., Hodgins. D., Toneatto, T., & Cunningham, J. (2008). Treatment seeking among Ontario problem gamblers: Results of a population survey. *Psychiatric Services*, *59*, 1343-1346.

Swan, J. L, & Hodgins, D. C. (2015). Brief Interventions for Disordered Gambling. *Canadian Journal of Addiction*, *6*(2), 29- 37

Van Wormer. K., & Davis. D.R. (2013). *Addictions Treatment: a strengths Perspective*. Brookes/ Cole. USA

Wallen, J. (1993). Addiction in Human Development; Developmental Perspectives on Addiction and Recovery (Haworth Addiction Treatment), 1st. Ed.

Wiebe, J., Wynne, H., Stinchfield, R., & Tremblay, J. (2007). The Canadian adolescent gambling inventory (CAGI): Phase II final report. Canadian Centre on Substance Abuse.

Wilber, M. K., and Potenza, M.N. (2006). Adolescent Gambling; Research and Clinical Implications. *Psychiatry* (Edgmont), *3*(10): 40–48. PMCID: PMC2945873

Winters, K. C., & Arria, A. (2011). Adolescent Brain Development and Drugs. *Prevention Researcher, 18*(2), 21–24.

Winters, K. C., Kushner M. G. (2003). Treatment issues pertaining to pathological gamblers with a comorbid disorder. *Journal of Gambling Studies*; 19: 261–77.

Winters, K.C., Stinchfield R & Fulkerson (1993). Toward the development of an adolescent gambling problem severity scale. *Journal of Gambling Studies*, 9, 371-386.

Yau, M.Y.H., & Potenza, M.N. (2015). Gambling disorder and other behavioural addictions: recognition and treatment. *Harvard review of psychiatry, 23* (2), 134.