REVIEW OF LITERATURE

The recent expansion of gambling in the world has been associated with increased opportunities for gambling and a greater social acceptability for the behaviour. According to National Research Council of United States (1999), the promotion of widely available government lotteries, televising of poker tournaments, and accessibility of internet gambling make today's gambling environment significantly different from that of years past. In this environment, more adults and adolescents report gambling than did in prior decades. Gambling has an inherent element of risk, and adolescence is a period of development characterized by high rates of risk-taking behaviour in a variety of settings (Chambers et al., 2003; Wagnor & Anthony, 2002). Studies have demonstrated that if gambling situations were presented to adolescents, most will participate to some degree. According to Gupta and Derevensky (2002), as compared to previous years, adolescents live in a time of increased gambling availability; they were developing with the general perception that gambling is acceptable and normal.

Engaging in activities that make people feel authentic or real has been typically associated with a host of positive psychological and physiological outcomes (i.e., being authentic serves to increase well-being). According to Lister et al.’s (2014) study conducted on 61 gamblers who bet on National Hockey League, people who felt authentic when gambling reported behaviour associated with problem gambling (high frequency of betting) as well as problematic play (a big monetary loss and a big monetary win). Moreover, such behaviours and gambling outcomes were particularly high among people who were motivated to gamble for the purpose of enhancement. The interaction of feeling authentic when betting and gambling for purposes of enhancing positive emotions proved especially troublesome for problematic forms of play.

According to Lynch et al. (2004), for an adolescent, gambling has often been reported as an opportunity to socialize. It has been viewed as an activity with others rather than an opportunity to win money.

According to Fortune et al. (2012), there has been an inherent social component to various gambling modalities, including many casino games, poker, and sports pools, which proves to be a significant motivation for gambling involvement.
among many gamblers (Neighbors et al., 2002; Lee et al., 2006). There has been a small but consistent literature to suggest that social factors contribute to problem/pathological gambling among juveniles (Gupta & Derevensky, 1997), older adults (McNeilly & Burke, 2001), college students (Neighbors et al., 2002) and adolescents (Fried et al., 2010). Familial and social factors have been commonly theorized to influence the development and trajectory of addictive disorders, and pathological gambling is no exception.

Keeping in view the above, the primary aim of the study was to compare adolescents of both the genders, with and without gambling tendencies on psycho-social variables. The gambling groups were further categorized into three sub groups viz., Social Gamblers, At-Risk Gamblers and Problem Gamblers. All the groups were compared on Gambling tendencies; Mental Health and its dimensions; Stress Symptoms; Perceived Stress; Styles of Coping; Dimensions of Perceived Parental Bonding; Perceived Social Support; Dimensions of Sensation Seeking; Rotter’s Locus of Control; Eysenckian dimensions of Personality; Dimensions of Impulsivity put forth by Barratt; Satisfaction with Life; Satisfaction with time spent with Father; Bonding with Father; Satisfaction with time spent with Mother; Bonding with Mother; Perceived Health Status and Perceived Happiness Status.

The secondary aim of the research was to study the relationship between gambling tendencies and psycho-social factors among adolescents for both the gender.

A.) CONCEPTUAL FRAMEWORK

PERSONALITY

According to Mohan (2000), Personality has retained its fascination for the thinkers all over the world. ‘Personality’ refers to a general style of interacting with the world, especially with other people – whether one is withdrawn or outgoing, excitable or placid, conscientious or careless, kind or stern. A basic assumption of the personality concept is that people do differ from one another in their style of behaviour, in ways that are at least relatively consistent across time and place (Ferguson, 2000).
Definitions of Personality

Cattell (1950) stated that “Personality is that which permits prediction of what a person will do in a given situation. According to Freud, personality was “the integration of the Id, the Ego and the Super Ego”. Adler’s idea of personality was “the individual style of life or characteristic manner of responding of life’s problems, including life’s goals.

Eysenck (1968) proposed that personality as “more or less stable and enduring organization of person’s character and temperament, intellect and physique which determines his unique adjustment to the environment. In their personality structure, some individuals possess “core” characteristics (either inherited or develop under influence of certain situations), which make them more vulnerable than others to certain kinds of human conflict, which threaten their emotional security.

Costa and McCrae (1995) defined personality as characteristics that are pervasive and enduring and form a central part of the person’s identity.

Burger (2010) stated that “Personality can be defined as consistent behaviour patterns and intrapersonal processes originating within the individual”.

Balasanov (2010) stated that “Personality is made up of the characteristic patterns of thoughts, feelings and behaviours that make a person unique”.

Eysenck’s Theory of Personality

Eysenck’s theory of personality is one of the formidable attempts in presenting a complete and explanatory theory. Eysenck’s definition of personality revolves around four behaviour patterns: the cognitive, the conative, the affective and the somatic. Thus, personality, according to Eysenck, is the sum total of actual or potential behaviour patterns of organism as determined by heredity and environment. Eysenck developed and presented an exhaustive personality theory on the basis of intensive research over the years (1947; 1967; 1971; 1981). He posited four independent major dimensions of personality, viz., Extraversion/introversion (E/I), Neuroticism (N), Psychoticism (P) and Social Desirability (Mohan et al., 2000).

The Dimensional Approach

The three basic dimensions of personality by Eysenck et al. (1985) are Extraversion/Introversion, Neuroticism and Psychoticism. Later on another dimension called lie (social desirability) scale was added in the personality questionnaire of Eysenck.
Extraversion/Introversion

Eysenck and Eysenck (1968) proposed that extraversion refers to the outgoing, uninhibited, impulsive and social inclinations of person. The typical extravert is sociable, likes parties, has many friends, needs to have people to talk to and does not like reading or studying by himself. He craves for excitement, takes chances, often sticks his neck out, acts on the spur of the moment, and is generally an impulsive individual. He is fond of practical jokes, always has a ready answer, and generally likes to laugh and be merry. He prefers to keep moving and doing things, tends to be aggressive and loses his temper quickly; although his feelings are not kept under tight control. He is not always a reliable person.

A typical introvert is a quiet, retiring sort of person, introspective, fond of books rather than people; he is reserved and distant except to intimate friends. He tends to plan ahead, looks before he leaps. He does not like excitement, takes matters of everyday life with proper seriousness, and likes the well-ordered mode of life. He keeps his feelings under close control, seldom behaves in an aggressive manner and does not lose his temper easily. He is reliable, somewhat pessimistic and places great value on ethical standards (Eysenck, 1965).

Neuroticism

The second major personality dimension deduced by Eysenck (1947) was neuroticism/stability. Neuroticism refers to a general, emotional over responsiveness, emotional lability, and liability to neurotic breakdown under stress. Neuroticism is closely related to the inherited degree of liability of the autonomic nervous system (Eysenck, 1964; 1967). According to Eysenck and Eysenck (1968), neuroticism as contrasted to emotional stability is very much similar to anxiety.

A high scoring individual on neuroticism tends to be anxious, worrying, over responsive and depressed. He reacts too strongly to all sorts of stimuli and finds it difficult to get back on an even heel after each emotionally arousing experience (Ibrahim, 1979).

Psychoticism

Eysenck and Eysenck (1975) and Howarth (1986) reported that a high scorer on Psychoticism possesses the following traits: Impulsiveness, lack of cooperation, oral pessimism, rigidity, lower super ego controls, low social sensitivity, low
persistence, lack of anxiety, egocentric, impersonal, lack of feelings of inferiority, unempathic, creative, aggressive, cold, antisocial and tough minded.

A high scorer on Psychoticism is described as being solitary, crude, inhuman, insensitive, hostile and aggressive.

**Lie-Scale (Social Desirability)**

The lie (social desirability) scale (L) was first incorporated in the Eysenck Personality Inventory (EPI) to measure a tendency on the part of the subjects to fake good responses. A series of factorial and experimental studies have been carried out to investigate the nature of this scale in some detail (Eysenck, 1971). This scale possesses a considerable degree of factorial unity (Mohan, 2000).

It is being considered as a tendency to respond in a socially desirable way; it is variously described as a desire to conform to social norms (Edwards, 1954); nice personality (Skinner et al., 1970); ideal self and ideal responses (Choudhary, 1972).

**Locus of Control**

Locus of control is considered to be an important aspect of personality and according to Smith et al. (1997), this construct has generated enormous interest over the past 30 years.

Locus of control as defined by Rotter (1966), refers to individual differences in the extent to which people perceive events as contingent upon their own behaviour or enduring characteristics (a belief in internal control) versus the extent to which they believe that reinforcement is contingent not upon the self, but upon external factors such as chance, fate or powerful others (a belief in external control).

In short, internal locus of control refers to the perception of positive and negative events as being a consequence of one’s own actions and thereby under one’s own personal control. In contrast, external locus of control refers to the perception of positive or negative events as being unrelated to one’s own behaviour in certain situations and thereby beyond personal control.

Rotter (1966) postulated that an individual who perceives his or his illness as consequence of one’s own behaviour is said to have internal locus of control. Such a person is likely to recover soon but an external person tends to perceive his behaviour as determined by external events beyond his control; such as fate, powerful others etc.
This is negative expectancy and he/she is unlikely to progress and recover from illness.

**IMPULSIVITY**

Impulsivity may be variously defined as the tendency to act with less forethought than do most individuals of equal ability and knowledge (Dickman, 1993); a lack of behavioural inhibition (Moeller et al., 2001), or risk-taking, lack of planning, and making one's mind up quickly (Eysenck & Eysenck, 1977). Likewise, Patton et al. (1995) conceptualized impulsivity as a set of discrete subcomponents of cognitive functioning such as acting on the spur of the moment (motor activation), not focusing on the task at hand (attention), and not planning and thinking carefully (lack of planning).

Moeller et al. (2001) proposed a model of impulsivity as the "decreased sensitivity to negative consequences of behaviour; rapid, unplanned reactions to stimuli before complete processing of information; and lack of regard for long-term consequences". Impulsivity is also defined as a predisposition, and part of a pattern of behaviour rather than a single act (Moeller et al., 2001).

Impulsivity (or impulsiveness) is a multifactorial construct (Evenden, 1999) that involves a tendency to act on a whim, displaying behaviour characterized by little or no forethought, reflection, or consideration of the consequences (VandenBos, 2007). According to Daruna and Barnes (1993), Impulsive actions typically are "poorly conceived, prematurely expressed, unduly risky, or inappropriate to the situation that often results in undesirable consequences," which imperil long term goals and strategies for success (Madden & Johnson, 2010).

According to Leeman and Potenza (2011), Pathological gambling, in contrast, seems to involve many diverse aspects of impulsivity and abnormal reward circuitry (similar to substance use disorders) that has led to it being increasingly conceptualized as a non-substance or behavioural addiction. Evidence elucidating the role of impulsivity in pathological gambling is accumulating, with pathological gambling samples demonstrating greater response impulsivity, choice impulsivity, and reflection impulsivity than comparison control samples. Additionally, pathological gamblers tend to demonstrate greater response perseveration (compulsivity) and risky decision making in laboratory gambling tasks compared to
controls, though there is no strong evidence suggesting that attention and working memory are impaired in pathological gamblers. These relations between impulsivity and pathological gambling are confirmed by brain function research: pathological gamblers demonstrate less activation in the frontal cortical regions (implicated in impulsivity) compared to controls during behavioural tasks tapping response impulsivity, compulsivity, and risk/reward. Preliminary, though variable, findings also suggest that striatal activation is different between gamblers and controls, and that neurotransmitter differences (e.g., dopamine, serotonin, opioids, glutamate, norepinephrine) may exist as well.

**SENSATION SEEKING**

According to Zuckerman (2009), Sensation seeking is a personality trait defined by the search for experiences and feelings, which are "varied, novel, complex and intense" and by the readiness to "take physical, social, legal, and financial risks for the sake of such experiences." Risk is not an essential part of the trait, as many activities associated with it are not risky. However, risk may be ignored, tolerated, or minimised and may even be considered to add to the excitement of the activity. In order to assess this trait he created a personality test called the Sensation-Seeking Scale. This test assesses individual differences in terms of sensory stimulation preferences. So there are people who prefer a strong stimulation and display a behaviour that manifests a greater desire for sensations and there are those who prefer a low sensory stimulation. The scale is a questionnaire designed to measure how much stimulation a person requires and the extent to which they enjoy the excitement. Zuckerman hypothesized that people who are high sensation seekers require a lot of stimulation to reach their Optimal Level of Arousal. When the stimulation or sensory input is not met, the person finds the experience unpleasant (Larsen & Buss, 2008).

Sensation-seeking has been divided into 4 traits:

- **Thrill- and adventure-seeking**: Desire for outdoor activities involving unusual sensations and risks, such as skydiving, scuba diving, and flying.
- **Experience-seeking**: Referring to new sensory or mental experiences through unconventional choices, also including psychedelic experience, social nonconformity and desire to associate with unconventional people.
Review of Literature

- **Disinhibition**: Preference of "out of control" activities such as wild parties, drinking and sexual variety
- **Boredom susceptibility**: Intolerance of repetition or boring people, and restlessness in such conditions.

As per Russo et al. (1991), the most recent version of the Sensation Seeking Scale (SSS-V) has demonstrated moderate validity and reliability. It has been adapted for use with children.

Zuckerman's research has found that high sensation seekers tend to seek high levels of stimulation in their daily lives. The scale predicts how well people tolerate sensory deprivation. Sensation seeking increases with age from childhood to adolescence. It then starts to decreases after it peaks in the late adolescence years of 18-20 (Zuckerman). The correlation is -.30 between age and sensation seeking (Larsen & Buss, 2008). However, boredom susceptibility remains stable across the life span, unlike the other facets of sensation seeking (Roberti, 2004).

According to Roberti (2004), Substantial gender differences have been found in sensation seeking, with males scoring significantly higher than females. In American samples, males significantly outscored females in total sensation seeking, thrill and adventure seeking, boredom susceptibility, and disinhibition. Studies in Australia, Canada, and Spain found similar gender differences in total sensation seeking, thrill and adventure seeking and boredom susceptibility. Sensation seekers tend to prefer occupations involving novel, stimulating, and unconventional activities and unstructured tasks requiring flexibility. Low sensation seekers tend to prefer more structured, well-defined tasks involving order and routine. Males high in sensation seeking tend to choose scientific and social service professions. Among females, traditional vocations (e.g. housewife or home economics teacher) tend to be associated with low sensation seeking (Roberti, 2004).

MENTAL HEALTH

According to Wig (1999), the World Federation of Mental Health has come out with a three point definition of mental health based on the following three criteria:

1. A person who is mentally healthy must be comfortable within himself or herself: if they are not comfortable within themselves, if they are tense,
nervous, fearful, sad, aggressive or suspicious, they are not mentally healthy, at least not for the time they are having such negative emotions (Wig, 1999).

2. A person who is mentally healthy is not only comfortable within oneself but also makes others comfortable around him or her. It is a very important component of the definition. People may be very happy and comfortable within themselves but if they are making the life miserable for those around them, they are not a mentally healthy person. In fact the degree of one's mental health can be judged from the faces of those who are in their company. Ultimately mental health is a kind of balance or harmony between one's self interest and social responsibility (Wig, 1996).

3. A mentally healthy person is constantly striving to improve further. A mentally healthy person never feels that he/she has reached perfection because he/she is always making further efforts for self improvement (Wig, 1996).

Mental health is an expression of emotions and signifies a successful adaptation to a range of demands (About.Com, 2007).

As per The American Heritage Dictionary of English Language (2009), mental health refers to a state of emotional and psychological well-being in which an individual is able to use his or her cognitive and emotional capabilities, function in society, and meet the ordinary demands of everyday life.

Mental health as defined by World Health Organization (2014) is a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.

STRESS

Tracing the history of the concept of stress, its origin dates back to 1914, when Cannon used the term in medicine. Cannon (1939) also suggested the term “homeostasis” from the Greek language where “homeo”, means similar, and “stasis”, means position, for “the coordinated 55 physiologic processes, which maintain most the steady states in the organism”.

Lazarus and Folkman (1984) defined stress as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well being".
Stress is a general term to describe tense situations and reaction to stress usually has a strong emotional content. Seyle (1950) defined stress as the nonspecific (that is, common) result of any demand upon the body, be the effect mental or somatic.

Stress is perceived to be interaction between the person and environment. Lazarus (1966) defined stress as an organizing concept that includes a number of variables and processes – relationship between the person and the environment that is appraised by the person as taxing or exceeding his/her resources and endangering his/her well-being.

According to Korchin (1986), Stress is defined neither by the conditions acting on the person (the stressor), nor by the state of the person (coping resources, ego strength etc), nor by his reactions (stress responses), but rather by the interplay of the three.

According to International Encyclopedia of Psychology (1996) stress is an adaptative reaction to circumstances that are perceived as threatening. It motivates people and can enhance performance. Learning to cope with adversity is an important aspect of normal psychological development, but exposure to chronic stress can have severe negative consequences if effective coping mechanisms are not learned. The stress of contemporary life could impair immunologic functioning and increase susceptibility to disease.

Larsen (2000) opined that stress is the subjective feeling that is produced by events that are perceived as overwhelming and beyond one’s control. Events that typically elicit stress are called stressors. There are individual differences in response to stress. Stress really lies in the transaction between the person and the characteristics of the environment. Personality processes may moderate this transaction.

Stress is an unavoidable effect of living and is an especially complex phenomenon in modern technological society. It has been linked to coronary heart disease, psychosomatic disorders, and various other mental and physical problems. Treatment usually consists of a combination of counselling or psychotherapy and medication (Britannica.Com, 2010).
Morrow (2011) stated that “Stress can come from any situation or thought that makes you feel frustrated, angry, nervous, or anxious”. A state of psychological tension and physiological arousal produced by a stressor (IB Psychology, 2011).

Samuelson (2011) stated that stress is a “state of extreme difficulty, pressure or strain”.

Type of Stressors

Stressors can be grouped into two categories:

a) Life Event Stress
b) Chronic Stress or Daily Hassles

Stressful Life Events

Stress is the wear and tear of life caused by an excessive demand on the body system to cope. The stresses of daily life ranging from bodily adjustment to sudden temperature or humidity, an emotionally charged argument with one’s spouse or boss, all constitute stress.

In the recent years attention is being paid to the life events which may not be very detrimental for the growth of society but can play havoc in the life of person affected. For instance destruction of one’s house in fire, death of someone in the family, difficulties in job, marriage and various other threats or conflicts that many people face in their daily lives. Some of such events under certain conditions can act as powerful stressors that affect people’s lives directly or indirectly.

According to Encyclopedia of Stress (2000), a life event stress is a comprehensive list of external events and situations (stressors) that are hypothesized to place demands that tend to exceed the capacity of the average person to adapt. The difficulty in adaptation leads to physical and psychological changes or dysfunction, creating risk for psychological disorder or physical disease.

Daily Hassles or Chronic Stressors

These are persistent, repetitive, and almost routine stressors that are part of everyday life. Lazarus and Cohen (1977) have characterized daily hassles as stable, repetitive, low-intensity problems encountered daily as part of one’s routine. They are different from major life events and tend to have different negative behavioural
Coping

Individuals cannot remain in a continuous state of tension. Even if a deliberate and conscious strategy is not adopted to deal with stress, some strategy is surely adopted. According to Lazarus (1981) coping refers to cognitive and behavioural efforts to manage disruptive events that tax the person’s ability to adjust. Coping responses are a dynamic series of transactions between the individual and the environment, the purpose of which is to regulate internal states and/or alter person-environment relations (Lazarus & Folkman, 1984).

According to situation Folkman and Lazarus (1988) and Synder and Dinoff (1999), coping is a survival mechanism conceptualized as a transaction between an individual and the environment in which a response is directed at minimizing the psychological, emotional and physical burdens associated with a stressful. It consists of constantly changing cognitive, behavioural and emotional efforts to manage particular external and/or internal demands that are appraised as taxing or exceeding the resources of the person (Lazarus & Folkman, 1984).

According to Mohan (2003) coping is a continuous cognitive and behavioural process of overcoming stress and stressful consequences of external forces.

Kelly (2010) stated that “Coping refers to the thoughts and actions we use to deal with stress. In large part, feeling stressed or not depends on whether we believe we have the coping resources to deal with the challenges facing us”.

Coping Styles

Although there are many ways to classify the coping responses, most approaches distinguish between strategies that are active in nature and oriented toward confronting the problem. Carver et al. (1989) have organised the dimensions of coping included in measurement procedures into three domains:
• **Task – Focused Coping**: It involves attempts to define the meaning of a situation and includes such strategies as logical analysis and cognitive redefinition.

• **Emotion – Focused Coping**: This includes responses whose primary function is to manage the emotions aroused by stressors and thereby maintain effective equilibrium.

• **Avoidant Coping**: is coping that is directed at managing or reducing emotional distress, which includes cognitive strategies such as looking on the bright side, or behavioural strategies such as seeking emotional support.

**SATISFACTION WITH LIFE**

Life satisfaction refers to a cognitive judgmental process.

**Shin and Johnson (1978)** define life satisfaction as "a global assessment of a person's quality of life according to his chosen criteria".

According to **Diener et al. (1985)** satisfaction with life refers to cognitive judgmental process which is the hallmark of subjective well being area that centers on the person’s own judgments. Judgments of satisfaction are dependent upon a comparison of one’s circumstances with what is thought to be an appropriate standard.

According to **Seligman (2011)** life satisfaction is the way a person perceives how his or her life has been and how they feel about where it is going in the future. It is a measure of well being as well as a cognitive, global judgement. It is having a favorable attitude of one's life as a whole. Life satisfaction has been measured in relation to economic standing, amount of education, experiences, and the people's residence as well as many other topics.

Contentment with life, particularly in regard to the fulfillment of one's needs and expectations (**Education.com, 2012**).

**PARENTAL BONDING**

**Bowlby (1969)**, while discussing mother-child interaction, emphasized the retrieval behaviour of the mother which is concerned with reducing the distance between infant and mother, so serving a protective function.
Parker et al. (1979) opined that the concept of a ‘bond’ between a parent and a child is generally accepted despite the lack of a satisfactory definition of the concept. Theoretically it might be proposed that parent-child bonds could be broadly influenced by characteristics of (e.g. individual differences in attachment behaviour), characteristics of the parent or care taking system (e.g. psychological and cultural influences) and by characteristics of the reciprocal, dynamic and evolving relationship between the child and the parent..

Parker et al. (1979) suggested that the parental contribution to bonding may be influenced by two principal source variables i.e. the first variable as “care” dimension and the second variable as “psychological control over the child” or “overprotection” dimension.

According to Levy (1970) and Parker et al. (1979), Care has been associated with affection, emotional warmth, empathy and closeness. Overprotection has been associated with control, intrusion, excessive contact, infantilization and prevention of independent behaviour.

Bonding is the process that a child goes through in developing lasting emotional ties with its immediate caregivers, which is seen as the first and most significant developmental task of a human being, and is central to that person's ability to relate properly to others throughout its life (Adoption.com, 2011).

According to Klaus et al. (2011), in each person's life much of the joy and sorrow revolves around attachments or affectionate relationships -- making them, breaking them, preparing for them, and adjusting to their loss by death. Among all of these bonds as a special bond - the type a mother or father forms with his or her newborn infant. Bonding does not refer to mutual affection between a baby and an adult, but to the phenomenon whereby adults become committed by a one-way flow of concern and affection to children for whom they have cared during the first months and years of life.

PERCEIVED SOCIAL SUPPORT

Social support can be described as the social and psychological support provided by the environment. An individual’s social support system includes peers, friends, and family members, but the most important social support sources are family, peers, and teachers.
Schaefer et al. (1981) also identified three dimensions of social support, which involves intimacy and has to do with receiving reassurance; Tangible support or the provision of direct aid and services; and informational support, which includes advice concerning solutions to one’s problems and feedback about one’s behaviour.

**Types of support**

The varieties of social support has been described by House et al. (1988) and Cohen and Wills (1985).

1. **Emotion Support:** it refers to behaviour that fosters feeling of comfort leading an individual to believe that he or she is admired, respected and loved and that others are available to provide care and security.

2. **Cognitive Support:** it refers to information, knowledge or advice that helps the individual to understand his or her world and to adjust the changes within it.

3. **Material Support:** refers to good and services that help to solve practical problems.

Researchers also commonly make a distinction between perceived and received support (Taylor, 2011). Perceived support refers to a recipient’s subjective judgement that providers will offer (or have offered) effective help during times of need. Received support (also called inacted support) refers to specific supportive actions (advise or reassurance) offered by providers during times of need (Gurung, 2006).

**PERCEIVED HEALTH**

Health is most desirable need of human being. Health is one of the major factors in all kinds of developments and so on. Health has been defined in different way, in different disciplines.

According to Wilson and Cleary (1995), Health perceptions (or perceived health status) are subjective ratings by the affected individual of his or her health status. Some people perceive themselves as healthy despite suffering from one or more chronic diseases, while others perceive themselves as ill when no objective evidence of disease can be found.
How people view their own health is an important indicator of health status. As defined by the **Institute of Medicine (1997)**, health encompasses not only the absence of disease but also “a state of well-being and the capability to function in the face of changing circumstances.”

According to **Last (2001)**, the World Health Organization defined the health of individuals as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity". This was later expanded to include the ability to realize aspirations and satisfy needs, and cope with or change the environment. They defined health as a positive concept that encompasses personal, social and physical resources.

As per **American Thoracic Society (2007)**, Health status is an individual's relative level of wellness and illness, taking into account the presence of biological or physiological dysfunction, symptoms, and functional impairment.

**PERCEIVED HAPPINESS**

**Kahneman et al. (2003)** and **Veenhoven (2006)** depict happiness as an emotional experience and argue that the term happiness describes people who feel fine with their life, or more formally, the degree to which assesses someone's life in total, unlike **Diener et al. (1997)** who claim that happiness is cognitive phenomenon and that one person is happy when the experiences of life that cause satisfaction and joy is more than the experience of causing grief.

According to **Layard (2005)**, "for most, people, the value of personal relationships with family, colleagues, friends and neighbours has been the best guarantee for happiness." According to **Layard (2005; 2007)**, some people think that happiness is the ultimate goal of their life, instead **Chekola (2007)** claims that it is only one component of a good life.

Given the fact that people are not in a social vacuum, is not surprising that social networks are a key determinant of happiness (**Ballas & Dorling, 2007; Fowler & Christakis, 2008**). Although each person defines happiness based on his or hers own terms, in general people advocate similar things that make them happy (**Conceição & Bandura, 2008**).
Lyon (2012) described happiness as a value judgement, as an objective state, as a subjective state, as a continuum from illness to wellness, and as utopian state (rarely achievable).

According to Schröder (2013), Emotional states such as happiness and attitudes towards life are seen as a key determinant of the somatization of feelings of stress and anxiety related to life events. Findings from medicine and psychology suggest that emotional reactions to life events can affect physiology in ways that are potentially damaging for health.

B.) REVIEW OF PSYCHOSOCIAL FACTORS PLAYING A ROLE IN GAMBLING TENDENCIES

EYSENCKIAN'S DIMENSION OF PERSONALITY, LOCUS OF CONTROL AND GAMBLING TENDENCIES

Research has pointed toward the presence of dispositional attributes of problem gamblers (Blaszczynski, 1998; Breen & Zuckerman, 1999; Cyders & Smith, 2008). The suggestion was that certain personality characteristics, most of which emerge at a young age and were fairly stable over the lifespan, likely contribute to problem gambling. Examining personality traits associated with problem gambling among youth was particularly useful in terms of determining the direction of the relationship between gambling problems and personality traits. As gambling behaviour has been relatively new among youth, it was unlikely to have significantly impacted their personalities. Thus, if certain personality traits were found to be overrepresented in youth with gambling problems, they were likely to be underlying traits that lead to gambling problems rather than having been caused by a pattern of excessive gambling.

Ladouceur et al. (1994) conducted a study on a sample of 60 participants (36 males and 4 females) who were pathological gamblers seeking treatment and reported that 68% of their treatment seeking pathological gamblers admitted to participating in illegal behaviour to finance their gambling, with 17% of them having appeared in court for committing a criminal offence.

Psychological variables that have been studied with standardized measures include personality traits, locus of control and motivation. By administering a battery of psychometrically validated personality tests to 230 clinically defined pathological
gamblers, Steel and Błaszczynski (1996) examined personality traits such as neuroticism and psychoticism for the factorial structure of pathological gambling (DSM-IV disorder of impulse control, co-morbid with Antisocial Personality Disorder). These personality traits such as neuroticism and psychoticism had been investigated previously in a wide range of studies of problem gambling with similar instruments such as the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975). Steel and Błaszczynski (1996) found four factors which explained 62% of the variance in pathological gambling behaviour: psychological distress (anxiety/depression), sensation-seeking, criminal livedness and impulsiveness. Psychological distress among gamblers has also been reported by other investigators (Getty et al., 2000; Gupta, 2000; Echeburua et al., 2001; Lopez Viets, 2001).

Stinchfield et al. (1997) examined gambling behaviour among 1,22,700 Minnesota public school students in 1992 and 5,900 Minnesota public school students in 1995. Researchers examined correlates of gambling frequency in a multivariate statistical design using multiple regression. They found that antisocial behaviour, being male, and alcohol use explained 25% of the variance in gambling frequency. Their results suggested that frequent gambling behaviour amongst adolescents may be part of a constellation of risk-taking behaviours, including frequent alcohol use and antisocial behaviours such as physical violence, vandalism, shoplifting, and truancy, these findings being especially true for boys.

According to Zuckerman and Kuhlman (2000), neuroticism and extraversion may be considered extensions of traits associated with risk-acceptance, however, in that impulsivity has been a component of neuroticism, and extraversion is consistently associated with sensation-seeking and impulsivity. That neuroticism and extraversion explained additional variance beyond known, well-established correlates of gambling behaviour and antisocial behaviour (e.g., impulsivity), was a novel finding, however, and suggested that these traits require further study. Gambling Behaviour among children mediated between temperament, genetic risk, and substance abuse disorder outcomes (Dickson et al., 2002).

In a study conducted by Shapira et al. (2002) on a sample of 1,051 adolescents, it was found that at-risk/problem adolescent gamblers were more likely to have sold personal or family property, stolen other things, bought or sold stolen property or borrowed money from friends/acquaintances without their knowing in
order to obtain money to gamble or to pay off gambling debts. Problem and at-risk adolescent gamblers were most likely to be nervous about the amount of money they gamble.

A study of 78,582 Minnesota public school students by *Stinchfield (2000)* revealed that the strongest correlate of gambling frequency was an antisocial behaviour scale measuring dangerous behaviour, physical violence, vandalism, and shoplifting. These include physical violence, vandalism, shoplifting, truancy, and conduct problems (*Langhinrichsen-Rohling et al., 2004a; Hardoon et al., 2004*).

Gambling-related criminal activities were generally white-collar and non-violent, such as shoplifting, fencing stolen goods, fraud, forgery, embezzlement, petty theft, and larceny (*Derevensky et al., 2004*).

*Hardoon et al. (2004)* examined the relationship between several psychosocial variables associated with adolescent’s problem gambling among 2336 students of 7-13 grades. Researchers found that 55.8% of adolescent probable pathological gamblers and 31.2% of at-risk gamblers met the clinical criteria for conduct problems, which indicated that they were likely to break rules, had more problems with individuals in authority, engaged in antisocial activities, and displayed oppositional behaviour.

*Clarke (2004)* expected that compared to non-problem gamblers, problem gamblers would have higher impulsiveness, powerful others and chance locus of control. They would also have greater motivation towards stimulation and amotivation than non-problem gamblers. However, according to *Moore and Ohtsuka (1997)*, venturesomeness, internal locus of control and internal motivation towards knowledge and accomplishment would be expected to be lower for problem gamblers than for non-problem gamblers. Thus the purpose of the investigation conducted by *Clarke (2004)* on sample of 147 New Zealand university students who gambled for money (approximately 17% of the sample was classified as problem gamblers, the rest as non-problem gamblers) was to compare problem gamblers to non-problem gamblers on the psychological variables. Results revealed the following relationships with gambling motivation (1) impulsiveness to internal motivation for stimulation and to amotivation, (2) venturesomeness to intrinsic motivations towards stimulation, knowledge and accomplishment, (3) venturesomeness to internal locus of control, (4)
powerful others and chance locus of control to amotivation, (5) chance locus of control to external regulation, and (6) powerful others locus of control to identified regulation. It was concluded that gambling motivation was a more useful construct than locus of control in explaining problem gambling.

In two different studies conducted by Nower et al. (2004), on 1339 youth, 637 males and 702 females, 17-21 year old and a study conducted by Gupta et al. (2006) on 870 high school students in Montreal region examined the personality characteristics of problem gamblers. Results of both the studies revealed that youth problem gamblers tended to be more excitable and impulsive, were greater risk-takers, and had greater difficulty conforming to societal norms.

As per Petry (2005), to date, results from studies on personality factors among gamblers have been largely inconsistent. Some have claimed the existence of an “addictive” personality type. This concept may have an intuitive appeal in explaining the high co-morbidity among different addictive behaviours. Even though similarities exist between different addictions, there has been no empirical evidence for one underlying personality type predisposing for the development of addictions in general. More likely, there were multiple types of addictive personality factors which have been driven by different biological and learning processes (Zuckerman, 1999). Problem Gambling has typically been linked to both externalizing psychopathology, such as antisocial personality disorder and drug and alcohol disorders as well as internalizing psychopathology such as anxiety and depression (Petry et al., 2005).

A meta-analysis conducted by Malouff et al. (2005), examining the relationship between the Five Factor Model of personality and symptoms of clinical disorders, found that the typical pattern associated with clinical disorders was high scores on Neuroticism and low scores on Conscientiousness, Agreeableness and Extraversion.

Goodie and colleagues (Goodie, 2005; Camchong et al., 2007; Lakey et al., 2007) have also provided evidence that gambling pathology is associated with overconfidence, risk seeking, and diminished discrimination between bets on events over which one has or does not have control, in studies using the Georgia Gambling Task (GGT) and Iowa Gambling Task (IGT).
According to Slutske et al. (2005), personality factors have also been demonstrated to be robust predictors of regular and pathological gambling. In a study conducted by Bagby et al. (2007) on 292 participants (106 Pathological gamblers, 56 males and 50 females; 177 non-pathological group, 81 males and 96 females) from two separate investigations conducted at the Centre for Addiction and Mental Health, using a five-factor model of personality it was revealed that pathological gamblers scored higher on Neuroticism (negative mood states), lower on Conscientiousness, and higher on some impulsivity measures than non-pathological gamblers. Results from the study conducted by Bagby et al. (2007), also suggested that the overall personality profile of the pathological gambler was one that combines high impulsivity with emotional vulnerability complemented by a high level of excitement-seeking common to pathological gamblers and non-pathological gamblers. Although speculative, but according to the researchers one possible interpretation for the development of pathological gambling was that it resulted from maladaptive efforts to regulate affect or dampen the effects of high neuroticism. In a prospective longitudinal population based study on 939 (475 males and 464 females) young adults born in Dunedin, New Zealand, Slutske et al. (2005) found that both high Negative Emotionality (the tendency to experience negative moods) and low Constraint (behavioural under-control) in adolescence were predictive of pathological gambling in young adulthood.

Findings from a study conducted by Derevensky and Ellenbogen (2006) on high school students in Montreal region with moderate to severe gambling related problems exhibited less self regulatory behaviour (i.e., impulsivity, distractibility, over-activity, self-indulgence, difficulty conforming to group norms) while exuding the impression of being carefree, sociable, and happy. The adolescents with the most severe gambling problems reported the highest levels of frustration, impulsivity, anxiety, impatience, and irritability.

Studies addressing the general personality profile of gamblers are inconclusive (Álvarez-Moya et al., 2007). In a sample of frequent poker and other card players, Lakey et al. (2007) found that biases concerning overconfidence, propensities for accepting risky bets, and a myopic focus on reward all related to higher degrees of gambling-related pathology, independently of each other and of card playing frequency.
Young adults may turn to gambling as a method to escape negative moods, or distract from stressors. While a number of studies have demonstrated a link between pathological gambling and Negative Emotionality, the results have been mixed. One study of young adult slot machine gamblers using Eysenck’s personality questionnaire found no effect of Neuroticism on gambling (Carroll & Huxley, 1994), whereas others have found that pathological gamblers have scored significantly higher on the neuroticism domain and three of its facet traits (viz. depression, self-consciousness, and vulnerability) excluding the impulsiveness facet (Bagby et al., 2007).

Recently, Ledgerwood et al. (2007) examined two groups of pathological gamblers namely pathological gamblers who committed illegal acts related to gambling which included 63 participants and pathological gamblers who have not committed any illegal acts which included 168 participants. The study revealed that fewer than 30% of their sample of pathological gamblers reported committing one or more illegal acts a year prior to entering treatment. Ledgerwood et al. (2007) also found that pathological gamblers with a reported past-year history of criminal activity were significantly younger than those gamblers who did not report committing illegal acts in the past year. Overall, the data suggested that approximately half of problem gamblers participate in one or more criminal activities in their lifetime (Zorland et al., 2008).

According to Bagby et al. (2007) and Myrseth et al. (2009), neuroticism describes susceptibility towards experiencing negative emotional states, such as anxiety, guilt, anger, or depression. Extraversion describes gregariousness, assertiveness, and interest in seeking out excitement and stimulation. Several dimensions of the Big Five personality traits have also been associated with risk-taking i.e. High scores on neuroticism, and low scores on agreeableness and conscientiousness have been associated with elevated gambling behaviour, severity of gambling, and self-reported antisocial behaviour (Bagby et al., 2007; Myrseth et al., 2009). It was therefore possible, as according to the researchers, that these personality traits (openness to experience, conscientiousness, extraversion, agreeableness and neuroticism) explained some portion of the relationship between antisocial behaviour and gambling behaviour.
As per Quinsey et al. (2004) and Zuckerman (2007), individual differences in personality may underlie various forms of risk-taking. Personality traits such as impulsivity, sensation-seeking, and low self-control have been significantly correlated with antisocial behaviour and both problem and non-problem gambling (Skitch & Hodgins, 2004; Toneatto & Nguyen, 2007; Mishra et al., 2010).

Problem gambling has significantly been more prevalent in forensic populations than in the general population. Although some previous work suggested that gambling and antisocial behaviour were related, the extent and nature of this relationship was unclear. Both gambling and antisocial behaviour were forms of risk-taking, and therefore share common determinants. Mishra et al. (2011) investigated whether individual differences in personality traits associated with risk-taking, the Big Five personality traits, and antisocial tendencies predicted gambling and antisocial behaviour. A sample of 180 male students were recruited by the researchers for a study of gambling (35.0% non-problem gamblers, 36.7% low-risk gamblers, 21.7% problem gamblers, and 6.7% pathological gamblers). Results of a study conducted by Mishra et al. (2011) indicated that antisocial behaviour was associated with gambling, and that they share common determinants. Personality traits associated with risk-acceptance such as impulsivity, sensation-seeking, and low self-control appeared to play an important role in problem gambling, general gambling involvement, and all forms of antisocial behaviour. Beyond the variance explained by personality traits associated with risk-acceptance in the study, the Big Five explained additional variance in problem gambling and minor antisocial behaviour, with neuroticism and extraversion as important predictors. Severe antisocial behaviour was the only measure in which antisocial tendencies explained additional variance above and beyond personality traits associated with risk and the Big Five.

According to Mishra et al. (2011), different personality traits appeared to motivate engagement in different types of gambling and delinquent behaviour. Impulsivity was most effective in predicting problem gambling, and sensation-seeking significantly predicted general gambling involvement. Low self-control significantly predicted all forms of antisocial behaviour. These personality traits are highly intercorrelated, however, and may represent different manifestations of a similar tendency to prefer risky outcomes. As a block in the regression analyses, personality
traits associated with risk-acceptance explained significant variance in every measure of gambling and antisocial behaviour (Mishra et al. 2011).

A study by Ledgerwood et al. (2012), on risk behaviours in preadolescents similarly found that problematic gambling behaviours were associated with impulsivity and sensation seeking.

**IMPULSIVITY AND GAMBLING TENDENCIES**

Some earlier studies revealed that pathological gamblers scored lower in scales assessing impulsivity and other similar traits (Dickerson et al., 1987; Allcock & Grace, 1988). Yet, recent research conducted by Shapira et al. (2002), revealed that substance abusers had a higher degree of impulsivity than control groups, and individuals with both substance abuse and pathological gambling disorders had the highest degree of impulsivity.

With few exceptions, a majority of studies have reported positive associations between impulsivity and pathological gambling. Carlton and Manowitz (1994) used the Barratt Impulsivity Scale and other personality dimensions to examine impulsivity in 12 male pathological gamblers attending Gamblers Anonymous. Of the four Barratt Impulsivity Scale subscales (speed of cognitive response, impulsivity, adventure seeking, risk-taking), only impulsivity was found to significantly differentiate pathological gamblers from controls. Castellani and Rugle (1995) compared 843 inpatient male veterans, subdivided by behaviour of choice cocaine, alcohol, gambling), on a variety of measures including the BIS and found that pathological gamblers were the most impulsive subgroup.

Steel and Blaszczynski (1996) reported a strong correlation between the ‘narrow impulsiveness’ (non-planning) subtype of impulsivity on the Eysenck Impulsivity Scale and dramatic Cluster B personality disorder, particularly antisocial personality disorder (ASPD), which was typically characterised by a penchant for acting without forethought and careless pursuit of immediately gratifying behaviours with a high probability of adverse consequences. Using principal components analysis, the researchers identified a discrete factor comprised of impulsivity, psychopathy and DSM-III ASPD associated with gambling and behavioural and psychological dysfunction among problem gamblers. Other studies by the group found supporting data for a positive relationship between narrow impulsiveness and
pathological gambling and both Cluster B and some Cluster C personality disorders in treatment-seeking pathological gamblers (Steel & Blaszczynski, 1998). Findings suggested that impulsivity was part of a general personality disorder structure and served to mediate the severity of gambling behaviour and associated behavioural and psychological disturbances among pathological gamblers presenting for treatment.

Currently there were very few longitudinal studies which assessed problem gambling among adolescents. Vitaro and his colleagues (Vitaro et al., 1996, 1997, 1999; Vitaro et al., 2001) have confirmed that impulsive personality traits in early adolescence correlated with excessive gambling behaviour during late adolescence. While their main focus was on impulsivity as a predictor. Vitaro et al. (1997) studied impulsivity among 754 adolescent boys using the Eysenck Impulsiveness Scale (EIS). Problem gambling severity was assessed with the South Oaks Gambling Screen. Researchers found a clear relationship between greater problem gambling severity and high rates of impulsivity.

Vitaro et al. (1998) proposed that gambling among youth was the product of an impulsive personality type. Problem gamblers with substance use problems were more likely to have high self-reports of impulsivity and exhibit impulsivity-related behaviours at a younger age compared with those with only gambling problems (Vitaro et al., 1998). Research has consistently revealed that adults with gambling problems exhibit higher scores on both self-report and behavioural measures of impulsivity (Breen & Zuckerman, 1999). Disinhibition and response modulation deficits in early adolescence predicted gambling problems at a later age (Vitaro et al., 1999). Together, the findings of these prospective studies emphasize the significance of impulsivity as a personality trait among youth that was highly predictive of gambling problems at a later age.

As per Gonzalez-Ibanez et al. (1999), growing body of evidences suggested that pathological gambling may be associated in some individuals with high levels of trait impulsivity, and that impulsivity had a direct relationship to the severity of problems in both gambling and non-gambling domains and responses to treatment.

Petry (2001, 2001a & b) reported that impulsiveness may be regarded as “a behavioural adaptation to chaotic and unpredictable environments,” and these types of environments may increase an individual’s susceptibility to substance abuse and
problem gambling. Petry (2001a) investigated a variety of behavioural and personality measures of impulsivity with 27 pathological gambling substance abusers, 63 non-pathological gambling substance abusers, and 27 non-addicted controls in the USA, using a card task designed to measure preferences for delayed and immediate rewards and punishers. The results revealed that substance abusers played more cards than controls, resulting in immediate rewards with larger overall net losses. Substance abusers with gambling problems showed the greatest preference for large rewards despite the presence of equally large punishers. In addition, subjects who gambled pathologically reported differences in ‘time orientation’ and devoted less attention to future and past events with more of a focus on the present. Petry (2001b) evaluated delay discounting in 39 non-substance abusing pathological gamblers, 21 substance abusing pathological gamblers and 26 controls. Participants were given the choice of an amount of money (US$1,000) presented immediately or presented from 6 hours to 25 years in the future. Results indicated that pathological gamblers discounted rewards at a higher rate than controls and substance-abusing pathological gamblers discounted rewards at the highest rate of all.

According to Cavedini et al. (2002) and Williams (2002), the robust association between impulsivity and both gambling and problem gambling has been consistent in researches, as is the positive relationship obtained between risk-taking and gambling.

Researchers such as Chambers and Potenza (2003) and Nower et al. (2004), who studied sensation seeking and behavioural impulsivity, found that behavioural under control predicted the development of adolescent and young adult gambling behaviours. However, relatively few studies have used a multidimensional personality assessment to predict non-pathological gambling. This distinction was important because factors influencing early gambling involvement were different than those that promoted pathological gambling.

Whiteside et al. (2005) demonstrated that urgency, sensation seeking and lack of premeditation differentiated between problem gamblers and healthy controls, and that only urgency uniquely predicted gambling problems in a heterogeneous psychiatric sample with externalising difficulties.
In another study on college students in New Zealand, Clarke (2006) investigated whether impulsivity would mediate and/or moderate the association between depression and problem gambling. He found that the influence of depression on the severity of problem gambling was fully mediated by impulsivity. However, the interaction effect between depression and impulsivity on problem gambling was non-significant. Other researchers have also provided empirical evidence that impulsivity mediated effects of emotional and biological vulnerabilities on the severity of disruptive gambling among clinical samples of pathological/problem gamblers (Petry, 2000).

According to Nower and Blaszczynski (2006) to attain greater conceptual clarity regarding the precise relationship of impulsivity and problem gambling, it was important to reconceptualise impulsivity as a multi-factorial construct and to further investigate the implications of functional or dysfunctional impulsivity in the gambling environment. Researchers proposed a model of impulsivity and gambling which described a dynamic system in which the complex interplay of premorbid personality traits and cognitive schemas interacted with learning theory and principles of reinforcement in the gambling environment to foster an evolutionary shift from functional to predominantly dysfunctional styles of impulsivity. Findings suggested that individuals with addictive disorders in general and pathological gambling in particular were likely to report higher levels of impulsivity than those with an absence of addictive pathology (Nower & Blaszczynski, 2007).

Cyders et al. (2007) defined the components of impulsivity as follows: lack of planning which involves a failure to plan ahead (e.g., disagreement on “I like to stop and think things over before I do them”); lack of perseverance which involves a failure to maintain vigilant attention on a task (e.g., “There are so many little jobs that need to be done that I sometimes just ignore them all”); sensation seeking which is the tendency to pursue novel or thrilling experiences (e.g., “I sometimes like doing things that are a bit frightening”); negative urgency which is the tendency to act rashly when upset (e.g., “I often make matters worse because I act without thinking when I am upset”); and, positive urgency which is the tendency to act rashly when experiencing an unusually positive mood (e.g., “When overjoyed, I feel like I can’t stop myself from going overboard”). Cyders et al. (2007, 2008) thus demonstrated that urgency,
sensation seeking and positive urgency were associated with gambling problems in a sample of undergraduate students.

A study conducted by Gillespie et al. (2007) revealed that positive outcomes were more immediate and therefore more powerful in influencing behaviour than are long-term negative outcomes. Feeling good, getting excited, being entertained, socializing with friends (enjoyment/arousal), impressing others, feeling in control (self-enhancement), and making money (money) were all immediate benefits of gambling. They have the potential to occur soon after a decision to gamble has been made. In contrast, feeling guilty (emotional impact), becoming preoccupied, and not being able to stop one's gambling behaviour (overinvolvement) were all delayed costs. Despite recognizing and experiencing the negative consequences of gambling, probable pathological gamblers may believe that the potential benefits outweigh the potential costs of gambling because of their temporal characteristics. This decision-making process may be further hampered by impulsivity, of which studies have shown probable pathological gamblers to demonstrate elevated levels (Nower et al., 2004; Vitaro et al., 2004), as well as heightened sensation-seeking (Nower et al., 2004).

A longitudinal study of kindergarteners by Pagani et al. (2009) found that early impulsivity was a significant predictor of later engagement in gambling behaviour and problem development. Adolescent problem gamblers have been shown to have significantly higher numbers of attention deficit hyperactivity disorder symptoms (Derevensky et al., 2007). Because impulsivity has been common to both problem gamblers and those with attention deficit hyperactivity disorder, it has been suggested that the effect of impulsivity on problem gambling was mediated by attention deficit hyperactivity disorder (Breyer et al., 2009). Other correlates common to both problem gambling and attention deficit hyperactivity disorder include higher rates of depression, suicidality, and substance abuse (Derevensky et al., 2007).

As per Goudriaan et al. (2008) the limited self-regulation was displayed when the addicted person was not able to inhibit the urge for the desired behaviour. The tendency to act upon acute impulses was referred to as disinhibition in the field of neuropsychology, whereas in personality theories it has often been referred to as impulsivity.
According to Tochkov (2009), it was possible that the expectation of experiencing a negative emotion such as regret over losing the next round of betting served as a natural inhibitor to prolonged gambling.

Xuan and Shaffer (2009) pointed out, the association between gambling severity and individual differences in trait self-control rests mainly on self-report findings embedded in unclear conceptualizations of self-control. Moreover, more attention has been paid to identifying predictors of impaired self-control than to measuring self-control itself. Personality researchers found that impulsivity, some forms of sensation-seeking, and novelty-seeking were related to problem gambling behaviour (Hammelstein, 2004; Nower et al., 2004; Maccallum et al., 2007; Johansson et al., 2009).

Emond and Marmurek (2010) found that, gambling related cognitions mediated the influence of irrational thinking styles on gambling severity. As per Quilty et al. (2010), lack of perseverance was associated with gambling pathology only within patients with depressive disorders. Lack of perseverance was characterised by difficulty maintaining task focus during monotonous or difficult activities, and was a core feature of depressive episodes (APA, 2000). This form of impulsivity was among those least well captured by current measures of impulsivity (Whiteside & Lynam, 2001); yet, this result was consistent with recent evidence for the potential mediating role of impulsivity within the relation between depressive symptoms and gambling severity (Clarke, 2006).

Researchers such as Myrseth et al. (2010) and Lund (2011) stated that problem gambling had sustained because of distorted gambling cognitions. The Gambling Related Cognitions Scale (Raylu & Oie, 2004) identifies five cognitive factors related to gambling in a community sample: expectancies (e.g., “gambling makes the future brighter”); illusion of control (e.g., “specific numbers and colors can help increase my chances of winning”); predictive control (e.g., “losses when gambling are bound to be followed by a series of wins”); inability to stop (e.g., “I can’t function without gambling”); and, interpretive bias (e.g., “relating my losses to probability makes me continue gambling”).

The gambler’s personality has often been associated with impulsivity. A study by Inglin and Gmel (2011) aimed to analyze attitudes and beliefs of the 2,500 French-speaking general Swiss population (1,220 males and 1,280 females) regards
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gambling. Beliefs related to gambling included the perception of the effectiveness of preventive measures toward gambling, the comparative risk assessment of different addictive behaviours’, the perceived risks of different types of gambling and attitudes were related to the gambler’s personality. Results of the study revealed that the general population perceived gambling rather negatively and was conscious of the potential risks of gambling; indeed, 59.0% of the sample identified gambling as an addictive practice. Slot machines were estimated to bear the highest risk. Compared with women and older people, men and young people indicated more positive beliefs about gambling; they perceived gambling as less addictive, supported structural preventive measures less often, and perceived gambling as a less serious problem for society. Gamblers were more likely to put their practices into perspective, perceiving gambling more positively than non-gamblers. Thus more people gamble the more impulsivity appeared to be an important component in gamblers personality; impulsivity has been related to gambling severity (Blaszczynski et al., 1997).

According to Bergen et al. (2012) problems with self-control were seen as a key cause of problem gambling behaviour. Yet, self-control has been rarely studied directly in gambling studies. Bergen et al. (2012) demonstrated in two different studies that self-report and behavioural measures (derived from the strength model of self-control) showed lower trait self-control in problem gamblers. In study 1, a sample of 2,208 undergraduate students from the University of Guelph, Canada (73% female, mean age was 19 years) completed a self-report measure of self-control strength. In Study 2, a sample of 296 University of Guelph students and staff (58% female, mean age was 19 years) completed multiple behavioural measures of self-control strength. Results of Bergen et al. (2012) study revealed that self-control strength was inversely associated with problem gambling severity, such that higher-risk gamblers had relatively lower self-control than low-risk and non-problem gamblers. It was noted, however, that in study 1 results’ relied on self-reports of self-control strength. Perhaps problem gamblers simply believed that they have relatively low self-control strength. In study 2, researchers used behavioural measures of cognitive and emotional self-control, and compared self-control across problem gambling severity index categories. Bergen et al. (2012) demonstrated that problem gamblers reported lower self-control and displayed less controlled behaviour than do non-problem gamblers. Across multiple measures derived from the strength model of self-control (self-report, cognitive control, and emotional control), problem gamblers
showed trait self-control deficits relative to non-problem gamblers. In particular, problem gamblers had less emotional and cognitive self-control than did non-problem gamblers.

SENSATION SEEKING AND GAMBLING TENDENCIES

Blaszczynski et al. (1990) found that pathological gamblers had significantly higher levels of boredom and depression than controls, but failed to find differences in sensation seeking, gambling-induced elevation of mood, or differences related to preferred form of gambling. Similarly, other studies have failed to find significant differences between the group (Castellani & Rugle, 1995) or noted lower than expected rates of sensation seeking among problem gamblers (Dickerson et al., 1987). These studies have also been limited by the use of small sample sizes, self-selected groups and non-representative clinical samples. However, the research as a whole suggested that individuals who were easily bored and seek intensely stimulating and varied activities were at increased risk for problem gambling.

According to Coventry & Brown (1993), several adult studies using the Sensation Seeking Scale have found elevated sensation seeking scores among casino, race track and multiple venue betters and among problem gamblers (Coventry & Norman, 1997). In studies of adolescents and young adults, pathological gamblers scored considerably higher than peers on the thrill and adventure seeking and disinhibition scales of the sensation seeking scale and on the intensity-seeking subscale of the AISS (Nower et al., 2004).

Blanco et al. (1996) investigated 27 problem gamblers and 27 matched control subjects and found significant differences between the two groups on the Sensation Seeking Scales (Thrill and Adventure seeking and Disinhibition). Thus they considered sensation seeking as a probable problem gambling risk factor.

The Canadian Foundation of Compulsive Gambling (1993) found that 65% of adults in Ontario who had gambling problems reported they gambled for excitement. For regular players, the most important reasons for gambling seemed to be escape and excitement (and consequently arousal), the latter being the primary factor in adolescent populations, Gambling among adolescents, already widespread, appeared to be on the rise (Fisher, 1993; Ladouceur et al., 1994). Research suggested that as much as 8.1 percent of adolescents in Ontario were problem
gamblers (Govoni et al., 1996). Gambling has also been shown to be highly comorbid with other risky behaviours such as substance abuse (Griffiths, 1995; Rupcich et al., 1997).

Gupta and Derevensky’s (1998) research into gambling among Montreal adolescents showed that their primary motivation for gambling was ‘enjoyment’, with ‘making money’ and ‘excitement’. Similarly in Wiebe’s (1999) study of Manitoba youth, the overwhelming majority of adolescents identified ‘fun’ or ‘excitement’ as their primary motivation for gambling. Wood and Griffiths, (2004) on the sample of 1,195 adolescents between the ages of 11 and 15 years (550 male, 641 female, 4 did not mentioned their gender) and Wood et al. (2004) on 996 (549 females, 441 males, 6 did not mentioned their gender) participants from grades 7th–11th in the age range of 10–17 years also reported similar results that is adolescents primarily gambled for fun and excitement. Other cited reasons by adolescents for engaging in gambling behaviour included relaxation, escaping from problems, and alleviating depression (Gupta & Derevensky, 1998a, b; Wood et al., 2004).

Langewisch and Frisch’s (1998) conducted a study on the sample of 144 male undergraduate university students. Participants completed the measures of sensation seeking, impulsivity, gambling, and risky behaviours. A very high percentage of participants were classified in the pathological gambler range of scores in the study by the researchers on the basis of statistical analyses of the gambling scores obtained. In addition, significant difference was found between the relationships of sensation seeking, impulsivity, and risky behaviours with gambling scores in the pathological group versus non-pathological group. Pathological gamblers’ scores on measures of sensation seeking and impulsivity did not correlated with their degree of gambling pathology. In contrast, the sensation seeking and impulsivity scores of non-pathological gamblers did correlated with their scores of gambling pathology. These results have implications on Jacob's General Theory of Addiction. Researchers also suggested that the classification of gambling as an impulse control disorder rather than an addictive disorder needs to be re-evaluated.

Sensation-seeking and impulsiveness are characteristic of many criminals and substance abusers, but for problem gamblers these are personality traits that are frequently reported in the literature (Zuckerman & Kuhlman, 2000; Ibanez et al., 2001; Lopez Viets, 2001; Slutske et al., 2001; Zaleskiewicz, 2001).
As per Steenbergh et al. (2002), studies examining the relationship between individual differences and gambling outcomes had rarely included measures of gambling-relevant beliefs. Faulty gambling-related cognitions reflected gambling problems or predicted their development (Ladouceur & Walker, 1996), as certain cognitive fallacies (like the illusion of control) were related to a tendency to develop more entrenched, problematic patterns of gambling (Steenbergh et al., 2002).

According to Chambers and Potenza (2003) and Chambers et al. (2003), excitement-seeking or related constructs were important motivational factors related to gambling behaviours. A high need for excitement/arousal or a susceptibility to boredom was related to impulsive excitement/sensation-seeking, which was associated with excessive gambling and problems characterized by poor impulse control including substance abuse, antisocial personality disorder, and criminal behaviour Consistently, data suggested that gambling and other addictive behaviours’ shared common underlying biological mechanisms implicated in impulsivity, a component of which has been excitement/sensation-seeking.

As per Trimpop (1994), extraversion has been shown to predict sensation seeking which again consistently has been linked to problem behaviours, particularly risk taking. High scores on Neuroticism would be prone to addictions and problem behaviour (Phillips et al., 2006). Consequently it is likely that gamblers, who often were characterized by sensation seeking and risk taking, would score high on this trait.

In a large scale survey conducted by e-commerce and online gaming regulation and assurance (2007) on 10,865 online gamblers from 96 countries, respondents were asked to list their reasons and motivations for gambling online, cited entertainment, excitement, or relieving boredom more than making money. The finding of the survey conducted by e-commerce and online gaming regulation and assurance was in line with Zuckerman’s prediction that the relationship between sensation seeking and gambling was about excitement, not profit.

In Pantalon et al.’s (2008) study, excitement-seeking and related constructs have been associated with heavier gambling and negative health measures in problem and/or pathological gamblers. Most adults gamble recreationally and an understanding of the relationship between excitement seeking as a motivation for gambling amongst
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subs syndrome gamblers has significant public health implications. Logistic regression analyses were used by Pantalon et al. (2008) in their study to examine a national sample of 1,476 past-year recreational gamblers to identify characteristics distinguishing gamblers acknowledging gambling for excitement (“Excitement-seeking Gamblers” or EGs) and gamblers denying gambling for excitement (“Non-excitement seeking Gamblers” or NEGs). Excitement-seeking gamblers were more likely than non-excitement seeking gamblers to report alcohol use and abuse/dependence, any substance abuse/dependence, incarceration, large gambling wins and losses, more frequent and varied gambling, and symptoms of pathological gambling (i.e., at-risk gambling). Together, these findings indicate that excitement-seeking gamblers were more likely than non-excitement seeking gamblers to demonstrate problems in multiple areas characterized by impaired impulse control.

Researchers such as Bonnaire et al. (2004), Nower and Blaszczynski (2006) and Turner et al. (2006) have reported boredom to be an important factor in the development and maintenance of problematic gambling behaviour. Indeed, correlational research has often demonstrated a positive relationship between gambling problems and self-report measures of boredom. Blaszczynski et al. (1990), for example, found low tolerance for boredom to be a significant factor in repetitive gambling behaviour. Specifically, they reported elevated boredom proneness scores among problem gamblers when compared to a control group of non-gamblers. Similarly, Turner et al. (2006) found that susceptibility to boredom was significantly predictive of problem gambling. Bonnaire et al. (2004) found that the number of games played by gamblers increased with greater levels of boredom.

Support for the notion that boredom has been causally related to gambling and gambling problems came from various studies such as conducted by Williams and Hinton (2006) and Clarke et al. (2007), who interviewed gamblers who indicated that boredom was among the primary motivators for being engaged in gambling activities. In a separate study, sociologists Smith and Preston (1984), with 45% of respondents who gambled while in Las Vegas reported similar results citing “boredom and excitement” as the primary motive for gambling. Caroll and Huxley (1994), for instance, found that young male slot machine gamblers who displayed characteristics of dependency made constant reference to boredom and boredom mitigation when citing reasons for continued gambling. They concluded that for
problem gamblers, “fun and entertainment appeared to have given way to a compulsive quest for boredom relief”. Accordingly, these Researchers suggested that perceiving one’s life as being low in stimulation was fundamental to discriminating between dependent and nondependent gamblers. Brown and Coventry (1997) also found that boredom, along with loneliness and isolation, were the main motivations for gambling among women with gambling problems. Finally, McNeilly and Burke (2000) investigated motivations for gambling among older adults, and found that 30% reported gambling as a means to relieve their boredom.

According to LaPlante et al. (2008), adolescents have moved to internet gambling in order to alleviate boredom, a sense of adventure or in seeking to alleviate the psychological impact of personal difficulties. Increased frequency of play and being able to continue play almost indefinitely presented an alternative from everyday problems to a self-centered world of continuous stimulation, leading to loss of control over the impulse to play and receive the desired level of excitement.

A qualitative study conducted by Shead et al. (2010) stated on the basis of review done that adolescents with gambling problems obtained higher scores on the Disinhibition and Boredom Susceptibility subscales of the Sensation Seeking Scale indicating that adolescents have higher risk-taking tendencies. Risk-taking has been an intrinsic element of gambling. Problem gamblers tended to take more risks in general and on gambling tasks in particular. Results of Shead et al.’s (2010) study were supported by the following studies. Breen & Zuckerman, (1999), which stated that both gambling and problem gambling have been shown to be associated with high sensation-seeking behaviour as indicated by a high degree of seeking out novel, exciting experiences with an element of risk in a sample of 248 male undergraduates of 18-19 years old. A study of 2,179 middle and high school students found that risk propensity was a particularly strong predictor of being at-risk or having a gambling problem, even after controlling for other predictors (Dickerson et al., 2008). Youth who perceived their involvement in risky activities as highly positive while not appreciating the costs and negative consequences of such activities were at greater risk of developing gambling problems.

Sensation seeking has been associated with impulsivity, Zuckerman (1994) and Nower and Blaszczynski (2006) has suggested combining sensation seeking with impulsivity to create a super trait called “impulsive sensation seeking”. Sensation
seekers were defined as “those who seek novel, varied or complex sensations or experiences and who are willing to take risks for the sake of such experiences” (Breen & Zuckerman, 1999). Zuckerman (1999) proposed that problem gamblers have been the prototype of high sensation seekers, and suggested that engaging in gambling activities could be a way of maintaining optimum levels of stimulation (Zuckerman, 1994).

According to Mercer and Eastwood (2010) the propensity to experience boredom was believed to be a predisposing factor for problem gambling; yet, a full understanding of this association was lacking. Some claimed that gambling alleviated the under-arousal associated with boredom; others claimed that gambling helped individuals in avoiding the negative affect associated with boredom. The purpose of the study conducted by Mercer and Eastwood (2010) was to clarify this relationship. 202 undergraduate students completed measures of gambling, boredom, and sensitivity to punishment and reward in their study. Results suggested that individuals gambled in order to increase arousal, rather than to avoid the negative affect associated with boredom. Moreover, results also suggested that boredom was distinctly related to gambling problems, above and beyond its overlap with sensitivity to reward.

Braverman and Shaffer (2012) did not consider sustainability aspects to predict the development of gambling related problems. Researchers investigated whether several gambling characteristics cluster in a reliable way to identify bettors who will later close their accounts due to gambling-related problems. Nevertheless, since the employed data in Braverman and Shaffer (2010) described the actual gambling behaviour of subscribers to the Internet gambling service (Bwin.com, Interactive Entertainment, AG) (LaBrie et al., 2007), these betting data likely contain the behavioural fingerprints of broken sustainability. Researchers found that there were a substantial number of users who reported closing their account for gambling-related problems who demonstrated little live-action betting activity during their first month or during the whole 2-year period of gambling. It was likely that these gamblers participated in other games (e.g. fixed odds betting) and this other betting activity was contributing to account closing.
MENTAL HEALTH AND GAMBLING TENDENCIES

Historically, the term gambling “addiction” found its way into widespread use in the contemporary literature regarding gambling. Freud was one of the most widely referenced early 20th century Researchers to associate the term addiction with gambling, believing that it was closely related to substance dependence (Freud, 1979/1921) which he also labelled as an addiction. Today, there remains a variety of opinions among treatment and research professionals regarding the classification of pathological gambling. One of the most salient reasons for classifying pathological gambling as an addiction is the evidence emanating from the biological sciences where similarities in brain functioning and brain images have been reported between pathological gamblers and drug addicts.

McCormick et al. (1984) explored the relationship between diagnosable disorders of affect and pathological gambling. The sample consisted of 50 pathological gamblers admitted to an inpatient gambling treatment program. Of the total sample, 38 patients (76%) had major depressive disorder. As noted by the researchers, an interesting question was whether the depression created a motivation to escape these feeling through gambling or if the gambling losses created the depression. In the study group, participants were unable to report reliably the temporal relationship between early gambling and early depressive episodes. Fifty percent of pathological gamblers have been found to have a history of drug or alcohol abuse (Lesieur et al., 1986).

According to Lesieur (1993), escape seekers find gambling a means of forgetting overwhelming problems, at least for a while. Gambling becomes a type of anaesthetic or a dissociative state, with the gambler almost taking on another identity whilst buying time away from their problems.

Depression has been a common co-morbid condition found among pathological gamblers but, within this cohort, a number of important subtypes have been reported. Graham and Lowenfeld (1986) identified a depressive reaction personality subtype using the MMPI, while both McCormick (1994) and Castellani and Rugle (1995) found a chronic dysthymic subgroup with a depressogenic cognitive style, which is prognostic for predicting relapse. Pathological gamblers within the depressive category, particularly females, were reportedly more likely to
choose modes of gambling that were socially isolating, repetitive, or monotonous to modulate this mood state (Rosenthal & Lesieur 1992; McCormick, 1994).

Hraba and Lee (1996) observed that estrangement from a conventional lifestyle helped to account for female problem gambling, factors that might also lead to boredom, depression and frustration.

According to Becona et al. (1996), pathological gambling has been found to be associated with depression. Researchers evaluated gamblers based on the Beck Depression Inventory and found the scores of pathological gamblers to be positively correlated with the severity of their addiction as determined by the DSM-IV characteristics reported.

According to Coman et al. (1996), Legge (1996) and Pierce et al. (1997), escape from personal pressures, boredom and depression were commonly cited reasons for gambling problems amongst females, despite the different methodologies and samples used.

According to Brown and Coventry (1997), Women’s gambling motivations also differed from men’s. Researchers reported that gambling motivations particularly associated with women included social isolation, the need to escape from everyday stress, and psychological co-morbidity. While these were also sometimes applicable to men, evidences’ suggested that there may be mitigating factors compounding these motivations for women. For instance, social isolation amongst women was reportedly a key motivator to start gambling and a trigger to progress to problem gambling. Brown and Coventry’s (1997) study reinforced the notion that women tended to gamble to combat loneliness and isolation. Additionally, Researchers found that gambling in venues provided women with ‘a place where they could feel safe and “belong” ’ and that the ‘attention given by friendly staff and gaming venue managers can alleviate feelings of loneliness and isolation’. Researchers concluded that a sense of belonging to a community could be found in gaming venues.

According to Gupta & Derevensky (1998a; 1998b), concomitant with states of anxiety, many problem gambling youth experience low self-esteem or depressive symptomology including clinical depression; adolescents with gambling problems reported higher suicide ideation and attempts as well (Ladouceur et al., 1994; Gupta & Derevensky, 1998a).
Gupta and Derevensky (1998a) examined correlates of adolescent problem gambling within a study examining the relevance of Jacobs’ General Theory of Addictions for youth problem gamblers. They divided their sample of 817 adolescents into four groups: (a) nongamblers (b) occasional gamblers (c) regular gamblers and (d) problem and pathological gamblers. They found that tobacco, alcohol and drug use, depression, dissociation, excitablety, and disinhibition were related to gambling problem severity, as well as, measures of arousal and self-esteem. These investigators also concluded that boys and girls likely have different predictor variables. For boys, excitation and dissociation (i.e., need to escape) were the best predictors of problem gambling. For girls, depression, dissociation, and drug use were the best predictors of problem gambling. These differences in results for boys and girls led the investigators to surmise that an abnormal physiological resting state may be a good predictor for boys, conversely emotional distress is a better predictor of problem gambling among girls.

Cunningham-Williams et al. (1998) found in the St. Louis Epidemiologic Catchment Area Study that among problem gamblers with alcohol abuse or dependence, gambling problems developed within 2 years of the onset of alcoholism in 65% of the cases and problem gambling occurred after the onset of nicotine dependence in 67% of the cases.

Beaudoin and Cox (1999) examined the characteristics of 57 adults seeking treatment for gambling problems. Approximately 30% of the sample reported receiving mental health services in the past, most commonly for depression. Furthermore, 40% of the sample reported gambling to rid unpleasant feelings. These results suggested that, for some people, gambling may act as a coping mechanism for depression.

According to Stinchfield (2000), despite the consistency with which depression and suicidal behaviour have been associated with problem gambling behaviour; researchers on a sample of 78,582 male and female Minnesota public school students enrolled in the 9th and 12th grades, found that neither depression nor suicidal behaviour accounted for a significant amount of variance when multivariate analyses were employed with other predictors.
Researchers such as Rossen (2001) and Gupta and Derevensky (2001) have suggested that adolescent problem gamblers were more likely to: demonstrate poor performance at school, including poor attendance; suffer high rates of depression and low self esteem; have poorer coping skills; be at a greater risk of suicidal ideation; participate in other risk-taking behaviours such as drug use, engaging in under-age drinking and participate in criminal activities and antisocial or delinquent behaviour.

Gold et al. (2001) reported “prevalence rates for pathological gambling were also higher among patients who were in treatment for substance abuse disorders than in the general population”

In their quantitative study, Thomas and Moore (2001) reported that the women in their study scored higher on the measure for loneliness than men and initially started gambling to combat feelings of loneliness and isolation. Similarly, in the study of the association between loneliness, social isolation and women’s EGM gambling in Victoria, Australia, Trevorrow and Moore (1998) found that the women who were screened as having gambling problems were lonelier than women with no gambling problems. Researchers also argued that women’s loneliness was not due to ‘lack of companionship, but with feelings of alienation and anomie – the experience of being with other people but not part of the group, of not being “really understood” by others, and of aloneness despite company’. Researchers highlighted the possibility that loneliness and/or alienation ‘increases as the woman who began as a social gambler finds that she has lost control of when and how much she should gamble and felt that she has no-one to turn to, and that no-one understands her plight’.

As per Raylu and Oei (2002), epidemiological studies reported high rates of mood disorders among individuals with problem gambling. Furthermore, individuals with problem gambling demonstrate elevated likelihood of suicide (Ladouceur et al., 1994; Sullivan et al., 1994), and report family histories of mood disorder (Crockford & el-Guebaly, 1998). As per Crockford and el-Guebaly (1998), pathological gambling frequently co-occurs with affective disorders. High rates of major depression and bipolar and cyclothymic disorders exist among patients with compulsive gambling. The co-occurrence of compulsive gambling with attention deficit disorder was fairly consistent. Compulsive gambling and attention deficit disorder both involve poor impulse control manifested in different but related forms. Consistent with this finding was that recovering gamblers had EEG
(electroencephalogram) patterns similar to those of children with attention deficit disorder.

Gambling has been found to be highly associated with other forms of antisocial activity. Vitaro et al. (2001) has found delinquency to be positively related both to gambling frequency and problem gambling. In addition, the study by Williams (2002) found a positive relationship between time spent on gambling and depression. Petry and Tawfik (2001) reported that 20% of youth seeking treatment for marijuana had a gambling problem.

Shapira et al. (2002) revealed that illicit behaviour among adolescents such as alcohol, marijuana, tranquilizer, crack or cocaine and other stimulant use, as well as tobacco usage, have strong association among adolescents scoring as past year problem gamblers. It was also observed by the researchers that adolescent problem gamblers have much higher rates of alcohol, drug and tobacco usage than reported by teens in any other gambler classification. According to Researchers, on days adolescents drink, adolescent problem gamblers reported drinking more alcoholic beverages (about 7) than low risk gamblers (approximately 3) and had over five times as many days of tobacco and marijuana use as their low-risk peers. According to Shapira et al. (2002), adolescent males and females have important mental health differences. Males were more likely to have been personally treated for an alcohol or drug problem (4.5% vs. 0.7%). However, females were more likely to be often or sometimes anxious, worried or upset in the past month; have fair or poor health in the past year; and have had two weeks or more of depression or loss of interests. Females were also more likely to report alcohol or substance abuse in the family (12.8% vs. 8.1%) than their male counterparts.

A study conducted by Moore (2002) on 100 individuals (51 males and 49 females) out of which only 75 participants completed the study in Oregon, confirmed that gambling has not been an activity that afflicts the unwitting individual without warning. More than 81% of the pathological gamblers participants reported mental illnesses (including substance abuse, prior to the onset of pathological gambling, and more than 73% reported trauma stemming from abuse) or neglect prior to the onset of pathological gambling. Of those participants reporting trauma stemming from abuse or neglect, nearly 93% reported the existence of mental illness, substance abuse, or
Review of Literature

pathological gambling in their biological family that included parents, siblings, grandparents, aunts and uncles. Nearly half (47.3%) identified a pathological gambler in their biological family. Of those reporting preoccurring mental illness or substance abuse, nearly 69% reported a family history of mental illness, substance abuse, or pathological gambling. The adhesive that seemed to bind pathological gambling within this milieu of mental illness and addiction was the gamblers’ ability to achieve a state of being while gambling that alleviates the unpleasantness of both present and historical stress. If this quest for disassociation, carried to an extreme, then becomes both the solution and the problem as more and more time and money were spent gambling in an attempt to distance oneself from the ever-expanding sphere of problems.

According to Kausch (2003), associations between problem gambling and marijuana use were less well-known. In a chart review of 113 pathological gamblers in treatment at a Veterans Administration Center, those reporting a history of drug abuse or dependence reported the highest lifetime rates of marijuana use (72.7%), researchers also found in chart reviews of gamblers that 43% of participants i.e. 49 pathological gamblers in treatment at a Veterans Administration Center had a clinical diagnosis of depressive disorder.

As per Deverensky and Gupta (2004), growing concern has emerged toward adolescents and young adults with respect to risks of gambling problems. Problem gambling in adolescence can lead to numerous serious outcomes.

A recent study conducted by Lynch et al. (2004) on 534 adolescent and 2,417adult participants who were interviewed through the use of random-digit-dialing (RDD) surveys and 530 (adults only) face-to-face interviewed participants at selected gambling venues in United States found that adolescent gamblers were more likely than adolescent non-gamblers to report alcohol and drug use and abuse/dependence and depression. Researchers also found that early-onset adult gambling displayed stronger associations with adverse measures of psychiatric health compared with adult onset gambling. The researchers therefore concluded that adolescent-onset gambling has been associated with more severe psychiatric problems, particularly substance use disorders, in adolescents and young adults. There was also a positive association between both levels of gambling involvement and depressive symptomology, deliberate self-harm, and arguments with others. Findings
were consistent with the large number of studies suggesting that mental health issues such as depression and suicide ideation and attempts were associated with both adolescent problem gambling (Langhinrichsen-Rohling et al., 2004a; Nower et al., 2004; Delfabbro et al., 2006b) and gambling participation (Lynch et al., 2004).

According to Derevensky and Gupta (2004b) and Langhinrichsen-Rohling et al. (2004), adolescents view suicide and abusing substances as viable options for coping with the problems associated with gambling. These types of behaviours have negative long-term effects on the physical health and mortality of youth, making gambling even more dangerous for young players. Adolescent, particularly female, pathological gamblers report more frequent suicide ideation and attempts than adolescents who do not gamble.

Langenbacher et al. (2001) and Ledgerwood and Downey (2002) conducted studies comparing drug and alcohol abusers with and without pathological gambling and found that pathological gamblers had more severe alcohol and drug dependence; had more trouble with the law (Hall et al., 2000); received more psychiatric diagnostic and treatment for drug dependence (Shaffer et al., 2002); had father and/or mother with gambling problems too (Toneatto & Brennan, 2002; Carvalho et al., 2005) and more psychiatric symptoms (Petry, 2000; Shaffer et al., 2002; Carvalho et al. 2005).

According to Petry et al. (2005), it has been important to include individuals with mood disorder histories in studies of problem gambling because up to 37% of individuals with problem gambling also have a history of major depression and up to 17% have a history of dysthymic disorder.

In a 2000–2001 study of 960 callers to the Connecticut Council on Problem Gambling Helpline, Potenza et al. (2005) reported that 173 callers to the helpline reported alcohol use problems; compared with 787 callers without an alcohol use problem, callers with an alcohol use problem were more likely to acknowledge problems with more forms of gambling. Petry et al. (2005) analyzed the National Epidemiologic Survey on Alcohol and Related Conditions (2001–2002) and found that 73% of the 192 pathological gamblers in this large, nationally representative sample had lifetime alcohol use disorders and that 60.4% reported lifetime nicotine dependence.
Both general population and gambling treatment studies of gamblers have shown elevated depression scores and higher frequencies of major depressive disorders among those with gambling problems (Bland et al., 1993; Cunningham-Williams et al., 1998; Lynch et al., 2004; Petry et al., 2005).

Studies have reported higher rates of relationship between suicide and pathological gambling. From 17 to 80% of pathological gamblers have suicidal ideation and 13 to 27% report at least one attempt (Ledgerwood & Petry, 2004; Martins et al., 2004; Battersby et al., 2006). As per Maccallum and Blaszczynski (2003), major depression, substance abuse, relationship issues, unemployment, financial stress, and legal issues were known to be the risk factors for suicide ideation and suicide. Several studies report such consequences for problem gamblers (Statham et al., 1998; Weissman et al., 1999).

According to Clarke et al. (2006) and Dannon et al. (2006), children and adolescents with gambling problems have higher rates of internalizing and externalizing behaviour disorders including conduct and emotional problems, anxiety, family discord, substance abuse, and cognitive problems.

Delfabbro et al. (2006) suggested that young problem gamblers were more likely to smoke, to drink without adult supervision and to use recreational drugs. For example, the prevalence of cigarette smoking is 4 times higher, marijuana smoking rates is 6 times higher and harder drug use more than 10 times higher in young problem gamblers without the adult supervision. Results suggested that gambling has often been one important part of a cluster of other risk taking behaviours.

One recent Australian study conducted by Delfabbro et al. (2006b) exploring the psychosocial correlates of problem gambling in 926 adolescents in the age range of 11 to 19 years found that problem gamblers were 10 to 20 times more likely to have use ‘hard’ drugs compared with non-problem gamblers and that 75% of problem gamblers drank alcohol without adult supervision on at least a weekly basis. The findings of several studies confirmed that gambling behaviour in adolescents has been associated with adverse mental health outcomes and a variety of risk behaviours, such as alcohol use, tobacco use, and illicit drug use (Wood et al., 2004; Lynch et al., 2004; MORI Social Research Institute, 2006).
In a Scottish study by **Moodie and Finnigan (2006)**, pathological gamblers had significantly higher rates of depression than did problem gamblers, non-problem gamblers, and non-gamblers.

**Ellenbogen et al. (2007)**, one of the most disturbing consequences of gambling for individuals was the effect it has on their mental health. Adolescent gambling has been found to be associated with major depression, anxiety, attention-deficit/hyperactivity disorder, low self-esteem, and personality disorders. Researchers collected the data from five studies of adolescents and young adults conducted between 2002 and 2005 by the International Center for Youth Gambling Problems and High-Risk Behaviours, McGill University were included for analyses by the Researchers. The sample comprised of 5,313 (2,750 males, 2,563 females) participants between the ages of 12 and 18 years. Social gamblers, defined as those that gamble but do not appear to have a problem with gambling, also abuse substances. A recent study of adolescent problem gamblers found a significantly higher proportion of problem gamblers than non-problem gamblers reported clinical attention deficit hyperactivity disorder symptoms (**Derevensky et al., 2007**).

According to **Problem Gambling Foundation of New Zealand (2008)** and **Winters (2008a, 2008b)**, adding to the developmental liability of youth has been the egocentrism and invincibility characteristic of adolescents. As per **Fong (2006)**, most adolescents believe that they were immune from the negative consequences associated with risky behaviour. These factors make minors more vulnerable to gambling, particularly when they were brought into it by family members. This was worrisome as young problem gamblers were more likely to hold superstitious beliefs about gambling, like being able to beat the odds of winning, or that betting more money equals a bigger pay out (**Moore & Ohtsuka, 1999**). Even worse, most adolescents were not even aware about the downside, that gambling behaviour has (**Haubrich-Casperson, 1993**).

A vast body of literature demonstrated high rates of comorbidity between substance use disorders and pathological gambling (**Petry et al., 2005; Kessler et al., 2008**).

**Women’s Information Referral Exchange [WIRE] (2008)** have shown that feelings of loneliness and social isolation can trigger problematic gambling for women, the temporal sequencing involved has been unclear; whether social isolation was a precursor to, or a consequence of, a gambling problem remains unknown.
According to Desai et al. (2008), female problem gamblers reported comparably even higher rates of mood and anxiety disorders, but comparably lower rates of alcohol/substance abuse and dependence and personality disorders than their male counterparts. Researchers analysed the data from the US national epidemiological survey of alcoholism and related disorders and conducted structured diagnostic interviews with a sample of 43,039 respondents. Results revealed that the associations between current gambling problems and current major depression, dysthymia, panic disorder, social phobia, and generalised anxiety disorder were statistically stronger in women than in men, and that there were similar patterns of other Axis I mood and anxiety disorders such as mania, hypomania, simple phobia, alcohol abuse/dependence, nicotine dependence, and drug abuse/dependence across gambling problem severity for both women and men. The rate of suicide ideation and suicide attempts by female problem gamblers was also comparably higher than that of their male counterparts (Specker et al., 1996).

As per Desai et al. (2008), emerging evidences also suggested that there have been gender differences in the degree of psychiatric symptomatology at different levels of problem gambling severity. In an exploration of co morbidity with subsyndromal and pathological gambling problems, strongest gender differences in psychiatric symptoms were observed in the at-risk gamblers, rather than the problem/pathological gamblers. It was argued that these findings parallel those found in the alcohol dependence literature, whereby females report more severe health-related problems at similar levels of alcohol consumption than their male counterparts. Subsyndromal levels of pathological gambling (e.g., ‘problem gambling,’ ‘at-risk gambling’ and ‘recreational gambling’) were similarly associated with impairments and comorbidities (e.g., obesity, nicotine dependence, alcohol abuse/dependence), albeit typically to a lesser extent (Desai et al., 2007). Among recreational gamblers, differences in gambling-related characteristics (e.g., gambling motivations) have been reported between gamblers with and without problem gambling features (e.g., one or more DSM-IV diagnostic criteria; Pantalon et al., 2008), and greater rates of psychiatric comorbidities have been reported among recreational gamblers with problem gambling features in comparison to those without (Grant et al., 2009).
Problem gamblers as according to Shaffer and Martin (2011) were significantly more likely to have mental disorders and/or substance use disorders compared to those without gambling problems. Overall, research indicates that individuals with such psychiatric disorders were approximately 17 times more likely to develop problem gambling than were those without such disorders (Kessler et al., 2008). Specifically, problem gamblers were 5.5 times more likely than non-PGs to have had a substance abuse disorder (Kessler et al., 2008); 75% of problem gamblers have had an alcohol disorder, 38% have had a drug use disorder, and 60% have had nicotine dependency (Petry et al., 2005). Concerning mental health disorders, problem gamblers were four times more likely than non-PGs to experience a mood disorder in their lifetime and three times more likely to have had an anxiety disorder (Kessler et al., 2008); 50% of problem gamblers have had a mood disorder, 41% have had an anxiety disorder, and 61% of problem gamblers have had a personality disorder (Petry et al., 2005). These expectations and the development of gambling-related problems were also associated with impulsivity (Blanco et al., 2009).

Studies conducted by Lee et al. (2008), Cumyn et al. (2009) and Owens et al. (2009) have provided evidences that the impulse control problems were often associated with attention deficit hyperactivity disorder place individuals, especially adolescents, at increased risk for developing other problems and/or disorders that would normally involve impulse regulations. Disregard for future costs of immediate gratification was also a symptom of other impulse control disorders (e.g., substance abuse and problem gambling). It was therefore not surprising for the researchers that problem gambling was common among those with attention deficit hyperactivity disorder. The rate of both attention deficit hyperactivity disorder and other impulse control disorders among problem gamblers has been higher than chance levels (Specker et al., 1995).

The research conducted by Mathias et al. (2009) confirmed the high prevalence rates of pathological gambling among alcohol and other drugs abusers and also identified that there had been a high proportion of patients with suicide ideas among substance abusers who were also pathological gamblers. The severity of this association was also reinforced by finding that drug abusers with pathological gambling have more severe psychiatric, drug, legal and family problems than those who did not have gambling problems. Researchers confirmed that drug abusers with
pathological gambling have more frequently family history of gambling problem. Drug abuse has already been considered a severe condition, difficult to treat and related to many personal and social harm. Researchers also stated that condition has even been more severe when drug abuse was associated with pathological gambling, which is not an uncommon situation.

In a study conducted by Momper et al. (2010) on a sample of over 3,000 adults who participated in a telephone survey about gambling and other behaviours, Researchers found that those at risk for problem gambling were more likely to consume alcohol at each of the drinking levels, from relatively infrequent drinking to daily drinking, when compared with individuals who did not gamble or who were not classified as being at risk. Compared with non-gamblers or those not at risk, individuals at risk of problem gambling had an increased likelihood of using marijuana when the consumption was more frequent, in this case beginning with individuals who use marijuana once per month. Finding was consistent with prior research on frequent marijuana users in treatment who also report increased levels of gambling behaviours (Petry & Tawfik, 2001).

According to Yip et al. (2011), problem gambling features were more frequently reported by men than by women with binge eating disorder. These findings were consistent with previous studies of both syndromal and subsyndromal problem gambling in the general population (Gerstein et al., 1999) and among individuals seeking treatment for gambling problems (Potenza et al., 2001; Martins et al., 2004). Findings were also consistent with previous studies reporting higher frequencies of impulsive behaviours in other domains (e.g., substance use) among men versus women with binge eating disorder (Grilo et al., 2009). Yip et al.’s (2011) study revealed that substance use may lead to impaired control (e.g., disinhibition) over such behaviours as eating and gambling. It was possible that individuals with binge eating disorder who also have problem gambling features may have more global impairments in impulse-control, and were therefore more likely to engage in a range of other impulsive behaviours (e.g., substance use). Individuals may engage in substance use behaviours when they gamble, perhaps to enhance the hedonic qualities of gambling, and substance use during gambling might lead to more problematic levels of gambling. These behaviour (binge eating, gambling, and substance use) may serve a common function, i.e., attempts to regulate negative affect.
Ledgerwood et al. (2012) compared 45 pathological gamblers and 45 control group participants on several measures of executive functions and researchers included mood disorders variable in their analysis of Executive Function. Thus, Executive Function differences appear to be relatively independent of mood history. However, when mood disorder history was included in the analysis of decision-making, the interaction between problem gambling group and time block was no longer significant. Thus, it appeared that depression may partially mediate the relationship between decision-making and problem gambling.

STRESS, COPING AND GAMBLING TENDENCIES

Life stressors have also been identified as an important component in the development of gambling problems. The General Theory of Addictions (Jacobs, 1986) proposed that certain personality characteristics and life events influence the development of gambling problems. Jacobs suggested that excessive gambling may result from a history of negative childhood experiences. Additionally, personal vulnerability has been linked by some researchers to negative childhood experiences of inadequacy, inferiority, low self-esteem and rejection (McCormick et al., 1987, McCormick et al., 1989). A study by Taber et al. (1987) has found that out of 44 individuals admitted to an inpatient gambling treatment program, 23% had experienced severe trauma during their lives and another 16% reported moderately heavy trauma. Furthermore, those with traumatic experiences also reported higher rates of substance abuse, depression, and anxiety than those without such experiences.

It may be speculated that both the type and level of stress may vary in the process of the development and maintenance of problem gambling. Some studies have shown empirical support for problem gambling as a ‘behavioural stress reaction’ (Blaszynski & McConaghy, 1989); others, changes in stress with excessive gambling (Legg-England & Gotestam, 1991); while one longitudinal study found that ‘stressed’ gamblers differed significantly on a number of psychological measures compared with infrequent and high frequency gamblers (Torne & Konstanty, 1992). However, it was difficult to compare results without considering differences in the operationalisation of stress. This led to consideration of whether or not different kinds of stress may be antecedent or consequent indicators within the process of the development and maintenance of problem gambling.
Sprinthall and Collins (1995) suggested that ‘pretending’ appeared to give many participants an illusion of coping with difficult situations. This was concerning, as evidences suggested that this form of suppression often creates more serious psychological problems due to the eventual emergence of consequences from emotional repression or isolation of feelings.

In a study, Dio and Ong (1997) suggested that avoidant coping style and stress were important factors in problem gambling. Stress has also been conceptualised as both an antecedent and consequent factor in the development and maintenance of problem gambling (Blaszczynski & McConaghy, 1989; Sharpe & Tarrier, 1993). The theorised relationship between stress and problem gambling in the study conducted by Dio and Ong (1997) was consistent with previous models (Sharpe & Tarrier, 1993). In other words, stress may contribute to gambling; similarly, gambling may contribute to stress. Heavy involvement in gambling (frequency and duration) is also related to problem gambling.

Au and Yu’s (1997) study on culturally and linguistically diverse (CALD) sample suggested that new immigrants participated in gambling as a coping strategy, albeit a maladaptive one, to deal with adjustment stress during migration. Further, for some new migrants, loss of primary control has further contributed to the maintenance of cognitive distortions and superstitious beliefs.

Getty et al. (2000) studied a group of 30 members of Gamblers Anonymous and compared them with 30 members of matched control group. The problem gambling diagnosis was made using the South Oaks Gambling Screen. The study used the Problem-Focused Styles of Coping Inventory (PF-SOC). All types of coping styles, suppressive, reactive and reflective were significantly different between the experimental and control group with the experimental group being higher on suppressive and reactive while lower on reflective coping styles. With only one study performed on maladaptive coping, Researchers considered maladaptive coping as a probable pathological gambling risk factor.

According to Mori (2000), the considerable financial and emotional investment can lead families to expect high achievement from their sons and daughters, who can feel under intense pressure to succeed in their studies. Additional stress can result if students need to combine paid work with study in order to support themselves financially.
A study by **Surgey (2000)** concerning electronic gaming machine gambling with 30 women in a number of focus groups suggested that women, more so than men, may be motivated to gamble to alleviate or escape from stress or anxiety.

**Abbott (2001)** and **Vakalahi (2001)** suggested that through differential reinforcement and modelling, problem gambling may become a maladaptive and dominant attempt to cope with stressful situations. Social learning theory de-emphasises the inevitable progression of symptoms, suggesting that gambling was a learned behaviour that can also be unlearned and alternative coping mechanisms can be established.

According to **Blaszczynski and Nower (2002)** and **Sharpe (2002)**, conceptual models on gambling have also suggested that impulsivity may interact with environmental factors such as life stress, which may in turn lead to the onset and maintenance of pathological gambling. In a study on 202 student volunteers in the United States by **Lightsey and Husley (2002)** an impulsivity x stress x emotional coping 3-way interaction effect on problem gambling was found. Researchers found that among 202 university student volunteers, 33% of men but only 3% of women reported problem or pathological gambling, and neither stress and impulsiveness nor coping predicted gambling among women. Researchers also revealed that among men, impulsiveness, task coping, and emotion coping accounted for significant and unique variance in gambling. For higher task coping and lower emotion-focused coping, impulsiveness had a weaker relationship to gambling. Additionally, among non-impulsive men, emotion-focused coping in high stress conditions was most likely to result in gambling.

**Dickson et al. (2002)** suggested that adolescents with problem gambling have poor general coping skills. According to a study conducted by **Toneatto et al. (2002)** on a sample of 148 females and 112 males, escape gambling was generally considered to be more common among female problem gamblers whereas men have tended to be described as action gamblers.

Another study by **Krishnan and Orford (2002)** explored the ways in which family members, primarily partners and parents cope with the excessive or uncontrolled gambling of their family member, and the types of support they rely on. Researchers applied a stress–coping–support model, originally developed to
understand the way families cope with drug and alcohol problems in family members (Orford, 1992). Researchers revealed that the coping strategies adopted by families involved were a) controlling: including direct and indirect control of finances, and ‘forcing’ the family member to attend counselling or Gamblers Anonymous; b) tolerant: including paying the gambler’s debts or gambling with them to help ‘restrain’ uncontrolled gambling behaviour; c) supportive: including attending Gamblers Anonymous meetings with the gambler and encouraging alternative leisure pursuits; d) punishing: including aggressive behaviour towards the gambler and punishment, particularly of children who were financing their gambling through stealing; e) talking: including both ‘confrontational’ talking in the face of denial, and ‘supportive’ talking; f) limiting: including setting limits on gambling and reinforcing ‘family rules’; g) separating: usually after a ‘last straw’ event or as a result of cumulative stress; h) help seeking: including seeking help from general practitioners and banks in terms of limiting the gambler’s access to funds.

Schull (2002) highlighted the need for women to cope with and escape from the stress of everyday life as a motivation to gamble. Several qualitative Australian studies have similarly identified that women reported using gambling as a coping strategy to deal with anxiety due to pressures of their everyday lives (Pierce et al., 1997; Surgey, 2000). Similarly, Bicego (2002) identified that women gamble to escape from negative mood, including depression and anxiety; to obtain relief from everyday problems (such as those brought about through traditional caring roles); and to cope with stress. Thus, ‘escape gambling’ appeared to be tied to psychological co-morbid concerns, particularly depression and anxiety disorders.

Gambling often provides individuals with a certain amount of relief or escape from problems occurring in their life (Blaszczynski & McConaghy, 1989; Abbott & Volberg, 2000) and can offer a temporary but effective reprieve from painful personal realities (Tavares et al., 2003; Wong & Tse, 2003; Welte et al., 2004). Moreover, research has found that gambling whilst experiencing negative mood states, increases the likelihood of continued gambling regardless of repeated losses. This has been the case even for non-problematic gamblers as well (Raghunathan & Pham, 1999).

McMillen et al. (2004) proposed that older women’s gambling might increase because their gendered caring role decreases when their children leave home. Known as the ‘empty nest’ syndrome, this life stage (old age) has been an especially
significant time in many women’s lives, with many experiencing a sense of loss than can lead to feelings of loneliness and social isolation. People were more prone to developing gambling problems when coping with a major life change or loss (for example, children leaving home, retirement or death of a loved one). The social isolation that can accompany life changes can instigate sudden loneliness, with some people commencing gambling to deal with this loneliness and attain a sense of social connectedness. Indeed, social isolation has been identified in the gambling literature as a motivator for women to gamble as well as an explanation for women’s quick progression to problem gambling (McMillen et al., 2004).

Bergevin et al. (2006) revealed that more severe gamblers have experienced a greater number of stressful or negative life events relative to others. Specifically, more severe gamblers reported a greater number of stressors than social gamblers, and social gamblers reported a greater number of events than non-gambling youth. A pattern of more stressful life events and ineffective coping among adolescent problem gamblers was demonstrated in a study that examined stress, coping, and gambling severity in a sample of 11- to 20-year-olds (Bergevin et al., 2006). Adolescents with gambling problems reported more negative life events and major life events compared with social and non-gamblers. In addition, adolescents with gambling problems used less task focused coping and more avoidance focused coping. Males with gambling problems reported using more emotion focused coping strategies but there were no differences among females in terms of emotion-focused coping. At-risk and pathological gamblers reported childhood maltreatment of all types (physical, and verbal abuse and neglect) and that the effects of their maltreatment had negatively impacted their daily behaviour suggesting that they may be gambling as a means to cope with psychological problems and "escape" from past experiences.

As per Volberg (2003), Wood et al. (2004), Clarke et al. (2007) and Clarke (2008), problem gamblers were more likely to say they gambled for excitement, as a way of escaping from problems or tension, for the challenge and due to boredom/apathy compared to non-problem gamblers.

According to Delfabbro et al. (2006b) and Jackson et al. (2008), common explanation for the association between the factors (depressive symptomotology, deliberate self harm and arguments with others) and gambling involvement was that
adolescent gamblers employed gambling as an emotion-based coping mechanism to escape from current and past problems and major traumatic life events.

Piquette-Tomei et al. (2008) argued that when women fail to live up to societal expectations they began to display problem gambling behaviour and fall short of meeting their traditional caring responsibilities. They experienced internal outcomes, such as feelings of guilt or shame, as well as external outcomes, such as being stigmatized. The internal shame and guilt experienced by women problem gamblers, along with the external stigma that exists towards them, can be considered outcomes of continuing gender roles. For men, who did not commonly have the traditional role of care expectations, they also did not have the associated shame and guilt that can go hand in hand with failing to live up to this role (Connell, 1987).

As per Khawaja and Dempsey (2008), on top of the usual pressures associated with transitions to adulthood and adjusting to university life, students face additional stressors related to loneliness and social isolation brought on by being far from family, friends and home country. Families of international students often make heavy sacrifices to send their children overseas to gain degree, post-graduate, and other professional qualifications. Both domestic and international university students were vulnerable to problem gambling given their propensity to experiment with new and potentially risky behaviours, their gambling preferences and the need to manage emotional, financial, academic and social stressors associated with university studies and their developmental stage. International students may be at even higher risk as they are subject to additional stressors associated with acculturation coupled with a sudden exposure to a high access gambling culture.

Wood and Griffits (2007) suggested that the way in which people deal with life circumstances has been a function of both personality and experience. Some individuals use gambling as a form of maladaptive coping in response to problems in their lives. Problem gamblers commonly report 'gambling to escape', achieved through mood modification as a means of coping with stressful life events and negative mood states. Problem gamblers face more life challenges and use less-effective coping styles that employ avoidance or mood modification tactics rather
than dealing with the cause of the problem. Indeed, adolescents with gambling problems have poor general coping skills (Dickson et al., 2008) and report more stress, daily hassles, and major traumatic life events (Felsher et al., 2010). Young adults may turn to gambling as a method to escape negative moods, or distract from stressors (King et al., 2010).

The Productivity Commission (2010) noted that women’s penchant for Electronic gaming machine (EGM) gambling as a coping and escape mechanism has resulted in the proportion of women amongst problem gamblers in treatment increasing from around 10% before the liberalization of gaming machines to 40–60% afterwards. Women have preferred luck-based games (mainly EGMs) to relax or escape from problems, while men have preferred competitive, skill-based types of gambling.

According to Shaed et al. (2010) youth who experience more stressful life events with a tendency to use ineffective coping strategies, particularly emotion focused strategies among males, were at greater risk of turning to gambling as a maladaptive outlet to deal with their problems. Adolescents who generally exhibit less self-regulatory behaviour, higher risk-taking tendencies, and ineffective coping styles were more susceptible than others to developing gambling problems (Shaed et al., 2010).

Among students with low impulsivity, especially men, stress and coping exerted main as well as interaction effects on problem gambling (Tang & Wu, 2012).

According to Weatherly and Miller (2013) gambling as an escape was an official symptom of pathological gambling (American Psychiatric Association, 2003) and severity of gambling problems has been associated with gambling as an escape (Wood & Griffiths, 2007; Miller et al., 2010; Rockloff et al., 2011; Thomas et al., 2011).

According to Bergevin et al. (2006) and Thomas and Moore (2003), students may be using gambling as an escape or distraction from negative affect and day-to-day pressures and hassles, there are clearly other factors at play, including cultural values and beliefs about gambling (Raylu & Oei, 2004), as well as ready access to a wide variety of gambling activities (Moore et al., 2013).
PARENTAL BONDING, PERCEIVED SOCIAL SUPPORT AND GAMBLING TENDENCIES

According to Clarke (2004) and Oei and Raylu (2004) studies, among the known risk factors for pathological gambling has been family history of gambling. Lorenz and Yaffee (1987) surveyed approximately 500 members of Gamblers anonymous and found that 37% of the spouses of problem gamblers believed their husbands did not spend enough time with their children and 44% reported that the children were close only to their mothers. Jacobs et al. (1989) compared 52 high school students who reported that one or both of their parents had a gambling problem to 792 classmates who reported no gambling problem among their parents. The children of parents with gambling problems manifested more adjustment problems than their counterparts whose parents had no gambling problems. Lesieur and Rothschild (1989) compared children of parents with only a gambling problem to children of parents with more than a gambling problem. Results of the study showed that the children from multiple-problem families reported more adjustment problems than the children of parents with only a gambling problem. Researchers in their study revealed that children of pathological gamblers reported that they were more often victims of parental abuse than the average population. Children also described their home environment as more unpredictable and characterized by low parental monitoring and high coercive discipline (Darbyshire et al., 2001; Vachon et al., 2004). These prospective results were in line with the finding that adult pathological gamblers also retrospectively report lower family cohesion and more family conflicts than normal controls (Ciarrocchi & Hohmann, 1989; Delfabbro et al. 2005). This suggested that maladaptive parenting practices mediated the link between parental problem gambling and children’s adjustment problems.

Abbott and Cramer (1993) reported serious family problems due to gambling in 10% of a community sample of gamblers, although 84% of those who gambled in the past year reported that gambling had no positive or negative effects on their family life. 6% actually considered that gambling had a positive effect on family life by providing opportunities for socialisation, entertainment and increasing their income. They also confirmed the common sense proposition that family problems from gambling increase as income declines. It has been important to assist problem
gamblers in families to realistically recognise the impact of their gambling behaviour on their partner and children.

**Gambino et al. (1993)** assessed the gambling history of 86 male and 7 female veterans, between the ages of 29 and 72, residing in a substance abuse treatment facility. Among the sample, 17.3% were identified as pathological gamblers with 37% reporting that their gambling behaviour became problematic before the age of 25. Participants who indicated that their parent had experienced problems with gambling were 3 times more likely to be diagnosed as pathological gamblers. Those who indicated that their grandparent had experienced problems with gambling were at least 12 times more likely. Findings from the study suggested that a strong association may exist between grandchildren’s gambling behaviour and their perceptions of their grandparents’ gambling behaviour.

Children and adolescents spend a large portion of their lives with their immediate family with behaviours being modeled by family members having a strong impact on the future behaviour of young people. **Gupta and Derevensky (1997)** administered questionnaires to children between the ages of 9 and 14 to assess their gambling activities, including where and with whom the gambling occurs. A large majority (86%) of those who gambled regularly reported gambling with family members. Other studies have also reported that youth with greater gambling involvement were more likely to have parents or family members who gamble (Wynne et al., 1996; Wallisch et al., 1996).

Compounding the issue, many of the parents that promote gambling to their children gamble themselves. **Ladouceur et al. (1999)** interviewed 279 parents in the Quebec, Canada region and reported that 74% of the parents they interviewed gambled themselves more than once a week and only 5% of the parents interviewed would try to prevent their child from engaging in gambling. At the very least, family members’ acceptance of gambling makes it easier for minors to gain access to this seductive activity.

As parental monitoring increases, adolescent participation in problem behaviours decreases. **Gray and Steinberg (1999)** examined the independent and joint contribution of three core dimensions of authoritative parenting (acceptance-involvement, strictness-supervision and psychological-autonomy granting) to
adolescents’ adjustment on a sample of 8,700, 14-18 year olds. Researchers reported that parental involvement exhibited a steady “contribution to every aspect of adolescent development” including helping positive adolescent development and avoidance of such behaviours as drug use, school misconduct, anxiety, and depression. Jacobson and Crockett (2000), on a sample of 424, 7th to 12th graders from a single rural school district in central Pennsylvania confirmed, the protective nature parental monitoring had on grade point averages, lower levels of depression, sexual activity, and minor delinquency as well as increasing levels of educational achievement, constructive school attitudes, and favourable perceptions of the future (Trusty, 1996).

Hartos et al. (2000) interviewed 300 adolescents (licensed 2 years or less) about factors significantly related to risky driving behaviours, traffic violations, and motor vehicle crashes included lower levels of parental monitoring and control, and lenient parental restrictions on driving (i.e., friends as passengers and driving curfews). Parental monitoring was among the subset of variables most useful in predicting risky driving behaviours in the study. Researchers found that parental behaviours such as setting limits, having expectations, and demanding responsible behaviour were associated with a reduction in adolescent participation in risky driving. Parents do not affect adolescents in isolation. Participants of the study were also subjected to peers and contextual factors. Peers were influential in enhancing or inhibiting the likelihood of participation in problem behaviours. However, those effects may be greatest in the context of weak familial controls. Peer influences in the context of poor family involvement and inadequate parental management practices exacerbated the association of adolescents and peers problem behaviours.

Few researches conducted by Wood and Griffiths (2000) and Dickson et al. (2002) revealed that parents and family members were not aware of the dangers inherent in children who were regularly engaged in gambling activities; educators were not aware of the prevalence of children gambling on a regular basis. Pathological gamblers were more likely to have parents with an addiction or involvement in illegal activity. Researchers recommended targeting interventions in children whose parents or siblings were gamblers or problem gamblers (Dickson et al., 2002).
Grant and Kim (2001) on 131 adult pathological gamblers found that 58% of problem gamblers reported that at least one first-degree relative had symptoms of problem gambling behaviour.

According to Darbyshire et al. (2001) and Vachon et al. (2004), aspects of parenting may explain the association between parental problem gambling and children’s adjustment problems: parental monitoring and coercive interactions, both of which were more likely in families of parents with gambling problems. Low parental monitoring could play a role with regard to adolescents’ adjustment problems because adolescents with parents who were not aware of how and with whom their children spend their free time, (because of the parents’ addiction or related problems) had more opportunities to engage in antisocial activities and had experienced fewer negative consequences for doing so. However, on the other hand parental monitoring had been shown to predict affiliation with deviant peers (Dishion et al., 1991).

Study conducted by Dickson et al. (2002) in light of other studies revealed that failure to monitor children; inconsistent parenting practices and/or harsh discipline (Windle et al., 1996); impact of parental alcoholism mediated by parent’s stress and monitoring of child gambling (Chassin et al., 1996); negative communication patterns, unrealistic expectations, unclear and inconsistent behaviour limits (St. Pierre et al., 1997; St. Pierre & Kaltreider, 1997); and lack of parental knowledge about adolescent problem gambling (Ladouceur et al., 1998) played a significant role in making children more vulnerable to develop behaviour problems.

In an interview research conducted by Shapira et al. (2002) during the period of December 11 to December 17, 2001, on 1,051 Florida adolescents in the age range of 13-17 years, found that the most common reasons for gambling as reported by the adolescents who gambled were to socialize, for entertainment or fun, to win money and for excitement. Reasons for gambling provided by adolescents who met the DSM-IV criteria for pathological gambling were to feel high, peer pressure, as a hobby and as a distraction from everyday problems. Low risk gamblers identified the main reasons as to support worthy causes, out of curiosity, for entertainment or fun, for excitement and to be around other people.

According to Shapira et al. (2002), adolescent at-risk, problem and pathological gamblers were more likely to describe family worrying or complaining about gambling, as well as gambling creating problems between them and their family
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or friends. These adolescent gamblers also faced difficulties at school or work due to their gambling behaviour. Higher percentages of problem adolescent gamblers reported that they have a parent who has/had a gambling problem than at-risk gamblers. Adolescent gamblers in Florida, were more likely to have sold personal or family property, stolen other things, bought or sold stolen property and borrowed money from friends/acquaintances without their knowing in order to gamble or to pay off a gambling debt.

In another family study, Black et al. (2003) found that more than 9% of the first-degree relatives of pathological gamblers had a gambling disorder themselves. These researchers suggested that familial factors play a part in pathological gambling and that susceptibility can be transmitted genetically or through family dynamics and modelling.

In a study conducted by Marotta and Hynes (2003) for Oregon Department of Human Services, researchers quoted that young people who were associated with peers who were involved in a problem behaviour- delinquency, substance abuse, violent activity, sexual activity or dropping out of school were likely to be engaged in the same problem behaviour. Even when young people came from well managed families and did not experienced other risk factors, just spending time with friends who were involved in problem behaviours greatly increased their risk of that problem developing.

The results from the study conducted by Wiebe et al. (2003) on a sample of 3,715 Ontario residents in the age range of 18-24 years, conveyed a profile of the problem gambler as emotionally distressed and lonely, and having low social support.

Larimer and Neighbors (2003) conducted two studies (Study I comprised of 317 undergraduates out of which 168 were males, 146 were females and 3 did not indicated their gender; Study II comprised of 500 college students out of which 204 were males, 347 were females and 9 did not indicated their gender) to examine college students gambling as a function of descriptive or injunctive social norms. Researchers found positive associations between college students’ perceptions of friend and family approval of gambling and each of the following: own approval of gambling, gambling frequency, and gambling expenditure.
Felsher et al. (2003) conducted a study on 1,072 youths in the age range of 10-18 years, from 20 elementary and 9 high schools throughout the province of Ontario, Canada, and found that adolescents who reported a higher frequency of parental lottery playing also reported higher levels of gambling pathology. Furthermore, out of the 82% of adolescents who perceived that their parents played the lottery, 48% reported they initially engaged in lottery playing because their parents were involved in it and 32% indicated that they had intentions to continue playing the lottery because of their parents’ involvement.

According to Delfabbro and Thrupp (2003), many young people with early gambling problems experienced wins when they first started gambling. They also tend to have friends and family members who have problem with gambling. Studies of the impact of parental drug and alcohol use on dependent children have clearly demonstrated the emotional and psychological costs that parental compulsive behaviour or addiction can have on children (Orford, 1992).

Hardoon et al. (2004) on a sample of 2336 adolescents (981 males, 1326 females, 29 did not reported their gender) in grades 7th – 13th in the age range of 12-19 years were selected from 34 schools viz. 17 elementary and 17 high schools, in the province of Ontario, Canada found that adolescents who felt their parents had experienced problems related to gambling reported higher levels of gambling pathology.

Studies of familial risk for pathological gambling conducted by Black et al. (2003) and Black et al. (2006) revealed that offspring of gamblers were at significantly higher risk for gambling-related problem. There were evidences that suggested that a familial history of addictive behaviours more generally were associated with gambling problems (Slutske et al., 2000, 2001), either by modeling their parents’ behaviour or by being exposed to the same genetic or socio-demographic risk factors as their parents. These gambling problems in the offspring can in turn lead to psychosocial adjustment problems (Delfabbro et al., 2006), independent of parents’ disciplinary practices. Hence, it is possible that gambling problems in the offspring explain the links between parental problem gambling and offspring’s conduct problems or depressive symptoms, as well and possibly better than ineffective parenting.
Delfabbro et al. (2005) reported that out of the 900 Australian youth they surveyed, 72% revealed that their parents gambled. Although, these figures in and of themselves were not alarming, but researchers found a significant relationship between the frequency of parental gambling and adolescent gambling. Consequently, gambling by family members contributes to the gambling behaviour of youth, for example, most youths become exposed to gambling by their parents (Hardoon et al., 2004).

Magoon and Ingersol (2006) utilizing Jessor’s Problem Behaviour Theory as a theoretical foundation, surveyed 116 male and female students in grades 9th to 12th (mean age 16.8) from a Midwestern urban high school to determine the prevalence and relationship among gambling behaviour and parental and peer influences using the South Oaks Gambling Screen- Revised Adolescents, the Inventory of Parent and Peer Attachment (Parent Scale), and the Alabama Parenting Questionnaire (Parental Monitoring and Supervision Scale). Results revealed that almost all of the students (91%) reported gambling at least once in their lifetime while 36.2% reported gambling once a week, 19% reported gambling on a daily basis, and 26% were classified as problem gamblers (10% using the “narrow” SOGS-RA criteria). Thus researchers concluded that parental gambling was related to levels of past year gambling as well as increased likelihood of being classified as a problem gambler. Increased parental attachment was also associated with decreased levels of adolescent gambling, while decreased parental trust and communication resulted in increased problem gambling. According to the researchers, measures of parental monitoring and supervision found similar outcomes in that increased monitoring and supervision resulted in lower levels of adolescent gambling. Additionally, when peer influences were moderated by parental influences, there was a moderating effect on gambling behaviour. This study illuminates the continued importance parents play in both risk enhancing and risk inhibiting influences on adolescent participation in problem behaviours.

Ellenbogen et al.’s (2007) study investigated whether the prevalence of weekly and problem gambling among youth varied according to cultural affiliation. A convenience sample of 1,265 Quebec high school students aged 12–18 was divided into three linguistic groupings: Anglophone (English), Francophone (French), and Allophone (other). Results revealed that the Allophone grouping contained the highest
proportion of youth who gambled on a weekly basis and who reported gambling problems, followed by the Anglophone, and finally the Francophone groupings. Allophones also scored lower on measures of family bonding. However, given that they did not score differently on measures of family supervision, interaction, adaptability and cohesion, there has been little reason to believe that they were more prone to problem behaviour due to a lack of family attachment. One reason, as according to the researchers, immigrants were thought to be more prone to gambling problems stems from the challenges faced in integrating with the mainstream culture (Raylu & Oei, 2004). In the study, youth who indicated that they experienced acculturation difficulties were three times more likely to experience gambling problems. However, overall, only a small percent (5.9%) of Allophone youth reported experiencing acculturation difficulties.

Study conducted by Lambos et al. (2007) revealed that young problem gamblers tend to score more poorly on measures of self-esteem, mood state, general health and family functioning. Although they do not typically have any fewer close friends than other adolescents, they have often been less popular in class and been more alienated from their peers.

According to National Research Council (1999), the majority of adolescents who gambled first did so with parents and other family members, who portrayed it as an exciting and safe way to have fun. Gambling has already been attractive to adolescents because they perceived it as an adult activity, similar to smoking or alcohol use. When parents and siblings promote the activity to adolescents as fun and harmless, it increases the likelihood that adolescents will partake in gambling activities (Problem Gambling Foundation of New Zealand, 2008). Unfortunately, parents tend to be in the dark about the age at which youth started gambling.

In another study conducted by Dickson et al. (2008), a sample of adolescents from middle and high school were examined to test the extent to which various protective factors increased resilience to adolescent problem gambling. Problem gamblers were less likely to report feeling connected to their families compared to at-risk gamblers, social gamblers, and non gamblers. Self-reported ratings of family cohesion decreased from non-gamblers across each level of gambling severity group. Family cohesion remained a significant predictor when tested along with other protective factors in their ability to predict participant classification as either non-
problem gamblers (i.e., non-gamblers and social gamblers) or problem gamblers (i.e., at-risk and probable pathological gamblers). These results support previous findings in which youth with gambling problems were more likely to report having poor family connectedness, family dysfunction, low perceived social support, and low parental supervision (Hardoon et al., 2004). Probable pathological adolescent gamblers were more likely to report having family members with gambling problems compared with other adolescents, and the proportions generally decreased as severity of problems diminished.

According to Bellringer et al. (2008), amongst those who gambled, 4% of mothers and 16% of fathers were classified as moderate risk or problem gamblers using the Problem Gambling Severity Index. Using the South Oaks Gambling Screen-Revised, 10% of fathers were classified as problem or probable pathological gamblers. Bellringer et al. (2008), noted gender differences in terms of associations between gambling and health. For fathers both gambling and at risk/problem gambling were associated with psychological distress. Fathers who gambled were also more likely to be perpetrators as well as victims of verbal aggression than fathers who did not gamble, with at risk/problem gambling also being associated with physical violence. These findings were not noted amongst mothers whereby at risk/problem gamblers were significantly less likely to perpetrate violence than non-problem gamblers. Not unexpectedly, smoking and alcohol consumption (particularly at higher/harmful levels) were associated with gambling (though not with at risk/problem gambling) both for mothers and fathers. Some studies have also found problem gamblers play to win (Wood et al., 2004; Clarke, 2008) or for the social interaction (Clarke et al., 2007; Clarke, 2008) more than nonproblem gamblers.

Gerra et al. (2009) conducted a study on 50 abstinent cocaine dependent patients, and 44 normal controls and suggested the possibility that childhood experience of neglect and poor parent–child attachment had partially contributed to a complex neurobiological derangement including hypothalamic–pituitary–adrenal axis and dopamine system dysfunctions, playing a crucial role in addictive and affective disorders susceptibility.

In addition to higher rates of psychiatric co morbidity, there has been growing empirical evidence that female problem gamblers had problematic personal and family histories. For example, there were evidences that female problem gamblers
tended to employ inefficient emotion-focused coping strategies (Scannell et al., 2000); reported high levels of domestic and family violence (Muellerman et al., 2002); were more likely to experience childhood abuse and trauma than male problem gamblers and female in the general population (Petry et al., 2005); reported family histories of drug and alcohol use and psychiatric co morbidities (Boughton et al., 2007) and experienced relationship and family difficulties (Dowling, 2009).

The linkages between parental and offspring gambling behaviour have been well-documented in the literature. Parental gambling history has been shown to be a strong correlate (Langhinrichson-Rohling et al., 2004; Vachon et al., 2004; Weinstock et al., 2006), moderator (Magoon & Ingseroll, 2006), and predictor (Wickwire et al., 2007) of offspring gambling attitudes and behaviour. A body of literature addressing the possible mediators of intergenerational transmission of gambling behaviour has emerged within the last decade (Dowling et al., 2010; Tepperman et al., 2011). Oei and Raylu (2004) proposed a transmission process through which the gambling cognitions (e.g., illusions of control over gambling) and behaviour of late adolescents and young adults are shaped by parental gambling cognitions and behaviour. Using structural equation modeling, the researchers found that parents’ gambling cognitions were indirectly associated with their child’s level of gambling pathology through the association with the child’s gambling cognitions. Parents’ gambling behaviour was directly related to their child’s gambling pathology. The researchers suggested that parents transmit their gambling cognitions to their child, which, in turn, may influence the child’s gambling behaviour. However, the parents’ behaviour also plays a direct role. Thus, those who have discussed gambling with a parent, observed parental gambling, or gambled with a parent were more prone to have similar gambling attitudes and behaviour as their parent. This may also be the case for those who have had such encounters with other family members.

Mathias et al. (2009) pointed that the relevance of family relations in drug abusers who were also pathological gamblers was reinforced by the results that the pathological gambling group had more severe family problems in ASI and by the fact that a higher proportion of pathological gamblers had reported that their father or mother or both had also a gambling problem. This later fact confirmed the studies of
Toneatto & Brennan (2002) and Carvalho et al. (2005). Black et al. (2003) found that the gambling disorders were significantly more frequent among relatives of pathological gamblers, and Walters (2002) found a heritability of gambling about 16% in a meta-analyses study. One study with twins reported a similarity of gambling behaviour among monozygotic twin pairs, but just in men and games with high potential payoffs, like casino cards, gambling machines, pull-tabs and lotteries (Winters & Rich, 1998). Familial risk for gambling was due to both shared environmental and genetic transmission, and behavioural genetic studies of pathological gamblers have suggested that between 34 and 48% of variation in pathological gambling symptomology were due to genetic factors (Shah et al., 2005).

As per Volberg et al. (2010), evidences from numerous international prevalence studies suggested an association between early exposure to gambling via parental participation and problematic youth involvement, with adolescents and young adult problem gamblers were more likely to have parents that gamble or parents that are problem gamblers themselves. Social learning theories contend that most behaviours were learned through experiencing positive and negative reinforcements or consequences for a particular behaviour. Behaviours were often initially learned by imitating significant models in one’s life (e.g., parents or peers) (Bandura, 1977; Akers, 1985). Akers (1977) has suggested that being associated with individuals who share deviant lifestyles and beliefs, being differentially reinforced for criminal behaviour over conforming behaviour, exposure to deviant models, and personal attitudes favouring criminal activity increased the likelihood of criminal behaviour.

According to Shead et al. (2010) myriad of factors were implicated in the development of gambling problems among children and adolescents. Individual, relationship, community, and societal factors all play a role in the cause and maintenance of youth gambling problems. However, variables at each of these levels cannot be considered in isolation. Rather, all risk factors should be examined in the context of other risk factors that could potentially lead to over-involvement with gambling.

Felsher et al. (2010) suggested that poor care-giving can also contribute to future gambling among youth. In a study of childhood maltreatment and youth gambling, pathological gamblers reported significantly higher emotional and physical
neglect as children when compared with at-risk, social, and non-gamblers. According to the researchers, living in a non nurturing family environment appeared to be an additional risk factor for gambling problems among youth.

According to researches conducted by Neal et al. (2005), Productivity Commission (2010) and Delfabbro (2012), problem gambling was known to affect at least 1–2% of the population at any given time, with significant impacts on individuals, their families and communities.

Casey et al. (2011) examined the predictors of adolescent gambling behaviour in a sample of 436 males and females in the age range of 13–16 years. The biopsychosocial model was used to identify key variables that differentiated between non-gambling and gambling adolescents. Logistic regression found that, as compared to adolescent male non-gamblers, adolescent male gamblers were older, had more conflict in their family, were more likely to have used drugs, and have peers that gamble. Compared to adolescent female non-gamblers, adolescent female gamblers had more attention and thought problems, and scored higher on rule-breaking. For both males and females, religiosity was a protective factor against involvement in gambling. Some of the results were consistent with previous research, while some of the findings of Casey et al.’s study were unique.

Chan and Ohtsuka (2011) interviewed 17 (15 males and 2 females) treatment-seeking Chinese problem gamblers attending a self-help group. Researchers reported that the majority of problem gamblers in Hong Kong had started gambling in their family when they were young, and that problem gamblers developed entrenched gambling habits by young adulthood. Researchers also reported that Chinese problem gamblers often lack attachment to significant others.

According to Suomi et al. (2013) there exists only a small number of empirical studies which investigated the patterns of family violence in problem gambling populations, although some evidence exists that intimate partner violence and child abuse were among the most severe interpersonal correlates of problem gambling. Suomi et al. conducted a large-scale study on the patterns and prevalence of co-occurrence of family violence and problem gambling in Australia, New Zealand and Hong Kong. Researchers screened 120 help-seeking family members of problem gamblers in a range of clinical services for both family violence and problem
gambling. The main results showed that 52.5% reported some form of family violence in the past 12 months (20.0% reported only victimisation, 10.8% reported only perpetration and 21.6% reported both victimisation and perpetration of family violence. Parents, current and ex-partners were most likely to be both perpetrators and victims of family violence). There were no gender differences in reciprocal violence but females were more likely to be only victims and less likely to report no violence in comparison to males. Most of the 32 participants who were interviewed in depth, reported that gambling generally preceded family violence. The findings suggested that perpetration of family violence was more likely to occur as a reaction to deeply-rooted and accumulated anger and mistrust whereas victimisation was an outcome of gambler’s anger brought on by immediate gambling losses and frustration. While multiple and intertwined negative family impacts were likely to occur in the presence of family violence, gambling-related coping strategies were not associated with the presence or absence of family violence.

PERCEIVED HEALTH, PERCEIVED HAPPINESS AND GAMBLING TENDENCIES

Social cognitive models of health behaviour (Health Belief Model, Becker, 1974; Theory of Planned Behaviour, Ajzen, 1991) place importance on the subjective cognitions implicated in behaviour choice.

According to Clayton (1992), adolescents usually fail to consider the potential costs and negative consequences of behaviours’ such as gambling; thereby underestimating the related risks. Thus, in keeping with social cognition theories, an individual’s decision to engage in gambling likely reflects the differential salience of its positive and negative outcomes. What youth expect to gain (i.e., positive expectancies) as well as what they expect to lose (i.e., negative expectancies) from their gambling is likely to play a significant role in their decisions to initiate and maintain their gambling behaviour.

Some researchers have argued that youth engage in potentially risky behaviours, like gambling, primarily because of the perceived benefits (e.g., pleasure, entertainment, excitement, peer approval, and relaxation). Moore and Gullone (1996) conducted a study on 570 school-based adolescents with an aim of assessing adolescents' perceptions of what constitutes risky behaviour and how risky behaviours
and risky judgments were related to each other. Researchers found a consistent pattern of relationships between risk participation and outcome judgment, with perceived pleasantness and likelihood of positive outcomes, and unpleasantness of negative outcomes, strongly associated with behaviour.

A Canadian survey conducted by Turner et al. (1999) on 1002 adults in Ontario analyzed how the general population understood gambling activities. On one hand, gambling was perceived as activities that were exciting and moral; on the other hand, it was perceived as generally addictive and not a good means for socializing.

Studies such as conducted by Jacobs (2000) and Delfabbro et al. (2006a) have found that more positive attitudes were displayed by participants who gambled i.e. youth problem gamblers were more likely to display positive gambling attitudes. Delfabbro and Thrupp (2003) conducted a study on 505 (226 males, 270 females, 9 did not reported their gender) students in 10th, 11th and 12th standard from 6 metropolitan high schools of Australia. Researchers suggested that gambling has been much more strongly influenced by gambling-specific attitudes and behaviours as adolescents have optimistic views about the potential profitability of gambling, and were more likely to have experienced early wins when they first started gambling.

Wood et al. (2004) conducted a study on 996 (549 females, 441 males, 6 unspecified) participants from grades 7th to 11th in the age range from 10–17 years. Results revealed that problem gamblers were more likely to report that they found video games, similar to electronic machine gambling, to promote dissociation and to be arousing and/or relaxing.

The majority of reports (Deverensky & Gupta, 2004; Chalmers & Willoughby, 2006) presented a profile of the problematic gambler: men and young people were more likely to develop a tendency to engage in excessive gambling.

As per Delfabbro et al. (2006) and MORI Social Research Institute (2006), regarding the relations among various socio-demographic factors and beliefs, both male and young populations were more likely to have more favourable beliefs about gambling. These studies have effectively shown that gambling was more popular among male adolescents.

Gillespie et al. (2007) conducted a study on 1010 students (432 males and 581 females) from 7-11 grades (11-18 years old) who resided in Montreal area using The Gambling Expectancy Questionnaire (GEQ; Gillespie et al., 2006) which suggested
that adolescents hold a variety of positive and negative outcome expectancies related to gambling. Significant age, gender, and Diagnostic Statistical Manual-IV-Multiple Response-Juvenile gambling group differences were identified by the researchers on the 5 subscales of Gambling Expectancy Questionnaire (enjoyment/arousal, self-enhancement, money, over-involvement, emotional impact) in the study. Results revealed significant differences between gambling groups on each of the five scales of the Gambling Expectancy Questionnaire which further suggested that gambling outcomes were perceived quite differently by those who gamble excessively, those who gamble responsibly, and those who do not gamble at all. Probable pathological gamblers and at-risk gamblers endorsed items on each of the three positive expectancy scales more highly than social gamblers and non-gamblers. According to Gillespie et al. (2007), participants in the study who gambled excessively, anticipated pleasure and excitement more heavily from gambling (enjoyment/arousal), they were also more likely to expect to feel good about themselves as result of gambling (self-enhancement), and they were more likely to anticipate winning money from gambling participation (money) than those who gambled less excessively or not at all. Results revealed that compared to non-gamblers, social gamblers perceived significantly more enjoyment and arousal as a result of their gambling. Social gamblers also reported financial gains from gambling as being more likely than non-gamblers. In sum, the positive outcomes/benefits of gambling were more salient for adolescents who gambled than for those who did not, likely resulting in their maintenance of this behaviour. Positive outcomes were mostly anticipated by youth who had experienced gambling-related problems. Despite having negative consequences associated with excessive gambling (spending increasing amounts of money to gain excitement, spending more money than planned, chasing losses, lying to family members, truancy, conflict, etc.), problem gamblers continued to expect (and likely perceive) benefits from gambling. Evidently, the benefits of gambling are clear, considerable, and encouraging to these adolescents (Gillespie et al., 2007).

Researchers like Coman et al. (1997) and Blaszczynski (2000) have proposed that negative affect was a potentially important factor in the onset and maintenance of gambling pathology. According to Zuckerman (1999) and Raylu and Oei (2002), individuals suffering from depressive disorders may gamble to relieve negative mood states. In contrast, Cyders and Smith (2008) have proposed that positive affect was important to the development of problem gambling. More specifically, empirical
evidence had suggested that individuals experiencing positive moods engaged more in risky behaviours.

An Australian study conducted by Jackson et al. (2008), using a large, representative sample of 2,766 8th grade adolescents (mean age of 14 years) found negative attitudes towards gambling; in fact, over half of the sample perceived gambling as a waste of time, although nearly half thought gambling was a way to make money. Results revealed that male adolescents and those who gambled in the study displayed more positive attitudes towards gambling. Boys were more likely to believe that gambling was entertaining, a way to make money, has the ability to improve mood, and is acceptable at moderate levels. In contrast, females were more likely to believe that gambling is a waste of time. Findings were consistent with previous studies reporting that boys were more likely to be in favour of gambling, were more likely to endorse perceptions of winning money by gambling, and were less likely to acknowledge the potentially harmful effects of gambling (Wood et al., 2004; MORI Social Research Institute, 2006).

In the study conducted by Inglis and Gmel (2011) on a sample of 2,500 French-speaking general Swiss population, out of which 1,280 were females, results revealed that the sample perceived gambling more positively, supported different ways of less prevention, found specific types of games less dangerous, and attributed less importance to the different addictive behaviours as social problems.

GENDER DIFFERENCES IN GAMBLING TENDENCIES

Volberg (1993), in a telephonic survey of 1,054 Washington State adolescents, found that problem gambling was associated with being male, being older, having a weekly income over $50, and having at least one parent who gambles. Volberg also found that tobacco, alcohol, and drug use were associated with gambling frequency and problem gambling. In another telephonic survey of 702 Minnesota youth, Winters et al. (1993) examined the relationship of demographic and psychosocial variables to problem gambling severity. The results of Winters et al. supported Volberg’s finding such that youth with greater gambling involvement were more likely to be male, regular drug users, have parents who gamble, have a history of delinquency, and have poor academic grades. Winters et al. also found that the family composition, family closeness, personal satisfaction, psychological distress, physical health, signs of eating disorder, employment status, and personal weekly income were
not related to the severity of problem gambling. In two consecutive telephone surveys of Texas youth in 1992 and 1995, Wallisch (1996) found problem gamblers were more likely to be male, younger, from a minority racial/ethnic group, work 10 or more hours per week, have a weekly income of $10 or more, have favourable attitudes towards gambling, expect to make money at gambling, have parents who gamble. Wallisch also notes an increase in gambling problems for girls between 1992 and 1995.

Affective states may differ by gender. Marks and Lesieur (1992) reviewed the literature and concluded that female gamblers differed systematically from male gamblers in relation to manifest psychological distress. In a study of 817 high school students, Gupta and Derevensky (1998a) found that adolescent problem or pathological gamblers exhibited evidence of hyper- or hypo-arousal, greater emotional distress, higher levels of dissociation and higher rates of comorbidity than non-problem gamblers. However, anxiety (hyperarousal) and dissociation emerged as the highest predictors for males and depressed mood, dissociation and use of stimulants were significantly predictive of female problem and pathological gamblers. Similarly, in a study of Gamblers Anonymous (GA) members, Getty et al. (2000) found that Gamblers Anonymous members manifested significantly higher levels of depression than controls, and female Gamblers Anonymous members reported more depression than males.

According to Jacobs (2000) and Stinchfield (2000), gambling has been more popular among males; males have been more likely to gamble and do so more frequently. Males make higher gross wagers and have higher gross winnings, suggesting they were greater risk takers. Stinchfield (2000) conducted a study on a sample of 78,582 males and females Minnesota public school students enrolled in the 9th and 12th grades. Researchers found that the boys’ rate of daily gambling was eight times greater than that of girls’ rate of daily gambling. The activities engaged in most frequently by 9th grade boys were playing cards, betting on games of personal skill, and betting on sports teams; while 12th grade boys played lottery games most frequently. Although girls gamble less often than boys, the most frequently reported activity by 9th grade girls was playing cards and 12th grade girls preferred lottery games. Males in the study were at increased risk for alcohol abuse which was consistent with the previous research by Dickson et al. (2002).
An epidemiological study was performed by Johansson and Gotestam (2003) on a representative sample of 3,237 Norwegian youth population in the age range of 12-18 years (with a response rate of 45.2%). The proportion that never gambled was 17.6% i.e. 570 participant and a majority (57.5%, i.e. 1861 participant) gambled seldom, whereas 24.9% i.e. 806 participant gambled weekly (36.2% of the males and 13.1% of the females). In relation to problematic gambling, the results showed that 1.76% had pathological gambling (2.79% in men and 0.69% in females) and 3.46% "at-risk" gambling. Problematic gambling (pathological gambling plus "at-risk" gambling) was 5.22% (7.82% of the males and 2.52% of the females). The group gambling frequently (at least weekly) was used to calculate pathological gambling and "at-risk" gambling. This resulted in high values, with 7.08% with pathological gambling (7.69% of males and 5.31% of females) and an additional 13.91% with "at-risk" gambling. The DSM-IV, with only 10 questions, gives a conservative estimate of pathological gambling. Slot machines proved the most popular game with 81.8%, followed by football tip (70.8%), Lotto (68.7%) and lotteries (39.4%).

Research conducted by Tavares et al. (2003), with treatment seekers revealed that gender primarily influences the age of onset for gambling and its trajectory. More specifically, women tended to began gambling later than men, but women developed gambling problems more rapidly than men. Women also seek treatment sooner than men. Beyond these differences, gender minimally contributed to game preference or the prevalence, development, and maintenance of pathological gambling beyond that of specific psychosocial factors (e.g., demographics, gambling history, gambling behaviour and consequences, criminality, and comorbidity; LaPlante et al., 2006; Nelson et al., 2006). Although the evidences suggested that gender has been a neurogenetic risk for pathological gambling (Petry et al., 2005; Kessler et al., 2008; Johansson et al., 2009), there were evidences that gender not necessarily moderated gambling behaviour and disordered gambling (LaPlante et al., 2006; Nelson et al., 2006). These findings suggested that gender has been less informative than specific demographic, economic, and health-related factors (e.g., age, gambling background, chemical addictions, socioeconomic status, and family responsibilities) for understanding gambling and problem gambling behaviour.
Slutshe (2006) analysed results from the United States National Epidemiological Survey on Alcohol and Related Conditions and found that the prevalence of treatment-seeking for gambling problems was 15.7% for women and 6.8% for men.

Olason et al. (2006) conducted a study with an aim to estimate gambling participation and problem gambling among 750 (371 girls and 379 boys) Icelandic adolescents in the age range 16-18-years. Researcher estimated the rate of problem gambling with the help of South Oaks Gambling Screen-Revised Adolescents and Diagnostic Statistical Manual-IV-Multiple Response-Juveniles. Results of the study indicated that 96% of adolescents had gambled in their lifetime, 79% at least once in the preceding year and about 10% gamble at least once a week. A psychometric evaluation of the two screening scales revealed satisfactory reliabilities and factor structures for both scales. The Diagnostic Statistical Manual-IV-Multiple Response-Juveniles identified 2% of the participants as problem gamblers while South Oaks Gambling Screen-Revised Adolescents identified 2.7%, and problem gambling was more common among boys than girls.

As per Nelson et al. (2006) and LaPlante et al. (2006), although gender uniquely contributes to gambling patterns, it has been important to note that gambler profiles based on demographic, economic, and health-related factors may be more important in understanding these patterns. One of the most consistently identified factors associated with adolescent problem gambling has been male gender, with many studies suggesting that problem gambling has been at least twice as prevalent amongst males as females (Chalmers & Willoughby 2006; MORI Social Research Institute 2006). In a recent study conducted by Hardoon et al. (2004) in the Canadian province of Ontario, in which 2,336 children and adolescents between the ages of 11 and 19 years were surveyed. Researchers found that males were five times more likely to be classified as probable pathological gamblers and three times more likely to be classified as ‘at-risk’ gamblers than females.

For males, in a study conducted by Gillespie et al. (2007), on 1,013 students (432 males and 581 females) from grades 7-11 (aged 11-18 years) from Montreal and Ottawa area, outcome expectancies were found to be a relatively strong predictor of problem gambling. Male problem gamblers were characterized by greater outcome expectancies of enjoyment/arousal, self-enhancement, money, and over involvement.
than their non-problem gambling counterparts. High scores on these Gambling Expectancy Questionnaire scales indicated problem gambling; the higher an individual scored on these scales, the more likely he was a problem gambler. The percentage of problem gamblers correctly classified by these outcome expectancies was surprisingly high (39%).

Data from five studies using self-reports were merged by Ellenbogen et al. (2007) to explore gender differences in the characteristics of adolescent problem gambling, including comorbidity with other youth problems. The sample consisted of 2,750 male and 2,563 female participants. Male problem gamblers were more likely than females to report signs of psychological difficulties while females were more likely to note behavioural problems as a consequence of their gambling problems. Males and females with severe gambling problems had remarkably similar prevalence rates of depression, substance use and weekly gambling. In the non-problem gambling group, depression was more likely to afflict females whereas substance use and frequent gambling were more prevalent among males. According to the researchers, male problem gamblers tended to be more competitive and concerned with winning and losing, while females were more likely to become problem gamblers out of a need to escape their difficulties. Problem gambling in adolescent females was associated with family problems.

Studies have demonstrated that young people and men were more at risk for problematic gambling (MORI Social Research Institute, 2006; Institut national de la santé et de la recherché médicale (Inserm), 2008).

Desai et al. (2008), made an effort to examine whether the association between psychiatric disorders and past-year gambling problems were stronger in women than men. Data from the National Epidemiological Survey of Alcoholism and Related Disorders (NESARC) of 43,093 individuals was analyzed for the purpose by the researchers. It was revealed that female problem gamblers reported comparably higher rates of mood and anxiety disorders, but comparably lower rates of alcohol/substance abuse and dependence and personality disorders, than their male counterparts. Gender differences were also present in the degree of psychiatric symptomatology at different levels of problem gambling severity.
In a study of middle and high school students by Dickson et al. (2008), males were found to be almost six times more likely than females to be identified as having a gambling problem and twice as likely to be classified as at-risk gamblers, endorsing a number of criteria for gambling problems but not meeting the clinical cut-off for pathological gamblers.

The study conducted by Kristiansen and Frederiksen (2008), on adolescent money gambling in Denmark. 1,180 young Danes aged 16-25 years completed an online questionnaire on their gambling habits including internet gambling. Findings indicated that both gambling at land-based venues and internet gambling among Danish adolescents has been widespread. 58% reported to be engaged in money gambling and 34% reported having gambled on the internet. Researchers found a significant gender gap among internet gamblers, more than twice as many males than females reported regularly internet gambling which was consistent with findings from American Gaming Association (2006). Some significant gender differences were observed in terms of the preferred type of game at land-based venues and chi-square tests were conducted to determine if the observed gender differences were significant for the four most popular games: Males were more likely than females to engage in lotto, football tip and scratch card, Odd set and Casino while female gamblers tend to prefer chance-based gambling activities whereas male gamblers tend to prefer knowledge-based gambling. Compared to non-internet gamblers, internet gamblers were more likely to be males, to play more games and to experience more gambling problems. Overall, males engaged more often in seven specific gambling activities while females were engaged more often in one type of gambling.

A recent Canadian study by Stewart et al. (2008) on community recruited sample of 193 gamblers found that internal, negative reinforcement motives (i.e., to reduce or avoid negative emotions) predicted gambling problems more strongly in women, while external, positive reinforcement motives (i.e. to increase positive emotions) predicted gambling problems more strongly in men. Stereotypically, it has been argued that men were attracted to skill-based activities (e.g., racing, casino games) because they were more likely to gamble for non-emotional or positive emotional reasons such as excitement, social reasons, and financial reasons; while women preferred chance-based activities because they were more likely to gamble to
escape aversive emotions, life problems, trauma, and abuse. It has been on the basis that men have traditionally been referred to as “action” gamblers, while women have been referred to as “escape” gamblers. There has been growing empirical evidences to suggest that gender influences the meaning of gambling and motivations to gamble (Dowling, 2009).

According to Wenzel and Dahl (2009) evidences indicated that more and more women gambled and developed gambling problems and pathological gambling. Research had further indicated that female and male pathological gambling differ in their clinical characteristics. The aim of the study was to do a critical review of the literature concerning clinical characteristics of female pathological gamblers (PGs) compared to males. Researchers searched Medline/PubMed, Embase, PsycInfo, The Cochrane Library, Sociological Abstracts and Gender Studies databases from 1970 to 2007 for clinical issues related to female pathological gamblers. The searches identified 399 abstracts and 28 papers which were included in the review conducted by them. The studies had a high frequency of methodological shortcomings. Wenzel and Dahl (2009) thus, indicated that gender differences exist in demographic characteristics, gambling behaviour and consequences, as well as treatment needs. Researchers concluded that there is strong evidence for a higher co-morbidity of anxiety or mood disorders in female problem gamblers and for a higher comorbidity of alcohol abuse in male problem gamblers. Researchers also stated that escape from emotional distress and problems seemed to be more important as a motivating factor for gambling in female problem gamblers than in males.

As per King et al. (2010), men and women differ in their propensity to gamble; however, whether they differ in the risk factors associated with gambling problems or gambling-related cognitive distortions was unclear. The majority of studies have focused on male gamblers, in part because they were at higher risk than women for developing gambling problems. However, findings have been mixed with regard to gender differences, some finding revealed higher rates of depression and negative emotional states (anxiety, dysthymia) among female problem gamblers than male problem gamblers (Desai & Potenza, 2008) and other studies found no gender differences in mental health measures (Potenza et al., 2006; Ellenbogen et al., 2007). Some researchers have found evidence for gender differences in gambling-related motives and cognitions (Stewart & Zack, 2008).
A study conducted by Kristiansen and Jensen (2014), reported the findings from a national survey on gambling behaviour among Danish primary school children. A questionnaire was administered to 2,223 primary school students ranging in age from 11 to 17 years. The questionnaire contained a South Oaks Gambling Screen- Revised Adolescents and items that measure gambling behaviour, social network and cognitive perceptions. The prevalence of problem gambling was 1.29%, while 4.5% were categorized as at-risk gamblers. The three most frequently reported reasons for gambling were to win money, to have fun and to socialize with family and friends. It was suggested by the researchers that gambling could be linked to a masculine universe and that at-risk gambling behaviour patterns could be part of a normal adolescent life in which gambling serves recreational or leisure purposes. In terms of gender differences and preferred types of games, results revealed that boys were more likely to gamble than were girls, and scratch cards, fruit machines and lotto were among the most popular gambling activities. Findings from the study conducted by Kristiansen and Jensen (2014) supported the findings from Nielsen and Heidemann (2008) and Sørensen et al. (2008). In the two other Danish prevalence studies, boys were more likely than girls to have gambling problems, and youngsters with gambling problems preferred scratch cards, fruit machines and cards (poker).