Childhood Maltreatment and Gambling

An examination of the relationship between childhood maltreatment and gambling in emerging adulthood

By
Preeyam K. Parikh

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Department of Applied Psychology and Human Development
Ontario Institute for Studies in Education
of the University of Toronto

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University of Toronto

Abstract

Although childhood maltreatment has been established as a risk factor for the development of problematic gambling, there are significant omissions in the literature regarding the investigation of mediating mechanisms underlying this etiological relationship. The purpose of the current study was to examine altered self-capacities (i.e., relationship difficulties, identity disturbances, and affect dysregulation) and gambling motives as mediating mechanisms underlying the link between childhood maltreatment and gambling, in a sample of emerging adults recruited from the community. It was hypothesized that childhood maltreatment would lead to impairments in the aforementioned self-capacities, which would subsequently predict greater endorsement of gambling motives. In turn, gambling motives were hypothesized to predict increased gambling frequency and gambling problems. The results revealed a pattern wherein altered self-capacities mediated the relationship between childhood maltreatment and gambling motives. However, gambling motives were not observed to mediate the relationship between altered self-capacities and gambling frequency or gambling problems.
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An examination of the relationship between childhood maltreatment and gambling in emerging adulthood

Harmful gambling is a growing societal issue with 600 000 to 1 million Canadians estimated to struggle with gambling and gambling related problems (Canadian Centre on Substance Abuse, 2009). The rampant growth of the gambling industry has played a significant role in the increased prevalence of gambling and gambling related problems. The increased availability of recent gambling technologies has further contributed to the increased prevalence of harmful gambling, particularly among youth. Studies have consistently shown that the prevalence of pathological gambling in adolescents (4–8%) is higher than the prevalence of pathological gambling in the general adult population (1–3%) (Derevensky, Gupta, & Winters, 2003; National Research Council, 1999). It has also been reported that upwards of 80% of adolescents in both Canada and the United States engaged in gambling in the past year (National Research Council, 1999; Shaffer & Hall, 1996).

Individuals within the transitional developmental period between adolescence and young adulthood are particularly at risk for problem gambling. Indeed, rates of problem gambling are two to four times higher among these 18-24 year olds than in the general population (Canadian Centre on Substance Abuse, 2009) and previous findings indicate that college students have higher rates of lifetime problem and pathological gambling compared to adolescents and older adults (Shaffer & Hall, 1996).

The early initiation of gambling is associated with several risks, including a greater risk of problem gambling during young adulthood (Jacobs, 2000; Winters, Stinchfield, Botzet, & Anderson, 2002) and a greater likelihood of mental health concerns in later life (Burge, Pietrzak, Molina, & Petry, 2004). In addition, problem gambling often leads to personal and familial difficulties, including dysfunctional relationships, physical abuse and
violence, financial pressures, anxiety and depression, substance abuse, and increased suicide risk (Messerlian, Derevensky, & Gupta, 2005). Although, there is a high prevalence of gambling among individuals aged 18-24, few studies have investigated harmful patterns of gambling behaviour during this developmental period.

Huang and Boyer (2007) conducted a national prevalence study, which examined patterns of problem gambling among 5,666 Canadians aged 15-24. They utilized data from the Canadian Community Health Survey, which is a cross-sectional national survey on the mental health and well-being of Canadians over the age of 15. The Canadian Problem Gambling Index (Ferris & Wynne, 2001) was administered to assess problem gambling behaviour and gambling consequences. The results of the study were considered nationally representative, and indicated that 61.25% of Canadian youth aged 15-24 engaged in past year gambling (translating into 3 out of 5 Canadian youth). On average, the study found that 2.22% of 15-24 year olds engaged in problem gambling. Consistent with other findings, Huang and Boyer (2007) confirmed that rates of low-risk and problem gambling in youth were significantly higher than rates of gambling in adults. Furthermore, results from the national prevalence study indicated that rates of gambling behaviour were higher in male youth (65.5%) than female youth (57.02%). The authors concluded that youth, particularly male youth, are at higher risk for gambling and gambling problems than adults.

In formal terms, gambling is defined as the placement of value on an event that has the possibility of resulting in a larger and more beneficial outcome (Petry, 2005). As such, gambling inherently involves an element of risk given that chance/probability governs the outcomes of gambling. Specifically, gambling behaviour involves betting and/or wagering on games and activities, including cards, dice, slot machines, lotteries and instant scratch tickets,
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bingo, dice, roulette, races, and sporting events. Petry (2005) has conceptualized different types of gambling behaviour as occurring along a continuum with increasing levels indicating the degree/severity of gambling involvement and gambling related problems. Level 1 gambling refers to “social” or “recreational” gambling, and describes the gambling patterns of a large number of individuals. Typically, Level 1 gambling is not associated with any significant problems or consequences. This category of gambling encompasses a broad range of gambling activities and gambling frequencies. For instance, some Level 1 gamblers may only wager $1 per year, whereas others may purchase one lottery ticket per day. Other Level 1 gamblers may spend more time and money on gambling by visiting casinos once or twice a month, spending roughly $200 per visit (Petry, 2005). Level 2 gambling involves riskier patterns of gambling behaviour that frequently result in consequences (i.e., gambling problems). This type of gambling may also be referred to as: problem gambling, at-risk gambling, or in-transition gambling. Common gambling related consequences faced by individuals in Level 2 include, feelings of guilt and shame about gambling frequency and gambling amount. In addition, Level 2 gamblers typically accumulate a significant amount of gambling related debt and may subsequently resort to borrowing money from household expenses, family members, or credit cards in order sustain their gambling activities (Petry, 2005). According to the Diagnostic and Statistical Manual of Mental Disorders 4th Edition (DSM-IV-TR; American Psychiatric Association [APA], 2000), Level 2 gambling would be classified as a sub-threshold gambling condition. Level 3 gambling refers to individuals who meet criteria for pathological gambling. This category of gambling behaviour is associated with significant gambling related problems that interfere with an individual’s everyday functioning. Problems that Level 3 gamblers may experience include, spending large
amounts of money on gambling (e.g., entire pay-cheques), jeopardizing important interpersonal relationships due to risky gambling, losing homes and/or jobs due to gambling, and engaging in criminal activity to support gambling behaviour. Alternative terms for Level 3 gambling include: *compulsive gambling* and *disordered gambling* (Petry, 2005). Although there are several terms used to describe issues with gambling in the literature, the present study will use the term problem gambling, which includes individuals who have experienced gambling problems, but may not meet criteria for pathological gambling.

Presently, the DSM-IV classifies pathological gambling (defined as persistent and recurrent maladaptive gambling behaviour, disrupting personal, family or vocational pursuits) as an impulse control disorder (APA, 2000). Five or more of the following symptoms must be endorsed in order to warrant a diagnosis: (a) preoccupation with gambling; (b) need to gamble with increasingly larger amounts of money in order to achieve desired excitement; (c) repeated unsuccessful efforts to control, cut down, or stop gambling; (d) restless or irritable mood when attempting to reduce gambling; (e) engaging in gambling to escape problems or relieve negative mood; (f) after losing money by gambling, often returning to gambling on another occasion to get even, also know as “chasing” lost money; (g) lying to others to conceal extent of gambling involvement; (h) engaging in illegal activities such as forgery, fraud, theft, or embezzlement in order to finance gambling; (i) jeopardizing or losing important relationships, jobs, careers, or educational opportunities due to gambling; (j) reliance on others to provide money to relieve desperate financial situations caused by gambling. Future revisions to the DSM propose to re-classify pathological gambling under the category of Addictions along with substance-use disorders. Furthermore,
pathological gambling will be the only behavioural addiction in the new DSM-V (APA, 2012).

Gambling is widely considered an addictive behaviour given its potential to reach both problematic and pathological levels. However, pathological gambling falls under the category of event-based addictions or behavioural addictions, which are distinguished from substance-based addictions (e.g., alcohol dependence). Furthermore, pathological gambling has been referred to as the “purest addiction” due to the fact that external substances do not enter the biological system (Custer, 1982). A number of complex and interacting etiological factors have been theorized to contribute to the development of problem gambling, including neurobiological and genetic factors, psychological factors, and factors associated with social/family context (Shaffer & Martin, 2011). Recently, childhood maltreatment, which involves disturbances in the early social/familial environment, has been identified as an important risk factor for the development of problem gambling in later life.

**Childhood Maltreatment**

Childhood maltreatment is commonly defined as the abuse or neglect of a child under the age of 18 by a parent, caregiver, or another person in a custodial role. Childhood abuse encompasses physical abuse, sexual abuse, and emotional abuse, and involves acts that cause injury and/or places minors in danger of being harmed. Acts of physical abuse may include hitting, broken bones, or burns; sexual abuse may include acts of incest, touching private parts, or being made to observe sexual acts; and acts of emotional abuse may include belittling or derogatory speech. Childhood neglect encompasses both physical neglect and emotional neglect, and involves the failure to provide supervision, attention, affection, food, clothing, shelter, or other basic needs (Child Welfare Information Gateway, 2008).
Childhood neglect is the most prevalent form of child maltreatment, followed in order by physical abuse, sexual abuse, and emotional abuse (National Research Council, 1993). Emotional abuse is not necessarily less prevalent in the population than other forms of maltreatment, however it tends to appear less prevalent given that it is less frequently reported than other forms of maltreatment.

Childhood maltreatment is a global epidemic with approximately 40 million victims of childhood abuse occurring each year worldwide (WHO, 2001). The prevalence of childhood maltreatment is also high within Canada. Trocmé et al. (2010) conducted a nationwide investigation to determine the incidence of childhood abuse and neglect in Canada. The investigators of this Canadian Incidence Study (CIS) of Reported Child Abuse and Neglect collected and analyzed data from a representative sample of 112 child welfare agencies across Canada in the fall of 2008. The overall sample consisted of 15,980 reported cases of childhood maltreatment, involving children below the age of 16 under investigation by child welfare workers. The study utilized a standardized and comprehensive definition of childhood maltreatment across all jurisdictions, which included 32 forms of childhood maltreatment grouped into five categories of maltreatment: physical abuse, sexual abuse, neglect, emotional maltreatment, and exposure to intimate partner violence. In addition, the investigators evaluated the evidence for each case of reported childhood maltreatment in order to determine whether abuse or neglect had actually occurred utilizing substantiation classifications for childhood maltreatment. According to the results of the CIS, for every 1000 Canadian children, approximately 29 reported cases of childhood maltreatment were investigated and 15 reported cases of childhood maltreatment were substantiated each year. Of the substantiated investigations, 34% involved neglect, 34% involved exposure to
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intimate partner violence, 20% involved physical abuse, 9% involved emotional maltreatment, and 3% involved sexual abuse. However, these numbers underestimate actual annual rates of abuse and neglect, as the study excluded unreported cases of maltreatment, cases only reported to the police, cases screened out before a full investigation was completed, reports made on already open cases, and cases that were investigated only because of concerns about future risk of maltreatment.

The consequences of childhood maltreatment are life-long and involve impairments in social and occupational outcomes as well as disturbances in physical and mental health (WHO, 2010). In particular, the long-term impacts of child abuse and neglect include an array of interrelated behavioural, socio-emotional, and neuro-cognitive consequences. Physical consequences that involve damage to the developing brain can result in pervasive psychological problems, including cognitive delays or emotional difficulties. In DeBellis’ (2001) work on developmental traumatology, he has found significant neurobiological impacts for childhood maltreatment on the developing brain, including impairments to the regulation of major biological stress response systems. These disturbances in biological stress response systems lead to an increased vulnerability for psychopathology, including symptoms of depression, anxiety, personality disorders, and posttraumatic stress symptoms (DeBellis, 2001).

Several studies have established childhood maltreatment as a risk factor for adverse psychological consequences such as mood disorders. Widom, DuMont, and Czaja (2007) conducted a prospective study to examine the relationship between childhood maltreatment and depression by longitudinally following and assessing participants into young adulthood. Results indicated that in comparison to matched controls, youth with maltreatment histories
were at higher risk for lifetime major depressive disorder in young adulthood. Furthermore, among individuals with lifetime major depressive disorder, significantly more individuals with maltreatment histories met the criteria for at least one other lifetime clinical diagnosis, including, antisocial personality disorder, drug abuse and/or dependence, dysthymia, and posttraumatic stress disorder. Widom (1999) also investigated the extent to which childhood abuse is a risk factor for the development of posttraumatic stress disorder in later life. She also utilized a prospective research design that longitudinally followed maltreated youth into young adulthood, with results indicating that childhood maltreatment victims were at heightened risk for developing a lifetime history of posttraumatic stress disorder compared to control participants. Interestingly, Widom also found that childhood neglect (in addition to childhood physical and sexual abuse) was independently associated with the development of lifetime posttraumatic stress disorder (Widom, 1999).

Using the same sample, Widom, Czaja, and Paris (2009) conducted another prospective study looking at the association between childhood maltreatment and borderline personality disorder in adulthood. Significantly more abused and/or neglected participants met the criteria for a diagnosis of borderline personality disorder than matched control participants. These results suggest that individuals with histories of childhood maltreatment are at increased risk for developing borderline personality disorder (Widom, Czaja, & Paris, 2009), a disorder that is associated with difficulties in emotion regulation. It is important to note, however, that Widom et al. (2009) found that drug abuse, major depressive disorder, and posttraumatic stress disorder were also predictors of borderline personality, and mediated the childhood maltreatment – borderline personality disorder relationship.
The effects of childhood maltreatment on the biological stress response system may also put maltreated individuals at increased risk for engaging in high-risk behaviours, including alcohol and/or substance abuse. According to DeBellis (2001), maladaptive biological stress response systems may contribute to the underdevelopment of the frontal and prefrontal cortex, giving rise to difficulties in self-regulation and subsequently a higher incidence of impulsive behaviours (e.g., alcohol and substance abuse). The link between childhood maltreatment and substance use (particularly alcohol use) is well established, with many studies documenting significant associations between these two variables (see Downs et al., 1996; Simpson & Miller, 2002, Tonmyr et al., 2010 for reviews). Utilizing a longitudinal research design, Lo and Cheng (2009) aimed to provide causal support for the link between childhood maltreatment and the development of substance abuse in young adulthood, following participants from the US National Youth Survey for an average of 10 years. These researchers also investigated whether clinical depression mediated the relationship between maltreatment and later substance use. Overall, they found that childhood physical abuse, but not sexual abuse, was a strong predictor of current substance use and that this relationship was partially mediated by symptoms of depression. Moran, Vuchinich, and Hall (2004) examined the link between four different categories of childhood abuse (physical, sexual, emotional, and both physical and sexual abuse) and three different types substance use (alcohol, tobacco, and illicit drug use) in adolescents. They administered several measures to 2,187 high school students in grades 10-12. The results indicated that all forms of childhood abuse led to increased engagement in alcohol use, tobacco use, and illicit drug use in adolescents. Although emotional abuse contributed to substance use risk, incidences of childhood sexual and physical abuse were more strongly associated with
substance use in adolescents. Two prospective studies conducted by Widom, Mamorstein, and White (2006) and Widom, White, Czaja, and Marmorstein (2007) also indicated that individuals with maltreatment histories are at higher risk for marijuana and licit drug use as well as heavy drinking and alcohol related problems respectively, when followed longitudinally from young adulthood to middle adulthood.

Taken together, current theoretical models highlight childhood maltreatment as a risk factor for engaging in multiple high-risk and impulsive behaviours and the empirical research highlights the significant relationship between a history of childhood maltreatment and substance use in particular. To date, however, when considering the link between child maltreatment and addictive behaviours, there has been a heavy emphasis on substance use, with relatively fewer researchers examining the relationships between childhood maltreatment and other important high-risk behaviours, including gambling. This is surprising given that gambling frequently co-occurs with substance use and is often described as similar to substance use in terms of etiological and bio-psychosocial underpinnings (Petry, 2006; Potenza, 2006).

*Childhood Maltreatment and Gambling*

Consistent with theoretical models of substance use, gambling has been characterized as a way of coping with early childhood trauma and abuse, particularly among women (Lesieur & Blume, 1991). However, with some exceptions, there has been a paucity of research examining the relationship between childhood maltreatment and gambling within the addictions literature. Early research in this area attempted to document the prevalence of childhood maltreatment among individuals struggling with gambling disorders. For instance, Taber, McCormick, and Ramirez (1987) reported that 23% of 44 male pathological gamblers
experienced sexual or physical traumas. Specker, Carlson, Edmonson, and Marcotte (1996) found that 32.5% of 40 pathological gamblers (25 of whom were men) acknowledged sexual or physical abuse. Additionally, Ciarrocchi and Richardson (1989) found that 82% of female and 24% of male gamblers reported childhood abuse. Although these findings are important, they are limited in that they are focused primarily on samples of treatment-seeking males, which may not be representative of all individuals with gambling disorders. Recently, researchers have started to look more broadly at the relationship between child maltreatment and gambling. A study conducted by Jacobs (2002), found that 80% of adult problem gamblers had experienced one or multiple types of childhood maltreatment. Recent studies have also established childhood maltreatment as a risk factor for problem gambling. Large-scale studies by Petry and Steinberg, (2005), Hodgins et al. (2010), and Felsher, Derevensky, and Gupta (2010), further corroborated the link between childhood maltreatment and gambling.

Consistent with prior research, Petry and Steinberg (2005) assessed the prevalence of child maltreatment among 149 pathological gamblers in an outpatient treatment program. The study investigators also aimed to examine gender differences in childhood maltreatment among gamblers. Although all forms of childhood maltreatment were included in the study, it was specifically hypothesized that female pathological gamblers would have higher rates of sexual abuse than male pathological gamblers. The findings indicated that pathological gamblers experienced higher rates of childhood maltreatment than individuals in the general community. Furthermore, increased severity of childhood maltreatment was significantly and independently associated with a lower age of gambling onset and increased severity of gambling problems. Female pathological gamblers also reported experiencing more severe
physical neglect, emotional abuse, and sexual abuse than men. Overall, the study concluded that childhood maltreatment is highly prevalent among pathological gamblers, particularly female pathological gamblers. Although this study provides important information regarding the relationship between child maltreatment and gambling, it is somewhat limited due to the retrospective design and utilization of a gambling treatment sample.

Hodgins et al. (2010) extended the work of Petry and Steinberg (2005) by conducting a large-scale study investigating the link between childhood maltreatment and gambling in a community sample of adult men and women (N = 1,372). The author’s hypothesized that individuals with gambling problems, particularly females, would report higher rates of childhood maltreatment. It was further predicted that childhood maltreatment would predict severity of gambling problems and frequency of gambling. Participants were recruited from the baseline wave of an ongoing longitudinal study of gambling. Items from the Canadian Problem Gambling Index (Ferris & Wynne, 2001) assessed gambling involvement and participants were categorized into non-gambler, non-problem gambler, low risk, moderate risk, and problem gambler categories using the Problem Gambling Severity Index. The results of this study indicated that individuals with gambling problems reported higher levels of childhood maltreatment than individuals without gambling problems. In addition, it was found that higher levels of childhood maltreatment were associated with greater frequency of gambling and greater severity of gambling problems, even when other individual and social factors were controlled (e.g., substance use disorders, family environment, psychological distress, etc.). Hodgins et al. (2010) further established the direct link between childhood maltreatment and gambling behaviour, however the authors highlight that future research should investigate mechanisms that mediate this link.
Felsher et al. (2010) conducted a seminal study that directly investigated the link between childhood maltreatment and gambling among adolescents and young adults. In this study 1,324 adolescent and young adult participants (aged 17-22) completed self-report measures on gambling behaviours, gambling severity, and childhood maltreatment. Criteria from the DSM-IV (American Psychiatric Association, 2000) were used to determine the incidence of pathological gambling among youth and the Gambling Activities Questionnaire (GAQ; Gupta & Derevensky, 1996) was used to measure the types and frequency of multiple forms of gambling during the past 12 months. Participants were placed into four groups based upon their gambling history and severity: Non-Gambler (no gambling during the past year), Social Gambler, At-Risk Gambler, and Pathological Gambler. The results indicated that adolescents and young adults with gambling problems had higher levels of childhood maltreatment in comparison to non-gamblers and social gamblers. Furthermore, pathological gamblers reported that emotional and physical neglect was the most commonly experienced form of maltreatment whereas at-risk gamblers reported that emotional abuse and emotional neglect was the most commonly experienced form of maltreatment. In sum, these findings support the relationship between multiple types of childhood maltreatment and gambling severity in adolescents and young adulthood.

Scherrer et al. (2007) also conducted a large-scale study that examined the relationship between childhood and lifetime traumatic events and gambling in a twin sample. This study analyzed data from twin pairs discordant for gambling in order to determine whether any genetic and/or family environmental factors explain the association between traumatic events and problematic gambling. The authors predicted that childhood traumatic events would be associated with disordered gambling and that genetic and/or family environmental factors
may partly explain the association between exposure to trauma and problematic gambling. The results indicated a linear association between the number of experienced childhood and lifetime traumatic events and severity of gambling problems. After adjustment for covariates, child abuse, child neglect, witnessing someone badly injured or killed, and experiencing physical attack remained significantly associated with pathological gambling. Monozygotic twins had similar histories of traumatic experiences, indicating that the link between trauma and disordered gambling is partially explained by genetic and/or shared family environmental factors.

Kausch et al. (2006) conducted another study with 111 (102 males and 9 females) veterans seeking treatment for severe gambling disorders and found that 64% of gamblers reported a history of emotional abuse, 40.5% reported a history physical abuse, and 24.3% reported a history of sexual abuse, with most of this abuse occurring in childhood.

Despite the observed associations between childhood maltreatment and gambling, there is still a dearth of research in this area, with clear limitations and gaps in the literature. A common limitation of the research to date is the heavy emphasis on utilizing male (and sometimes veteran) treatment-seeking samples, which hinders the generalizability of the findings to females and members of the general community who may also face difficulties with gambling. Many of the studies in this area also focused on adult samples, and fewer examined the link between childhood maltreatment and gambling during earlier developmental phases of risk and instability. Finally, none of the previous studies examined mediating psychological mechanisms underlying the relationship between childhood maltreatment and gambling problems. Although several theorists have highlighted the importance of emotion focused coping as an outcome of childhood maltreatment that may
motivate individuals to engage in risky patterns of gambling (Blaszczynski & Nower, 2002; Jacobs, 1986), empirical examinations of this model are lacking.

*Theoretical Basis for the Development of Problem Gambling*

Inquiry in the area of childhood maltreatment and gambling has strong theoretical underpinnings within the framework of Jacobs’ (1986) General Theory of Addictions. The goal of this general theory is to describe the etiological base and development course of addictive behaviours, utilizing the profile of a compulsive gambler. Jacobs’ (1986) theory postulates that two interrelated predisposing factors contribute to the development and maintenance of an addiction—which is defined as a dependent state, acquired over time, in order relieve stress. These factors include: (a) an abnormal physiological resting state and (b) childhood experiences that produce a deep sense of inadequacy. An abnormal physiological resting state involves chronic and excessive hypo-arousal or hyper-arousal, resulting in addictive patterns to relieve stress. According to Jacobs (1986), not all individuals with abnormal physiological tension/arousal levels are prone to developing an addictive personality syndrome (APS). Childhood experiences also significantly impact the development of addictive behaviours through various psychosocial mechanisms. In particular, early social and developmental experiences during childhood may contribute to feelings of inferiority and rejection by caregivers and/or significant others. As such, the primary reinforcing quality that drives addictive patterns of behaviour, involves the escape from painful realities and enhancement of wish-fulfilling fantasies that foster a sense of success and admiration, similar to dissociative or fugue states (Jacobs, 1982, 1984). Indeed, dissociative states are common to all forms of addiction and the goal of engaging in the addictive behaviour is to achieve an altered state of identity through which individuals can
escape from psychological distress (Gupta & Derevensky, 1998).

According to this model, the onset of an addictive behaviour is triggered by a chance occurrence (or early series of repeated chance occurrences) with the addictive stimulus in the daily encounters of a predisposed individual. From a learning theory perspective, the high level of positive reinforcement produced by the first experience with the addictive stimulus is associated with an increased probability of similar behaviour in the future (Jacobs, 1986). Furthermore, the disparity between the aversive resting state and significant alleviation produced by the addictive behaviour is extremely rewarding, subsequently motivating the predisposed individual to repeat similar experiences. Thus, it is postulated that two important types of behavioural reinforcers combine to maintain the addictive process: (a) positive reinforcement obtained by the memory and expectation of pleasure, and (b) negative reinforcement achieved through the escape from and avoidance of anticipated pain. Accordingly, Jacobs’ (1986) theory highlights emotion regulation (i.e., enhancement of positive emotions and escape from negative emotions) as an important motive for gambling.

Gupta and Derevensky (1998) provided empirical support for Jacobs’ theory and the role of emotion regulation in the maintenance of harmful gambling. These authors aimed to test Jacobs’ (1986) theory by evaluating the factors postulated to contribute to the onset and maintenance of addictive behaviours (i.e., abnormal physiological resting state and the need to escape from psychological distress) in a sample of adolescents. It was predicted that problem and pathological gamblers would demonstrate lower physiological resting state, lower self-concept, higher scores on measures of depression, and report higher levels of negative childhood experiences and dissociation while gambling. It was also expected that problem and pathological gamblers would gamble to escape from chronic states of stress and
depressed mood. A number of surveys assessing frequency and severity of gambling, depression, substance use, physiological arousal, and dissociation were administered to 817 adolescent students. The results provided strong support for Jacobs’ (1986) theory in adolescent gamblers. Adolescent problem and pathological gamblers showed evidence of abnormal physiological resting states, greater emotional distress, and greater levels of dissociation. Gupta and Derevensky (1998) concluded that affect regulation, particularly the need to escape or dissociate from aversive emotional states predicts the severity of gambling behaviour.

Blaszczynski and Nower (2002) have also advanced a theoretical framework attempting to integrate the biological, personality, developmental, cognitive, learning theory, and environmental factors contributing to problematic gambling. Specifically, these authors conceptualized the existence of three discrete pathways, each associated with etiological processes, vulnerability factors, and demographic features, that lead to the development of three distinct subgroups of pathological gamblers: the emotionally vulnerable problem gambler, the antisocial impulsivist problem gambler, and the behaviourally conditioned problem gambler. The first theorized subgroup (i.e., the emotionally vulnerable problem gambler) provides support for Jacobs’ (1986) conceptualizations regarding the development of addictive gambling behaviours. It is theorized that individuals in this subgroup gamble to modulate emotional states or meet specific psychological needs. In addition, emotionally vulnerable gamblers present with premorbid anxiety and/or depression, poor coping and problem solving skills, and negative family backgrounds. The antisocial/impulsivist subgroup is postulated to possess biological and psychosocial vulnerabilities that contribute to the development of pathological gambling and other types of psychopathology, such as
Childhood Maltreatment and Gambling: Possible Mediating Mechanisms

Despite research documenting the link between childhood maltreatment and impulsivity, antisocial personality disorder, and comorbid substance abuse. Finally, the behaviorally conditioned problem gamblers are said to fluctuate between regular/heavy and gambling due to conditioning, distorted cognitions about the likelihood of winning, and poor decision making, rather than any premorbid features of psychopathology.

Further support for Jacobs’ (1986) theory is garnered by Polusny and Folette’s (1995) emotional avoidance theory regarding the development of addictive behaviours. This theory described that behavioural strategies are employed in order to temporarily avoid or alleviate aversive internal experiences associated with childhood abuse and neglect. In particular, the emotional avoidance theory involves the unwillingness to experience negative internal events including thoughts, memories, and affective states linked to maltreatment experiences, which lead to the utilization of behavioural strategies aimed to reduce, numb, or alleviate these negative internal experiences. These emotional avoidance behaviours are negatively reinforced by the reduction or suppression of intense affective states stemming from aversive childhood experiences of abuse and neglect. Although these behaviors provide survivors with short-term relief from negative internal experiences, the avoidance of aversive thoughts and feelings associated with childhood maltreatment may lead to the development of coping strategies (e.g., gambling) that interfere with adaptive functioning.

Taken together, the aforementioned theories of gambling highlight emotion regulation (i.e., enhancement of positive affect and escape from negative affect) as an important motive for gambling, and as such elucidate an important potential mediating mechanism underlying the relationship between childhood maltreatment and gambling.

Childhood Maltreatment and Gambling: Possible Mediating Mechanisms

Despite research documenting the link between childhood maltreatment and
gambling, there are gaps in the literature regarding the examination of mediating psychological mechanisms explaining the etiological link between childhood maltreatment and gambling problems. As previously mentioned, childhood maltreatment is associated with adverse consequences, including difficulties in psychological and social functioning. Difficulties in these areas are thought to stem from deficits in interpersonal functioning referred to as altered self-capacities (Briere & Runtz, 2002). Altered self-capacities are postulated to consist of at least 3 distinct but interrelated psychosocial disturbances including: (a) difficulties in accessing and maintaining a stable sense of identity or self (identity disturbance), (b) difficulties in managing and/or tolerating aversive emotional states (affect dysregulation), and (c) difficulties in establishing and maintaining meaningful social and interpersonal relationships (relational disturbance). Studies have indicated that altered self-capacities may be involved with various personality disorders (Gunderson, Zanarini, & Kisiel, 1996) and have been found to correspond to characteristics in individuals with histories of severe childhood abuse and/or neglect (Briere, 1996). Disturbances in self-identity, emotion regulation, and interpersonal relationships have been linked to increased risk for engaging in dysfunctional patterns of behaviour including addictive behaviours (Briere & Gil, 1998; Grilo, et al., 1997). As such, impaired self-capacities may be a mechanism through which childhood maltreatment is associated with high-risk behaviours such as gambling, in later life. In particular, as described above, theorists have focused on the role of emotion dysregulation as a potential mediating mechanism in the relationship between childhood maltreatment and harmful gambling as delineated by Jacobs’ General Theory of Addictions (1986).

Briere and Runtz (2002) validated the existence of impaired self-capacities through
the development of the Inventory of Altered Self-Capacities (IASC) intended to assess disturbances in self-identity, affect regulation, and interpersonal-relatedness. This standardized inventory utilizes seven subscales in order to tap the three self-capacity dimensions: (1) Interpersonal Conflicts (difficulties in maintaining important relationships), (2) Idealization-Disillusionment (cycles of valuing then devaluing people), (3) Abandonment Concerns (fear of interpersonal rejection), (4) Identity Impairment (difficulties in maintaining a sense of self and identity), (5) Susceptibility to Influence (suggestibility and uncritical acceptance of direction or control by others), (6) Affect Dysregulation (difficulties tolerating and/or regulating negative emotions), and (7) Tension Reduction Activities (involvement in distracting external activities as a way to reduce painful internal states). These subscales will be described in further detail in the following sections.

An identity disturbance adversely impacts psychosocial functioning due to the lack of a cohesive sense of self, which impairs internal self-monitoring and self-awareness. A disturbed sense of self-identity may also contribute to decreased access to internal needs, thoughts, feelings, and behaviours; this in turn may lead maltreated individuals to experience emptiness, contradictory thoughts and feelings, suggestibility, the tendency to confuse individual thoughts, feelings, or perspectives with those of others, an inability to set future goals, and confusion about the who they fundamentally are (Kohut, 1977; McCann and Pearlman, 1990). According to attachment and socio-cognitive approaches, the maltreating environment does not provide a secure base from which individuals may develop and explore their environments, which is crucial for developing self-efficacy, self-agency, and independence (Dodge, 2003).

With regards to a relational disturbance, individuals may experience frequent conflict,
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chaos, or emotional turmoil in many interpersonal relationships. These individuals are also generally sensitive to perceived or actual abandonment by others and are predisposed to expect and fear the dissolution of significant relationships and thus struggle with forming and maintaining intimate adult attachments. These interpersonal fears and anxieties often lead individuals with a relational disturbance to engage in behaviours that are likely to threaten or disrupt close relationships, including the tendency to abruptly and dramatically shift their feelings and opinions about significant others from highly positive to highly negative, further contributing to their interpersonal difficulties (Pearlman and Courtois, 2005; Simpson, 1990). Attachment studies indicate that those with maltreatment histories are less able to self-organize and form a coherent approach to relationships (Kim & Cicchetti, 2003; Cicchetti, Rogosch & Toth, 2006).

A disturbance in affect regulation involves frequent experiences of emotional instability or mood swings, challenges with inhibiting the expression of strong affect, and difficulties regulating or terminating dysphoric internal states without externalization (Gratz & Roemer, 2004; Linehan, 1993; van der Kolk, McFarlane, & Weisaeth, 1996). Affect dysregulation also involves the inability to maintain adaptive functioning and goal-directed behaviour due to emotional ups and downs (Elliot, Watson, Goldman, & Greenberg, 2004; Gratz & Roemer, 2004). Within the IASC (Briere & Runtz, 2002), there are two subscales subsumed under affect dysregulation: affect instability assesses the phenomenon of rapidly changing mood and affect skills deficits assesses the underlying deficits involved in affect control, which are postulated to underlie affect dysregulation. Individuals with poor internal affect regulation skills may engage in risky externalizing behaviors (e.g., substance abuse, self-harm, etc.) that function to distract, soothe, numb, and/or reduce internal distress (Allen,
2001; Briere, 2002; DeBellis, 2001). Indeed, the IASC (Briere & Runtz, 2002) includes a scale tapping into tension reduction activities, which assesses the tendency for individuals to engage in potentially dysfunctional externalizing behaviours in order to reduce psychological distress during experiences of aversive internal states. Individuals with histories of childhood maltreatment are particularly likely develop maladaptive patterns of self regulation and emotion regulation, which are likely formed by exposure to unhealthy modeling of the regulation and identification of emotions by caregivers (DeBellis, 2001).

By contrast, adaptive emotion regulation involves the ability to identify and be aware of emotional states. The ability to modulate emotional states rather than suppress or eliminate emotions is also crucial healthy emotion regulation (Gratz & Roemer, 2004). Modulation is achieved through altering the intensity or duration of an emotion rather than changing the discrete emotion that is experienced (Thompson, 1994; Thompson & Calkins, 1996). Adaptive emotional modulation assists in reducing the urgency associated with emotion, enabling the individual to focus on controlling his or her behaviour rather than attempting to control his or her emotional states. This requires the ability to inhibit inappropriate or impulsive behaviors, allowing the individual engage in goal-directed behaviour despite experiencing unpleasant emotional states (Gratz & Roemer, 2004). Overall, emotion regulation is integral to an individual’s general well being and adaptive functioning (Elliot, Watson, Goldman, & Greenberg, 2004).

Briere and Rickards (2007) conducted a study investigating the association between trauma and abuse to disturbed self-capacities, utilizing the IASC. The IASC and other measures of childhood abuse and adult trauma were administered to a sample of 620 individuals from the general population. It was found that maternal (but not paternal)
emotional abuse was associated with higher scores on all seven scales of the IASC, whereas low paternal (but not maternal) emotional support was also linked to elevations on several IASC subscales. In sum, the findings conveyed that childhood emotional and sexual maltreatment were major contributors in the development of disturbed self-capacities in later life.

Disturbed self-capacities, in turn, have been identified to be significant predictors of substance abuse and substance-related consequences. Relevant work in this area has focused on investigating the link between emotion dysregulation and substance use, with trends indicating that individuals engage in alcohol and other drug use in order to regulate their emotions or to escape from emotional pain and distress (Grayson & Nolen-Hoeksema, 2005). This research also support findings from studies utilizing the IASC (Briere & Runtz, 2002), which describe the tendency for emotionally dysregulated individuals to react to painful internal states by engaging in potentially harmful and dysfunctional behaviours that may distract or alleviate internal distress (Briere & Runtz, 2002; Briere & Rickards, 2007).

Given the well-documented interrelationships between childhood maltreatment, emotion dysregulation, and risky behaviours such as substance use, recent research has postulated that the reduction of aversive emotional states may be a mechanism through which childhood maltreatment and substance use are significantly associated (Cicchetti & Toth, 2005). Indeed, previous research has established that psychological motives to escape from negative affect (coping motives) and enhance positive affect (enhancement motives) contribute to alcohol and other drug use (Cooper, 1994; Cooper, Frone, Russell, & Mudar, 1995; Cox & Klinger, 1988). In addition, several studies have indicated that motives are proximal predictors of substance use, which function as a final pathway through which child
maltreatment contributes to substance use and abuse (Goldstein, Flett, & Wekerle, 2010; Grayson & Nolen-Hoeksema, 2005).

With regards to gambling motives, Stewart and Zack (2008) have established both enhancement and coping motives as important predictors of gambling behaviour through the development and psychometric evaluation of the three-dimensional Gambling Motives Questionnaire (GMQ). The rationale for the development of the GMQ was based on the established three-dimensional model for alcohol motives (Cooper, 1994; Stewart, Zack, Collins, Klein, & Fragopoulou, 2008). The GMQ was administered to a large sample of gamblers and principle component analysis revealed three intercorrelated factors tapping into enhancement (to increase positive emotions), coping (to reduce or avoid negative emotions), and social motives (to increase social affiliation) for engaging gambling behaviour. Both enhancement and coping motives were related to increased frequency of gambling, indicating that more frequent gambling occurs in order to regulate emotions and mood states. In addition, both enhancement and coping motives independently predicted gambling problems, suggesting that more severe patterns of gambling behaviour (e.g., pathological gambling) are motivated by the desire to regulate emotions.

In sum, the literature has documented clear links between childhood maltreatment and difficulties with regulating affective states, disturbances in the development of self-identity, and challenges with interpersonal relationships (Briere & Rickards, 2007). It has also been proposed that the negative affect and psychological disturbance stemming from childhood maltreatment and subsequent impairments in psychosocial self-capacities are associated with the motivation to cope with negative affect and/or elevate positive affect (Jacobs, 1986). Furthermore, strategies used to modulate aversive emotions related to childhood
maltreatment and altered self-capacities tend to take form in harmful externalizing behaviours including high-risk gambling (Stewart & Zack, 2008), which ultimately enable maltreated individuals to escape from psychological distress through maladaptive means (Jacobs, 1986).

**Emerging Adulthood**

The psychosocial challenges and high-risk outcomes of childhood maltreatment (e.g., problem gambling) may be exacerbated during a significant developmental period, referred to as emerging adulthood (Arnett, 2004; 2005). The theory of emerging adulthood emanated from growing theoretical acknowledgement of a distinct developmental phase existing independently in between the developmental phases of adolescence and adulthood. The period of emerging adulthood began to develop through observations of increasing delays in marriage and parenthood (partially due to extending years of education for successful entry into the job market and changing societal values about premarital sex), which more frequently take place towards the late twenties. These demographic shifts subsequently created a gap between adolescence (during which many individuals are still residing with their parents) and young adulthood (during which many individuals get married and become parents themselves), thereby establishing emerging adulthood as a discrete developmental phase (Arnett, 2000; 2004; 2007). Emerging adulthood is defined by five key psychosocial features: identity exploration, instability, self-focus, feeling in-between, and exploration of possibilities. Arnett (2005) drew specific theoretical links between difficulties in fulfilling each of the fundamental tasks faced by emerging adults, and heightened risk for engaging in potentially dysfunctional coping behaviours (e.g., problem gambling) during this developmental period. In particular, emerging adults may be at increased risk for engaging in
harmful behaviours when identity explorations result in little consideration of different life alternatives and no commitment to future directions (Marcia, 1966) and when tasks surrounding the formation and maintenance of close and positive interpersonal relationships result in failure (Griffin, Epstein, Botvin & Spoth, 2001; Hawkins, Catalano, & Miller, 1992). As such, the various challenges associated with emerging adulthood give rise to a myriad of aversive emotions as well as potential difficulties with the modulation of these emotions. The psychosocial challenges (e.g., difficulties with identity formation, interpersonal relationships, and emotion regulation) and high-risk outcomes of childhood maltreatment (e.g., problem gambling) may be exacerbated during emerging adulthood due to the unstable and transitional nature of this developmental period (Arnett, 2004; 2005). Indeed, as previously mentioned, rates of problem gambling are two to four times higher among emerging adults compared to other age groups (Canadian Centre on Substance Abuse, 2009; Korn, 2000; Messerlian, Derevensky, & Gupta, 2005).

It is important to examine the relationship between childhood maltreatment and gambling in emerging adulthood, particularly because this developmental phase had been theoretically associated with increased psychosocial disturbances, including relationship difficulties, identity impairments, and affect dysregulation (Arnett 2004; 2005). Altered self-capacities in turn (i.e., difficulties with relationships, identity, and emotion regulation), have been empirically linked with childhood maltreatment (Briere & Rickards, 2007) and emotion regulation has been theoretically linked with problem gambling (Jacobs, 1986). Furthermore, past studies specifically support the relationship between gambling motives for emotion regulation and gambling behaviour (Stewart & Zack, 2008). Taken together, both research and theory lend support for the role that gambling motives and difficulties with interpersonal
relationships, self-identity, and emotion regulation may play as mediating mechanisms in the relationship between childhood maltreatment and gambling, particularly during emerging adulthood (Briere & Rickards, 2007; DeBellis, 2001; Jacobs, 1986).

Summary & Hypotheses

The current study aims to examine the role of altered self-capacities (i.e., difficulties with interpersonal relationships, identity formation, and affect regulation) and gambling motives as mediators of the relationship between childhood maltreatment and gambling in a sample of emerging adults recruited from the community. Based on the reviewed literature, it is hypothesized that increased severity of childhood maltreatment will lead to greater impairments in the three major areas of altered self-capacities (i.e., interpersonal relationships, self-identity, and affect regulation). In turn, difficulties with interpersonal relationships, self-identity, and affect regulation, will predict greater endorsement of gambling motives to cope with negative affect and enhance positive affect. Motives to gamble will subsequently predict increased gambling frequency and gambling problems. Please see figure 1 for a diagrammatic representation of the hypothesized sequential relationships between the key variables currently under investigation.

Figure 1. Diagrammatic representation of the hypothesized sequential relationships between key study variables.
Methods

Participants

Participants were male and female emerging adults between 18 and 24 years of age (M=21.1, SD=1.9) who were recruited from the general community within the province of Ontario. Eligibility criteria for participation in the study included fluency in English, being between the ages of 18-24, and having a valid email address.

The total sample included 182 individuals, however 7 cases were excluded from statistical analyses due to inconsistencies in their responses to the study questionnaire. In addition, only current gamblers (i.e., individuals who engaged in past year gambling) were included in the current study. As such, the final gambling sample included 86 emerging adults (i.e., 49% of the total sample engaged in past year gambling). The gambling sample was composed of 27 males (31.5%), 50 females (58.1%), and 9 individuals who did not specify their gender. All descriptive information refers to the sample of current gamblers.

The majority of the sample (63.3%) was composed of students, with 89.5% of students attending University, 7% attending Community College, and 3.5% enrolled in another type of educational program. In addition, 48.7% of the sample was currently unemployed, whereas 30.8% of individuals were employed full-time and 20.5% of individuals were employed part-time. Demographic items about ethnicity revealed that the gambling sample was 50% White, 16.3% South Asian, 15.1% Chinese, 7% Arab/West Asian, 2.3% Korean, 2.3% South East Asian, 2.3% Filipino, 2.3% Latin American, 2.3% Black, 2.3% South East Asian, 1.2% Aboriginal or First Nation Canadian, and 5.8% “Other”.

Procedure
Data pertaining to the variables under investigation within the current study was drawn from a larger pool of data that was collected via a large-scale community-based study on the relationship between childhood maltreatment and substance use in emerging adulthood. This study utilized an online self-report survey methodology. Participants were recruited through advertisements posted on community websites including: Craigslist, Kijiji, and Facebook, and the University of Toronto “my.utoronto.ca” news and events list. In addition, recruitment posters were advertised in designated posting areas within the University of Toronto campus. Recruitment advertisements were also posted outside of academic settings in areas frequented by young adults within the community (See Appendix A for the sample recruitment advertisement).

The recruitment advertisements provided a study email address, which participants used to contact the research team in order to indicate their interest in completing the survey. After this a member of the research team emailed the interested participant with a secure link to the online self-report survey. Each link was individualized with a unique code so that only the respondent could access that particular survey. Furthermore, participants were assigned an alphanumeric identification code that needed to be entered in order to begin the survey, ensuring the confidentiality and anonymity of their responses (see Appendix C). Once the survey was completed, further attempts to utilize the same unique code were unsuccessful. The first component of the online survey involved the consent form/ information sheet (see Appendix B), which described the purpose, risks and benefits, and procedures of the study, including the approximate length of the survey (i.e., 45 minutes). At the end of the informed consent component, participants had the option to provide their informed consent by clicking a box indicating their awareness of the study requirements and agreement to participate in the
online survey. The first question of the survey asked participants to provide their age and year of birth in order to ensure they met the study’s age criteria of 18 to 24. Individuals who did not meet the age criteria were directed to a screen explaining their ineligibility to participate in the survey (e.g., “I’m sorry, but you do not meet the age requirement for this study”), and were thanked them for their time. Conversely, participants who met eligibility criteria were directed to complete a series of online questionnaires comprising the online self-report survey (see Appendix C). All contact and/or indentifying information (i.e., names, email addresses, etc.) and participants’ survey data were stored separately, connected by the designated alphanumeric identification codes. Upon completion of the survey participants were provided a printable “Resource Sheet” (see Appendix D) with contact information for various community resources in case of any mental health, substance use, and gambling concerns and with the contact information of the Principal Investigator for any direct questions about the study. They were also provided detailed information on how to erase all survey data from their own computers to ensure that other users of the computer could not see that they had been involved in the study. In addition when participants completed the survey, they were given the option to enter their email addresses in a draw to win 1 of 4 online $50 gift certificates from Amazon.ca.

Measures

Participants who agreed to complete the survey and met the age criterion completed a series of questionnaires, which assessed variables including, childhood maltreatment history, gambling frequency and severity, motives to gambling, emotion dysregulation, and demographic information (see Appendix C).

Childhood Maltreatment. Childhood maltreatment was assessed with the Childhood
Trauma Questionnaire – Short Form (CTQ-SF; Bernstein et al., 2003). The CTQ-SF (Bernstein et al., 2003) is a 28-item self-report measure of child maltreatment across five domains: physical abuse (e.g., “People in my family hit me so hard that it left me with bruises or marks”), emotional abuse (e.g., “People in my family said hurtful or insulting things to me”), sexual abuse (e.g., “Someone tried to make me do sexual things or watch sexual things”), physical neglect (e.g., “I didn’t have enough to eat” and “I had to wear dirty clothes”), and emotional neglect (e.g., “I felt loved” – reverse scored). The response options for each item on the CTQ-SF (Bernstein et al., 2003) ranged from 1 (never true) to 5 (very often true). Total scores for each subscale are calculated by summing items within each subscale. The CTQ-SF has demonstrated convergent validity with other measures of childhood experiences trauma (e.g., the childhood trauma interview; Bernstein et al., 2003). With the exception of the physical neglect subscale, all maltreatment subscales demonstrated good internal consistency in the original validation sample: emotional abuse ($\alpha = .87$), physical abuse ($\alpha = .83$), sexual abuse ($\alpha = .92$), emotional neglect ($\alpha = .91$). Internal consistency for physical neglect ($\alpha = .68$) was lower, but still adequate in the original sample.

Gambling Frequency and Gambling Problems. Gambling frequency was assessed with two gambling items adapted from the Ontario Student Drug Use Survey (Adlaf, Paglia-Boak, Beitchman, & Wolfe, 2006). Frequency of gambling was determined by asking participants to indicate the number of times they engaged in various gambling activities during the past 12 months including: buying lottery tickets or betting money on cards, bingo, dice, sports pools, dice, gambling machines, or any games over internet. Next, participants were asked to indicate the largest amount of money they had gambled in the last 12 months.
ranging from $1.00 or less to $200 or more. Gambling problems were assessed with a modified 12-item version of the South Oaks Gambling Screen- Revised for Adolescents (SOGS-RA; Winters, Stinchfield, & Fulkerson, 1993), a self-report instrument, which measured the severity and consequences of gambling. The SOGS-RA asks participants to indicate whether or not (yes/no) they have experienced problems as a result of their gambling during the past 12 months (e.g., “have you borrowed money or stolen something in order to bet or to cover gambling debts?”). The SOGS-RA (Lesieur & Blume, 1987) is typically utilized as a screen tool for identifying problem gambling with cut-off scores of 5 or more indicating probable pathological gambling (Stinchfield, 2002). The SOGS has demonstrated satisfactory reliability and validity in four different samples, including ‘Gamblers Anonymous’ members, university students, psychiatric hospital inpatients, and hospital employees (Stinchfield, 2002). The SOGS-RA also demonstrated good internal consistency in the original sample, with Chronbach’s alpha = 0.80. Additionally, the SOGS-RA significantly discriminated between various categories of gamblers and significantly correlated to continuous measures of gambling frequency and amount of money gambled.

Gambling Motives. Motives for gambling were assessed with the Gambling Motives Questionnaire (GMQ; Stewart & Zack, 2008). This measure evaluates various reasons for engaging in gambling behaviours, including coping with negative emotions (coping motives; e.g., “To forget your worries), motives to enhance positive affect (enhancement motives; e.g., “Because it makes you feel good”), and social reinforcement motives (social motives; e.g., “Because it makes social gatherings more enjoyable”). Participants indicate the frequency with which they gamble for each reason using a 5-point Likert scale, which ranged from 1 (Almost never/Never) to 5 (Almost always/Always). Each GMQ subscale in the original
sample also showed good internal consistency with coefficient alphas greater than .80 for each subscale.

*Altered Self-Capacities.* Altered Self-Capacities were assessed utilizing the Inventory of Altered Self Capacities (IASC; Briere & Runtz, 2002), a 63-item measure of relatedness, identity, and affect regulation. Participants rate each symptom based on frequency of occurrence in the past 6 months, utilizing a 5-point scale ranging from 1 (*Never*) to 5 (*Very Often*). The IASC includes seven scales, which reflect four higher order subscales: Relatedness [Interpersonal conflicts (e.g., “having a lot of ups and downs in your relationship with people”), Idealization-Disillusionment (e.g., “your feelings about people changing quickly from good to bad”), Abandonment Concerns (e.g., “feeling afraid that someone you cared about might leave you”)], Identity [Identity impairment-Self-Awareness (e.g., “feeling like you didn’t know yourself very well”), Identity Impairment-Identity Diffusion (e.g., “losing track of who you are and what you want when you are with other people”), Susceptibility to Influence (e.g., “agreeing with people too easily”)], and Affect Dysregulation [Affect Dysregulation – Affect Skill Deficits (e.g., “having a hard time calming down once you get upset”), Affect Dysregulation- Affect Instability (e.g., “having many ups and downs in your feelings”), and Tension Reduction Activities (e.g., “doing things to stop feeling so much pressure or pain inside”)]. The IASC has demonstrated good reliability and validity in clinical and university samples, with higher scores on the IASC reported among individuals who have experienced interpersonal compared to other forms of trauma. The IASC also demonstrated good internal consistency in the original sample, with alpha coefficients ranging from .78 to .93, with an average scale alpha coefficient of .89.

*Data Analysis*
Summary scores were established for childhood maltreatment, altered self-capacities, and gambling variables. The five subscales for child maltreatment (i.e., physical abuse, sexual abuse, emotional abuse, physical neglect, and emotional neglect) were computed by summing the relevant items for each subscale. All CTQ subscales were transformed into dichotomous variables based on cut-off scores established by Bernstein et al. (2003), which reflect moderate to severe maltreatment (yes/no). The five subscales were then combined to create a total score reflecting the number of types of moderate to severe maltreatment. This score ranges from 0 (no moderate to severe maltreatment) to 5 (experienced all 5 types of moderate to severe maltreatment). This moderate maltreatment score captures multiple types of moderate childhood maltreatment, which has been linked with more adverse outcomes in later life compared to experiencing a single type of maltreatment (Clemmons, Walsh, DeLillo, & Messman-Moore, 2007). As such, the moderate maltreatment variable was used in all subsequent data analysis.

The IASC subscales were computed by summing items comprising each subscale. The gambling frequency variable was created by summing together the number of times participants reported engaging in various types of gambling during the past year.

The gambling motives variables were computed by summing the items relevant to each motive subscale (i.e., Coping, Enhancement and Social). Finally, total number of gambling problems were computed by summing items on the SOGS-RA (Winters, Stinchfield, & Fulkerson, 1993).

Prior to data analysis, all variables were examined for significant violations from normality. The gambling frequency variable was negatively skewed, with the majority of participants reporting low frequency gambling. A log transformation was applied to the
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gambling frequency variable, resulting in a more normal distribution for this variable. In addition, several univariate outliers were identified (scores greater than three standard deviations from the mean) on the gambling frequency variable. Consistent with methods outlined by Tabachnick and Fidell (2007), all outliers were changed to raw scores that were one unit larger than the next largest item. With the exception of the preliminary analysis (i.e., descriptive data), all subsequent analyses using past year gambling frequency utilized the logarithmically transformed variable. With regards to the IASC (Briere & Runtz, 2002), aggregate variables of relatedness (comprised of the interpersonal conflicts, identity impairment, and abandonment concerns subscales), identity (comprised of the identity impairments and susceptibility to influence subscales), and affect control (comprised of the affect dysregulation and tension reduction activities subscales) were created. Averages of the relatedness, identity, and affect control variables were then calculated in order to decrease any overlap between these three variables.

Preliminary analysis involved examining descriptive data for child maltreatment, gambling frequency, altered self-capacities, motives for gambling, and gambling problems. A correlation analysis was then conducted utilizing these same variables of interest. Furthermore, a path analysis was conducted using AMOS (Arbuckle, 2003) to assess various pathways from the total maltreatment variable, to each altered self-capacity (i.e., relatedness, identity, and affect control) to gambling motives (i.e., coping and enhancement), and finally to gambling frequency and gambling problems.

Results

Preliminary Analyses

Descriptive statistics for child maltreatment, altered self-capacities, frequency of past
year gambling, gambling motives, and gambling problems are listed for the total sample, and separately for males and females, in Table 1. Overall, emotional neglect, followed by emotional abuse, and physical neglect were the most frequently reported types of childhood maltreatment experienced by the total sample. With regards to gambling motives, the most frequently endorsed motive for gambling was enhancement, followed by social and coping motives. Males engaged in significantly higher levels of past year gambling than females and engaged in more types of gambling activities. Males also reported significantly higher coping motives for gambling than females. Furthermore, males reported experiencing significantly higher levels of total childhood maltreatment, total types of moderate childhood maltreatment, physical abuse, sexual abuse, and physical neglect than females.

According to cut-off scores developed for the CTQ (Bernstein et al., 2003), 9% of the sample experienced a moderate to severe amount of childhood physical abuse, 7% experienced a moderate to severe amount of childhood sexual abuse, 14% experienced a moderate to severe amount of emotional abuse, 17% experienced a moderate to severe amount of physical neglect, and 13% experienced a moderate to severe amount of emotional neglect. Rates regarding the largest amount of money spent on past year gambling are reported separately for the total sample, males, and females in Table 2.

Bivariate correlations between childhood maltreatment, altered self-capacities, motives for gambling, past year gambling (i.e., gambling frequency and gambling amount), and gambling problems are presented in Table 3. Findings from this analysis indicate that the total types of moderate childhood maltreatment variable was positively and significantly correlated with all forms of altered-self capacities as well as enhancement and coping motives for gambling. The maltreatment variable was also significantly associated with
gambling frequency, total number of different types of gambling, and total number of endorsed gambling problems. In turn, total gambling frequency and gambling problems were significantly associated with coping and enhancement motives. Gambling frequency was also associated with the aggregate IASC variables of relatedness, identity, and affect control. The gambling problems variable however, was only significantly related to the susceptibility to influence variable.

Path Analysis- Models from Childhood Maltreatment to Gambling and Gambling Problems

This set of data analyses examined pathways from the total moderate childhood maltreatment variable, to altered self-capacities (i.e., IASC subscales of relatedness, identity, and affect control) to coping and enhancement motives for gambling engagement, and finally to past year gambling and gambling problems. AMOS version 5.0 (Arbuckle, 2003) was used to provide path coefficients and tests of the overall fit of each of the six models (three models with past year gambling as the outcome variable and three models with gambling problems as the outcome variable). Additionally, an important aspect of the application of path analysis is the assessment of model fit, which is determined by the examination of several fit indices. The chi-square statistic tests whether the path model is a good approximation of the observed data, however it is sensitive to sample size wherein larger sample sizes can produce a significant chi-square in situations where the model represents a good fit. Thus, the Root Mean Square Error of Approximation (RMSEA; Steiger and Lind, 1980) and the Comparative Fit Index (CFI; Bentler, 1990) were also calculated for indices of fit. The RMSEA measures the discrepancy between an optimal model with a known population covariance matrix and a hypothesized model with an estimated covariance matrix.
Table 1

*Descriptive Statistics for Childhood Maltreatment, Altered Self-Capacities, Past Year Gambling, and Gambling Motives for the Total Sample, Males, and Females.*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past Year Gambling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Number of Gambling Occasions (frequency)</td>
<td>1.13 (0.49)</td>
<td>1.38 (0.50)</td>
<td>0.96 (12.08)*</td>
</tr>
<tr>
<td>Total Number of Types</td>
<td>4.65 (3.11)</td>
<td>6.40 (3.39)</td>
<td>3.56 (2.23)*</td>
</tr>
<tr>
<td>Total Number of Gambling Problems</td>
<td>2.12 (2.49)</td>
<td>3.13 (2.54)</td>
<td>1.5 (2.32)</td>
</tr>
<tr>
<td>Gambling Motives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhancement</td>
<td>12.41 (6.04)</td>
<td>13.17 (5.33)</td>
<td>11.69 (6.3)</td>
</tr>
<tr>
<td>Coping</td>
<td>8.13 (4.74)</td>
<td>10.33 (5.39)</td>
<td>6.62 (2.90)*</td>
</tr>
<tr>
<td>Social</td>
<td>10.67 (5.37)</td>
<td>11.63 (5.78)</td>
<td>9.88 (4.75)</td>
</tr>
<tr>
<td>Childhood Maltreatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total CTQ Score</td>
<td>40.22 (14.87)</td>
<td>45.34 (18.79)</td>
<td>37.04 (11.66)*</td>
</tr>
<tr>
<td>Total Number of Moderate Types</td>
<td>0.81 (1.27)</td>
<td>1.23 (1.56)</td>
<td>0.56 (1.03)*</td>
</tr>
<tr>
<td>Physical Abuse</td>
<td>7.05 (3.77)</td>
<td>7.96 (5.02)</td>
<td>6.44 (2.74)*</td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>5.92 (3.20)</td>
<td>7.11 (5.02)</td>
<td>5.13 (0.55)*</td>
</tr>
<tr>
<td>Emotional Abuse</td>
<td>9.38 (4.64)</td>
<td>10.15 (5.25)</td>
<td>8.84 (4.26)</td>
</tr>
<tr>
<td>Physical Neglect</td>
<td>7.84 (3.07)</td>
<td>9.27 (3.73)</td>
<td>7.09 (2.43)*</td>
</tr>
<tr>
<td>Emotional Neglect</td>
<td>10.03 (4.32)</td>
<td>10.85 (4.38)</td>
<td>9.53 (4.40)</td>
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<td>Altered Self-Capacities</td>
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<td>62.77 (18.80)</td>
<td>66.56 (20.72)</td>
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<tr>
<td>Abandonment Concerns</td>
<td>63.96 (18.23)</td>
<td>65.44 (19.35)</td>
<td>62.34 (17.34)</td>
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<tr>
<td>Identity Impairment</td>
<td>68.13 (18.38)</td>
<td>68.72 (20.26)</td>
<td>67.36 (17.32)</td>
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<tr>
<td>Susceptibility to Influence</td>
<td>62.21 (18.30)</td>
<td>64.92 (20.39)</td>
<td>59.40 (16.49)</td>
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<tr>
<td>Affect Dysregulation</td>
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<td>65.95 (19.47)</td>
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<td>68.76 (22.31)</td>
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<td>Relatedness</td>
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<td>17.30 (7.73)</td>
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<td>Identity</td>
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<td>Affect Control</td>
<td>17.46 (8.53)</td>
<td>18.34 (8.98)</td>
<td>16.49 (7.76)</td>
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</tbody>
</table>

*Note.* Scores reported for the altered self-capacities subscales are T-scores, except aggregate IASC scores of relatedness, identity, and affect control. *indicates significant gender differences at p < .05.
Table 2

*Largest Amount Spent on Gambling in the Past Year for the Total Sample, Males, and Females.*

<table>
<thead>
<tr>
<th>Amount Spent on Gambling</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
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<tbody>
<tr>
<td>$1 or less</td>
<td>4.2%</td>
<td>0%</td>
<td>2.3%</td>
</tr>
<tr>
<td>$2 to $9</td>
<td>22.5%</td>
<td>4%</td>
<td>34.9%</td>
</tr>
<tr>
<td>$10 to $49</td>
<td>42.3%</td>
<td>52%</td>
<td>37.2%</td>
</tr>
<tr>
<td>$50 to $99</td>
<td>8.5%</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>$100 to $199</td>
<td>11.3%</td>
<td>16%</td>
<td>9.3%</td>
</tr>
<tr>
<td>$200 or more</td>
<td>11.3%</td>
<td>16%</td>
<td>7%</td>
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### Table 3

**Bivariate Correlations between Childhood Maltreatment, Altered Self-Capacities, Motives for Gambling, Past Year Gambling Frequency, and Gambling Problems.**

<table>
<thead>
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</tr>
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</table>

**Note.** TCM = total childhood maltreatment; TMT = total maltreatment types; IC = interpersonal Conflicts; ID = idealization disillusionment; AC = abandonment concerns; II = identity impairment; SI = susceptibility to influence; AD = affect dysregulation; TRA = tension reduction activities; Rel = relatedness; Iden = identity; AC = affect control; EM = enhancement motives; CM = coping motives; GF = gambling frequency; GT = gambling types; GA = gambling amount; GP = gambling problems.

^ correlation that could not be computed because at least one variable was a constant.

^ p < .10 * p < .05. ** p < .01.
The discrepancy is expressed by degree of freedom, and as such the index is sensitive to the complexity of the hypothesized model. Values less than .05 indicate a good fit (Browne & Cudeck, 1993). The CFI is based on a comparison of the hypothesized model against a baseline model, typically the independence model where all correlations equal zero. Values for the CFI range from 0 to 1.00. Values greater than .90 represent a good fit and values greater than .95 reflect an excellent fit. Furthermore, Sobel tests were performed in order to determine the significance of indirect mediation effects between the dependent and independent variables (MacKinnon, Warsi, & Dwyer, 1995).

In order examine the underlying mechanisms in the relationship between childhood maltreatment and gambling, six separate path analyses were conducted, three with past year gambling frequency as the outcome variable and three with gambling problems as the outcome variable. The total moderate childhood maltreatment variable was the predictor variable, followed by either the identity, relatedness, or affect control variables, followed by gambling motives to both cope and enhance, and finally gambling frequency or gambling problems.

*Child maltreatment, relatedness, gambling motives, and gambling frequency.* The first path model examined paths from: 1) child maltreatment to relatedness; 2) relatedness to coping and enhancement motives; and 3) motives to past year gambling frequency. In addition, gender was included as a control variable. As illustrated in Figure 2, child maltreatment was significantly and positively associated with relatedness and relatedness was significantly and positively associated with both enhancement and coping motives. Motives, however, were not associated with gambling frequency. Gender was significantly negatively associated with gambling frequency, with males gambling more frequently. The indirect
effects for relatedness and motives were further examined using the Sobel test. Relatedness significantly mediated the relationship between child maltreatment and enhancement motives ($\beta = .16; Z = 2.23, SE = 0.35, p < .05$) and the relationship between child maltreatment and coping motives ($\beta = .24; Z = 3.22, SE = 0.27, p < .01$). However, enhancement did not significantly mediate the relationship between relatedness and past year gambling ($\beta = .140; Z = 1.44, SE = 0.0026, p = .149$). Additionally, coping did not significantly mediate the relationship between relatedness and past year gambling ($\beta = .140; Z = 1.28, SE = 0.0034, p = .200$).

**Child maltreatment, identity, gambling motives, and gambling frequency.** The second path model examined paths from: 1) child maltreatment to identity; 2) identity to coping and enhancement motives; and 3) gambling motives to gambling frequency in the past year. In addition, gender was included as a control variable. As illustrated in Figure 3, child maltreatment was significantly and positively associated with identity and identity was significantly and positively associated with both enhancement and coping motives. However, motives were not associated with gambling frequency. Gender was significantly negatively associated with gambling frequency, with males gambling more frequently. The indirect effects for identity and motives were further examined using the Sobel test. Identity significantly mediated the relationship between child maltreatment and enhancement motives ($\beta = .208; Z = 2.77, SE = 0.36, p < .01$) and the relationship between child maltreatment and coping motives ($\beta = .271; Z = 3.57, SE = 0.28, p < .001$). However, enhancement did not significantly mediate the relationship between identity and past year gambling frequency ($\beta = .167; Z = 1.62, SE = 0.0032, p = .105$). Coping did not significantly mediate the relationship
between identity and past year gambling frequency ($\beta = .167; Z = 1.30, SE = 0.0040, p = .194$).

*Child maltreatment, affect control, gambling motives, and gambling frequency.* The third path model examined paths from: 1) child maltreatment to affect control; 2) affect control to coping and enhancement motives; and 3) gambling motives to total number of gambling frequency in the past year. In addition, gender was included as a control variable.

As illustrated in Figure 4, child maltreatment was significantly and positively associated with affect control and affect control was significantly and positively associated with coping motives but not enhancement motives. However, gambling motives were not associated with gambling frequency. Gender was significantly negatively associated with gambling frequency, with males reporting more gambling frequency. The indirect effects for affect control and motives were further examined using the Sobel test. Affect control significantly mediated the relationship between child maltreatment and coping motives ($\beta = .233; Z = 3.16, SE = 0.27, p < .001$) and did not significantly mediate the relationship between child maltreatment and enhancement motives ($\beta = .126; Z = 1.75, SE = 0.35, p = .81$).

Furthermore, enhancement did not significantly mediate the relationship between affect control and past year gambling ($\beta = .124; Z = 1.28, SE = 0.0022, p = .200$). Coping did not significantly mediate the relationship between affect control and past year gambling ($\beta = .124; Z = 1.27, SE = 0.0033, p = .202$).

*Child maltreatment, relatedness, gambling motives, and gambling problems.* The fourth path model examined paths from: 1) child maltreatment to relatedness; 2) relatedness to coping and enhancement motives; and 3) gambling motives to total number of gambling problems in the past year. In addition, gender was included as a control variable. As
illustrated in Figure 5, child maltreatment was significantly and positively associated with relatedness and relatedness was significantly and positively associated with both enhancement and coping motives. However, gambling motives were not significantly associated with gambling problems. Furthermore, gender was not significantly associated with gambling problems. The indirect effects for relatedness and motives were further examined using the Sobel test. Relatedness significantly mediated the relationship between child maltreatment and enhancement motives ($\beta = .152; Z = 2.10, SE = 0.34, p < .05$) and significantly mediated the relationship between child maltreatment and coping motives ($\beta = .231; Z = 3.14, SE = 0.27, p < .01$). Enhancement however, did not significantly mediate the relationship between relatedness and gambling problems ($\beta = .155; Z = 1.36, SE = 0.013, p = 0.174$). In addition, coping did not significantly mediate the relationship between relatedness and gambling problems ($\beta = .155; Z = 1.52, SE = 0.018, p = .129$).

*Child maltreatment, identity, gambling motives, and gambling frequency.* The fifth path model examined paths from: 1) child maltreatment to identity; 2) identity to coping and enhancement motives; and 3) gambling motives to total number of gambling problems in the past year. In addition, gender was included as a control variable. As illustrated in Figure 6, child maltreatment was significantly and positively associated with identity and identity was significantly and positively associated with both coping and enhancement motives. However, gambling motives were not significantly associated with gambling problems. Additionally, gender was not significantly associated with gambling problems. The indirect effects for identity and motives were further examined using the Sobel test. Identity significantly mediated the relationship between child maltreatment and enhancement motives ($\beta = .197; Z = 2.61, SE = 0.36, p < .01$) and significantly mediated the relationship between child
maltreatment and coping motives ($\beta = .264; Z = 3.49, SE = 0.28, p < .01$). However, enhancement did not significantly mediate the relationship between identity and gambling problems ($\beta = .182; Z = 1.47, SE = 0.016, p = 0.142$). Coping did not significantly mediate the relationship between identity and gambling problems ($\beta = .182; Z = 1.55, SE = 0.022, p = 0.121$).

*Child maltreatment, identity, gambling motives, and gambling frequency.* The sixth path model examined paths from: 1) child maltreatment to affect control; 2) affect control to coping and enhancement motives; and 3) gambling motives to total number of gambling problems in the past year. In addition, gender was included as a control variable. As illustrated in Figure 7, child maltreatment was significantly and positively associated with affect control and affect control was significantly and positively associated with coping motives. However, affect control was not significantly associated with enhancement motives. In addition, gambling motives were not significantly associated with gambling problems and gender was not significantly associated with gambling problems. The indirect effects for affect control and motives were further examined using the Sobel test. It was found that affect control did not significantly mediate the relationship between child maltreatment and enhancement motives ($\beta = .114; Z = 1.57, SE = 0.34, p = .115$) whereas affect control significantly mediated the relationship between child maltreatment and coping motives ($\beta = .226; Z = 3.07, SE = 0.27, p < .01$). Furthermore, enhancement did not significantly mediate the relationship between affect control and gambling problems ($\beta = .136; Z = 1.18, SE = 0.011, p = .238$). Similarly, coping did not significantly mediate the relationship between affect control and gambling problems ($\beta = .136; Z = 1.51, SE = 0.017, p = .131$).
Model fit

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$c^2$ $(6, N = 86)$</td>
<td>14.5, $p = .025$</td>
</tr>
<tr>
<td>CFI</td>
<td>0.918</td>
</tr>
<tr>
<td>RMSEA</td>
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</tr>
</tbody>
</table>

Figure 2. Path model of associations between childhood maltreatment, relatedness, gambling motives to cope and enhance, and past year gambling frequency.
Model fit

\[ \chi^2 (6, N = 86) = 12.7, p = .049 \]

CFI = 0.938

RMSEA = 0.114

*Figure 3*. Path model of associations between childhood maltreatment, identity, gambling motives to cope and enhance, and past year gambling frequency.
**Model fit**

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$ ($6, N = 86$)</td>
<td>14.9, $p = .021$</td>
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<tr>
<td>CFI</td>
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<tr>
<td>RMSEA</td>
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*Figure 4.* Path model of associations between childhood maltreatment, affect control, gambling motives to cope and enhance, and past year gambling frequency.
Figure 5. Path model of associations between childhood maltreatment, relatedness, gambling motives to cope and enhance, and gambling problems.
Figure 6. Path model of associations between childhood maltreatment, identity, gambling motives to cope and enhance, and gambling problems.

Model fit

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<td>$c^2$</td>
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<tr>
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<tr>
<td>RMSEA</td>
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</table>

$\text{Child Maltreatment} \rightarrow \text{Identity} \rightarrow \text{Coping} \rightarrow \text{Gambling Problems}$

$\text{Identity} \rightarrow \text{Enhancement} \rightarrow \text{Gambling Problems}$

$\text{Gender} \rightarrow \text{Gambling Problems}$
Figure 7. Path model of associations between childhood maltreatment, identity, gambling motives to cope and enhance, and gambling problems.

<table>
<thead>
<tr>
<th>Model fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$c^2 (6, N = 86) = 14.9, p = .021$</td>
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<tr>
<td>CFI = 0.911</td>
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<td>RMSEA = 0.132</td>
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Discussion

The purpose of the current study was to examine potential underlying mechanisms in the link between childhood maltreatment, gambling, and gambling problems in a sample of 86 emerging adults recruited from the community. Specifically, the present study sought to extend previous research in this area by examining whether altered self-capacities (i.e., difficulties with interpersonal relationships, self-identity, and affect regulation) and motives to gamble mediated the relationship between childhood maltreatment and gambling. It was hypothesized that a history of childhood maltreatment would lead to difficulties with interpersonal relationships, self-identity, and emotion regulation, which would subsequently lead to greater endorsement of gambling motives for mood regulation (i.e., enhancement and coping motives). Gambling motives in turn, were hypothesized to predict increased gambling and gambling problems. The findings of the study are discussed here in further detail and are presented in order of analysis (i.e., preliminary analysis and path analysis).

Rates and Gender Differences in Maltreatment, Altered Self-Capacities, Motives, and Gambling

Preliminary analyses involved examining rates and gender differences for the key variables of this study: childhood maltreatment, difficulties with relationships, self-identity, and affect regulation, frequency of past year gambling, gambling motives, and gambling problems. In general, it was observed that the results of this examination were fairly inconsistent with typical findings in the literature regarding rates and gender differences for the key study variables. The current study showed that the mean scores for emotional neglect, followed by emotional abuse and physical neglect were the highest reported experiences of childhood maltreatment, with physical abuse followed by sexual abuse being the lowest
reported forms of maltreatment. Rates of moderate to severe childhood maltreatment followed a somewhat similar pattern. Physical neglect, followed by emotional abuse and emotional neglect were the highest reported rates of moderate to severe maltreatment and physical abuse followed by sexual abuse were the lowest reported rates of moderate to severe maltreatment. These findings are surprising as rates of moderate to severe childhood maltreatment were substantially higher in the current study than in other samples of emerging adults. For example, in a study looking at the relationship between childhood maltreatment and gambling in a sample of 17 to 22 year old students, rates of moderate to severe maltreatment were considerably lower across all five subtypes of childhood maltreatment when compared to present rates of maltreatment (Felsher, et al., 2010). The elevated rates of maltreatment in the current study could be explained by the sole inclusion of past year gamblers in the sample. Previous research has indicated that individuals engaging in gambling behaviours have likely faced greater psychosocial difficulties, including experiences of childhood maltreatment, than individuals in the general population (Hodgins et al., 2010; Petry, 2005). Indeed, participants categorized as at-risk gamblers in the study conducted by Felsher et al. (2010) reported comparable rates of moderate to severe childhood maltreatment as individuals in the present study.

The overall pattern of scores also indicated that men experienced greater levels of childhood maltreatment than women, as men had significantly higher total childhood maltreatment scores and experienced more moderate types of maltreatment compared to women. In addition, men reported experiencing significantly higher levels of physical abuse, physical neglect, and sexual abuse than women. The finding that men reported greater childhood physical abuse and physical neglect has also been reported by other studies.
looking at gamblers (Felsher et al., 2010). However, the higher rates of sexual abuse experienced by males than females is an irregular finding, given that both the general literature and gambling literature typically report higher levels of sexual abuse in females than males (Fehon, Grilo, & Lipschitz, 2001; Felsher et al., 2010; Scher et al., 2001; Simpson & Miller, 2002). In the present study however, males reported significantly higher levels of maltreatment on all sexual abuse items within the CTQ. This pattern of results may be explained by the fact that the sample only included current gamblers and that males reported engaging in more frequent and varied gambling behaviour than females. Thus, the current sample of emerging adults is not necessarily representative of the general population, but instead represents gamblers, with males experiencing more severe gambling and increased rates of childhood maltreatment. Despite the irregularity of finding higher levels of childhood sexual abuse in males, the co-occurrence of heightened childhood maltreatment and gambling within the male sample is consistent with the evidenced link between childhood maltreatment and gambling (Felsher et al., 2010; Hodgins et al., 2010). It is further possible that high scores on sexual abuse items from a few male participants had a larger impact on the mean score for the sexual abuse subscale, due to the smaller sample of males than females in the current study. In fact, the large majority of males in the current sample selected the never true response option for the sexual abuse items on the CTQ, with only a small percentage of males reporting childhood experiences of sexual abuse on these items.

In terms of altered self-capacities, the IASC subscale scores in the current sample were all higher than the original adult standardization sample for the IASC (Briere & Runtz, 2002). The finding that the current sample of 18-24 year olds had higher IASC scores than an adult standardization sample is consistent with the developmental theory of emerging
adulthood. Individuals in the phase of emerging adulthood are theorized to face many challenges with establishing close interpersonal bonds and maintaining a stable sense of self-identity. In addition, difficulties in the psychosocial areas assessed by the IASC may give rise to the experience of intense emotional ups and downs as well as potential difficulties in regulating these emotions. Given the unstable and transitional nature of emerging adulthood, difficulties with identity formation, interpersonal relationships, and emotion regulation tend to be elevated during this developmental period (Arnett, 2004; 2005). The IASC subscale scores in the current sample were also higher than the IASC subscale scores of a university student sample from the same study conducted by Briere and Runtz (2002). This discrepancy in scores could again be accounted for by the fact that the current sample included university students as well as individuals from the community whereas the sample in the Briere and Runtz (2002) study consisted entirely of university students who may face fewer difficulties with relationships, identity, and emotion regulation than emerging adults from the general population. Given that a large proportion of the current sample were also students, a more plausible explanation for the fact that the IASC subscales scores were relatively higher in the present study than in the Briere and Runtz (2002) study, is that the current sample was composed of only current gamblers who tend to experience heightened levels of psychosocial difficulties with regards to self-capacities, particularly during the risky phase of emerging adulthood (Arnett, 2004; 2005).

The current sample endorsed lower levels of coping and enhancement motives than the original validation sample for the GMQ (Stewart & Zack, 2008). However, gambling motives for social reasons were slightly higher in the current sample than the original sample (Stewart & Zack, 2008). The most frequently endorsed motive for gambling was
enhancement, followed by social motives and coping motives. Males also reported significantly higher coping motives for gambling than females. Overall, 49.14% of 18-24 year olds in the current study engaged in past year gambling, which is lower than national prevalence rates of gambling (i.e., 61.25%) for 15-24 year olds (Huang & Boyer, 2007). Lower prevalence of past year gambling in the current study may be explained by the fact that the Huang and Boyer (2007) study assessed a wider age span. In addition, these investigators employed a significantly larger sample size (N= 5,666), rendering their findings more representative of past year gambling rates in the population at large. As noted previously, males engaged in significantly higher levels of past year gambling than females and engaged in more types of gambling activities in the current study, which is a highly consistent and replicated pattern within the research literature (Petry, 2005). Taken together, the preliminary findings revealed a pattern wherein males endorsed significantly higher levels of certain key variables (e.g., childhood maltreatment, coping motives, and past year gambling). This pattern of discrepant scores across genders may have impacted the overall findings in the current study.

**Associations Between Childhood Maltreatment, Altered Self-Capacities, Motives, and Gambling**

Findings from the correlation analysis revealed that there were significant associations between childhood maltreatment, past year gambling frequency, gambling problems, and motives to gamble. These significant associations further establish the relationship between childhood maltreatment and gambling, which has been identified in previous studies (Felsher et al., 2010). However, the current findings represent an extension of previous work and indicate that there is a significant link between childhood maltreatment and the endorsement
of coping and enhancement motives for gambling. Childhood maltreatment was also significantly correlated with difficulties in relatedness, identity, and affect control, which is consistent with previous work by Briere and Rickards (2007), who demonstrated a similar link between childhood maltreatment and altered self-capacities.

As expected, difficulties in relatedness, identity, and affect control were significantly associated with gambling motives and gambling frequency. However, the associations between gambling frequency, relatedness, identity, and affect control in the current study merely approached significance. The finding that affect dysregulation is associated with gambling is consistent with previous literature (Stewart & Zack, 2008; Williams, Grisham, Erksine, & Cassedy, 2012) as well as Jacobs’ (1986) theoretical postulations about the role of affect regulation in the development of addictive gambling behaviour. The demonstrated link between affect dysregulation and gambling motives (to cope with negative affect and enhance positive affect) has not been clearly elucidated in past research (Stewart & Zack, 2008) and as such is an important contribution to the gambling literature.

Further contributions to the existing body of research include the establishment of significant associations between the relatedness and identity IASC variables, gambling motives, and gambling frequency, highlighting the importance of altered self-capacities (beyond affect dysregulation) with regards to gambling behaviour. The above findings are important as they lend support to the developmental theory of emerging adulthood, which suggests that the primary challenges associated with this phase (i.e., difficulties with interpersonal relationships and identity explorations) may increase risk for engaging in addictive behaviours such as problem gambling (Arnett, 2004; 2005). In addition, these findings provide initial validation for the hypothesis that increased psychosocial disturbances
(including difficulties with interpersonal relationships and self-identity) emanating from childhood maltreatment (Briere & Rickards, 2007), play an important role in the development of problem gambling. Difficulties with relationships, self-identity, and affect regulation however, were not significantly associated with gambling problems, which is somewhat surprising given that more severe forms of gambling tend to be associated with greater psychosocial difficulties, namely affect dysregulation (Stewart & Zack, 2008; Williams et al., 2012).

Pathways to Gambling and Gambling Problems

The current study sought to examine the mediating effect of altered self-capacities and gambling motives in the relationship between childhood maltreatment and gambling. Specifically, it was hypothesized that increased severity of childhood maltreatment would lead to greater impairments in three major areas of functioning (i.e., interpersonal relationships, self-identity, and affect regulation). It was further hypothesized that difficulties in these areas, in turn, would be associated with greater endorsement of gambling motives for mood regulation (coping and enhancement motives) and, finally, that these motives would be associated with increased gambling frequency and increased gambling problems.

Overall, findings revealed a general pattern wherein difficulties with relationships, self-identity, and affect regulation significantly mediated the relationship between childhood maltreatment and gambling motives, however gambling motives did not significantly mediate the relationship between the altered self-capacities variables and the gambling variables. It was also found that childhood maltreatment directly predicted the development of disturbances in the areas of self-identity, interpersonal relationships, and affect regulation, which in turn predicted gambling motives to cope with negative affect and enhance positive
affect. Conversely, motives to gamble were not seen to directly predict gambling behaviours or gambling problems.

The current results are inconsistent with past research, which has established a link between emotion regulation reasons for gambling (i.e., gambling motives) and gambling behaviour as well as gambling problems (Stewart & Zack, 2008). Specifically, previous research examining the relationship between gambling motives and gambling behaviour and gambling problems has shown that gambling to cope with negative affect predicts gambling problems regardless of the level of gambling activity or gambling frequency. For enhancement motives, there is a significant relationship between motives and levels of gambling activity and gambling frequency, which in turn predict gambling problems (Stewart & Zack, 2008).

One possible explanation for the pattern of findings involving the effects of gambling motives on gambling outcomes (i.e., gambling frequency and gambling problems) is the influence of significant gender differences, which accounted for a large portion of the variance in past year gambling frequency. In addition, the relatively small sample size in the present study may have diminished the statistical power of the current analyses. Although both coping and enhancement motives were significantly associated with gambling outcomes on an individual level, once other variables were included in the model, these effects were no longer significant. This suggests that the nonsignificant effects are due to an inability to detect effects when additional parameters are added to the model. The standardized path coefficients for the motives were in the hypothesized direction (positive) and in the small range (Cohen, 1988). Overall, the combined influence of significant gender differences on
Another possible explanation for these findings is that factors other than motives to gamble may be more important in mediating the relationship between childhood maltreatment and gambling for emerging adults. This explanation is supported by the generally low endorsement of gambling motives within the current sample in comparison to the standardization sample for the GMQ (Stewart & Zack, 2008). For example, it may be the case that difficulties with interpersonal relationships, self-identity, and affect regulation in and of themselves, have a stronger impact on the development of problem gambling than gambling motives. When psychosocial difficulties are elevated during emerging adulthood, cognitive reasons for gambling may be less important in driving maltreated individuals’ gambling behaviour than the proximal psychological distress arising from difficulties with relationships, identity, and emotion regulation. It is also possible that emerging adults may be less aware of their cognitive reasons for engaging in gambling for mood regulation, explaining the overall low endorsement of gambling motives in the present sample. An important future direction of the current study would be to examine the direct impact of altered-self capacities on gambling and gambling problems in emerging adults with histories of maltreatment.

Despite the nonsignificant effects for gambling motives on gambling outcomes, the finding that difficulties with interpersonal relationships, identity formation, and emotion regulation had significant mediating influences on the relationship between childhood maltreatment and gambling motives is a valuable contribution to the existing research literature. The current sample likely represents a group of individuals who are still early in
their gambling careers. Although most will not go on to develop more severe gambling, a subset of these individuals may continue to engage in gambling and may escalate from regular to pathological gamblers. As a result, the role of gambling motives as a mediating mechanism between increased psychosocial disturbances from childhood maltreatment and gambling outcomes may strengthen over time. Thus, the identification of early intervening variables, including difficulties with interpersonal relationships, identity, and emotion regulation, in the development of gambling behaviour for maltreated emerging adults has important implications for empirical advancement in the area of child maltreatment and gambling as well as for early clinical intervention and prevention strategies in the progression of problem gambling.

With regards to specific findings involving altered self-capacities, with the exception of the relationship between affect control and enhancement motives, all other paths from altered self-capacities to motives were significant. This was true for both direct and indirect effects. This finding is unusual, as difficulties with affect regulation (stemming from childhood maltreatment) are theoretically postulated to lead to risky engagement in gambling in order to elevate levels of positive affect (Jacobs, 1986). One possible explanation for these results is that interpersonal difficulties and identity disturbances are more salient in emerging adulthood than difficulties with affect regulation. Furthermore, interpersonal dysfunction and impaired self-identity may in fact exacerbate difficulties with affect regulation. In turn, the added influence of affect dysregulation on issues with relatedness and identity may more strongly predict the development of enhancement motives. Indeed, levels of IASC variables associated with disturbances in interpersonal relationships and self-identity were somewhat higher than those associated with affect dysregulation in the present sample. The notion that
difficulties with interpersonal relationships and self-identity could heighten affect dysregulation is supported by conceptualizations on altered self-capacities by Briere and Runtz (2002), which suggest that these psychosocial disturbances are all interrelated. Moreover, previous research has confirmed that interpersonal attachment styles influence strategies utilized for emotion regulation (Shaver & Mikulincer, 2002) and that disturbances in self-identity may motivate the up-regulation and down-regulation of emotions (Jansz & Timmers, 2002), further reinforcing the interrelationships between relationship difficulties, identity impairments, and emotion dysregulation.

It is also possible that coping motives are more effective (i.e., accounted for more variance) than enhancement motives with regards to modulating affect for emerging adults, which may explain why the affect control variable did not significantly predict enhancement motives. This finding is consistent with previous research by Stewart et al. (2008), which aimed to subtype gamblers based on affective motivations for gambling. The results of this investigation showed that ‘coping gamblers’ were similar to gamblers characterized by elevated levels of depression and emotional vulnerability, whereas ‘enhancement gamblers’ were similar to gamblers characterized by understimulation, proneness to boredom, and impulsivity. In light of these findings, it likely that difficulties with affect regulation would be more strongly associated with coping motives due to the relative severity of coping gamblers’ psychological distress, which may generally make affect regulation more challenging for individuals who tend to gamble for coping reasons. In comparison, enhancement gamblers’ psychological distress may be relatively less aversive than experiences of depression and emotional vulnerability, given that enhancement gamblers typically present with understimulation. Accordingly, enhancement gamblers may
experiences fewer challenges with affect regulation, potentially explaining the weaker association between affect dysregulation and enhancement coping motives. As mentioned previously, further support for this notion is provided by typical findings in the literature, indicating that gambling motives to cope with negative affect predict gambling problems regardless of the level of gambling activity or gambling frequency (Stewart & Zack, 2008). These findings suggest that coping motives are associated with more maladaptive forms of gambling, as gambling problems tend to be associated with pathological gambling behaviour (Stewart & Zack, 2008). In sum, individuals who gamble for coping reasons may experience more difficulty with affect regulation due to the relative intensity of their psychological distress; thus negative reinforcement (i.e., reduction of negative affect) may play a stronger role in gambling behavior than positive reinforcement (i.e., enhancement of positive affect).

The overall fit of the path models with the data was adequate to good, indicating that the path models were able to explain the relationships in the current data. The chi-squared values for all six path models were significant, suggesting a less than ideal fit. The RMSEA indices for the path models ranged from .114 to .132 indicating an adequate fit, given that RMSEA values should typically be less than .05. However, the CFI indices for the path models ranged from .911 to .938, demonstrating good fit of the path models to the data.

Taken together these findings partially support the present hypotheses, as impaired self-capacities and gambling motives somewhat mediated the relationship between childhood maltreatment and gambling. In addition, these findings build on previous research in the area of childhood maltreatment and gambling by addressing significant omissions in the existing literature. Indeed, the current study highlighted the importance of altered self-capacities in mediating the relationship between childhood maltreatment and gambling. This study is the
first to link identity impairments and interpersonal difficulties to engagement in gambling, and further elucidates the role of affect dysregulation in gambling behaviour. As such, the current results provide important contributions to our theoretical understanding of the developmental and psychosocial processes underlying the etiological role that childhood maltreatment plays in risky gambling behaviour during emerging adulthood.

Limitations and Future Directions

Although the current study addresses important omissions in the childhood maltreatment and gambling literature, as with all studies, there were some limitations in the research design. Research limitations of the current study include its relatively small sample size, which was composed only of individuals who reported gambling in the past year. This small sample size may have limited the ability to detect significant effects, resulting in fewer relationships than what may actually exist in the population. In addition, as mentioned previously, the small sample size may have allowed significant gender differences to have more of an effect on the outcome variable (i.e., gambling), thereby decreasing the effect of mediators such as gambling motives on past year gambling frequency and total gambling problems.

Furthermore, an analysis of gender differences in the path models was not conducted, as the sample size for the current study was too small. Considering that gambling motives did not emerge as a significant mediator in the link between altered self-capacities and gambling due to the potential impact of aforementioned limitations (i.e., significant gender differences in key variables), it would be important to analyze path models separately for each gender in order to investigate these variables in a more streamlined manner. Future studies with larger
sample sizes are needed to investigate variations in the direct and indirect effects of the current path models across genders.

The cross-sectional nature of the study is an additional research limitation of the present study. A cross-sectional research design limits the ability to draw causal and directional inferences with regards to the relationships between childhood maltreatment, altered self-capacities, and gambling. Longitudinal data are required to fully understand the etiological development of problem gambling in emerging adulthood. Future directions of this research should conduct these analyses with a larger sample size and should assess these variables in a longitudinal manner. In addition, future longitudinal studies of this nature would aid in elucidating causal, directional, and etiological associations between childhood maltreatment, altered self-capacities, and gambling.

Due to the online nature of the study, the impact of distracting extraneous factors on participants’ pattern of responses is unknown. For example, participants may have been under the influence while completing the survey and/or in a highly distracting environment while responding to the online questionnaire. Indeed, a validity analysis of the data indicated that some participants engaged in random responding, as there were many inconsistencies in the pattern of their responses. As such, it was determined that participants with more than three inconsistencies in their survey responses were removed from the total sample. The use of retrospective reports to measure key study variables is an additional limitation of the current study. The accuracy and validity of retrospective reports are subject to the respondent’s current affective state, memory, social desirability, and so on (Hodgins et al., 2010). Given that many of the questions asked about risky behaviours (e.g., gambling) and sensitive topics (e.g., childhood experiences of abuse and neglect) it is possible that some
participants may not have been entirely truthful in their responses. Limitations of this nature however, are common to most psychological research utilizing survey questionnaires, and certain ethical safeguards such as participants’ anonymity and confidentiality of participants’ survey data are hoped to reduce the influence of such limitations on the findings.

Clinical Implications

The findings of the present study provide important information regarding the relationship between childhood maltreatment and gambling, with implications for gambling prevention and treatment. The present findings highlight the importance of screening for childhood experiences of abuse and/or neglect in individuals receiving treatment for gambling problems. This information would enhance a clinician’s understanding of the etiology and development of gambling problems and would inform the formulation of client-centered strategies for clinical intervention. For example, helping individuals with gambling problems work through traumatic experiences of childhood abuse and/or neglect may alleviate some of the psychosocial issues stemming from the maltreatment, which have been observed to contribute to the development of gambling behaviour for mood regulation in the current study.

As previously mentioned, the present findings indicated that experiences of childhood maltreatment predicted the development of altered self-capacities (i.e., difficulties with relationships, identity disturbances, and affect dysregulation), which subsequently predicted gambling motives to cope with negative affect and enhance positive affect. In light of these findings, clinical interventions should focus on helping individuals work through difficulties associated with interpersonal relationships, self-identity, and emotion regulation. Specifically, clinical interventions could involve teaching clients alternative coping strategies
for dealing with these psychosocial challenges (e.g., adaptive emotion regulation strategies). Treatment strategies might also include a strong focus on psychoeducation about the link between childhood maltreatment and impaired self-capacities, as well as the subsequent tendency to engage in harmful coping strategies such as gambling. These interventions are particularly important for emerging adults with histories of childhood maltreatment, as the current results demonstrated that difficulties with relationships, identity, and emotion regulation tend to be heightened during this developmental period.

In addition, techniques from cognitive-behavioural therapy (CBT) could be utilized to identify and reframe maladaptive cognitions associated with motives to gamble for mood regulation purposes. For example, clinicians could attempt to identify and challenge automatic thoughts related to gambling motives and encourage the rehearsal of adaptive coping self-statements. In conjunction with CBT, clinicians could also use Motivational Interviewing (MI) techniques at the outset of treatment in order to help individuals with gambling problems. This would likely enable clients to enhance their intrinsic motivation for changing their problematic patterns of gambling and would help to resolve any ambivalence about changing these behaviours. A recent randomized control trial investigating the efficacy of CBT and MI for the treatment of both problem and pathological gambling supports the application of these techniques, as both CBT and MI were equally effective in reducing problematic gambling behaviours at a 12-moth follow up session (Carlbring, Jonsson, Josephson, & Forsberg, 2010).

Finally, given the current lack of gambling prevention programs for maltreated youth (Messerlian, Derevensky, & Gupta, 2005), there should be more emphasis on structuring and disseminating educational programs for at-risk youth. These programs should focus on
increasing awareness about the prevalence, risk factors, and negative consequences associated with gambling. Again, these efforts should involve educating at-risk youth about alternative and adaptive strategies for working through any psychosocial challenges they may be facing. With this in mind, it is hoped that findings from the present study will inform and improve current interventions for problem gambling (particularly for emerging adults), with the ultimate goal of improving the lives of maltreated youth.
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Childhood Maltreatment and Gambling

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*Journal of Studies on Alcohol and Drugs, 68*, 317-326.


Appendices
PARTICIPANTS NEEDED FOR RESEARCH STUDY ON

Childhood Maltreatment and Substance Use

If you:
- Currently live in Ontario
- Are between 18 and 24 years old
- Are fluent in written English
- Can provide a valid email address
- Are interested in sharing your experiences to help others

What will I be asked to do?
- Fill out an online survey about personal experiences with childhood maltreatment and substance use
- Survey takes approximately 45 minutes
- Complete the online survey twice, once after contacting us and again in 1 year

Replies to this ad are confidential.

You will have the chance to win 1 of 4 $50 gift certificates from Amazon.ca

To learn more please contact us:
416-978-0702 or project.emerge@utoronto.ca
or scan the QR Code with your smartphone
TO BE PRINTED ON OISE LETTERHEAD

Consent to Participate in a Research Study

The purpose of an informed consent is to ensure that you understand the purpose of the study and the nature of your involvement. The informed consent must provide sufficient information so you have the opportunity to decide if you would like to participate in the study.

Title of Study
The impact of childhood maltreatment on substance use in emerging adulthood:
Development of an integrated theoretical model

Investigators
Abby Goldstein, Ph.D, Principal Investigator, Assistant Professor, University of Toronto
Mallory Campbell, M.A. Candidate, Project Coordinator, University of Toronto
Christine Wekerle, Ph.D., Co-Investigator, Associate Professor, McMaster University
Deborah Goodman, Ph.D, Co-Investigator, Children’s Aid Society of Toronto

Purpose
• You are being asked to agree to participate in a study examining the impact of childhood maltreatment on substance use in emerging adulthood
• The goal of this study is to better understand how childhood maltreatment impacts the use of drugs and alcohol as well as gambling behaviour, during an important developmental period: emerging adulthood
• Emerging adulthood is a period of development from the late teens to early twenties and is a period of risk for substance use and gambling
• By identifying factors of risk and resilience that contribute to the relationship between substance use and gambling during emerging adulthood and childhood maltreatment, we hope to develop better ways of working with youth who have histories of child maltreatment
• We hope that a total of 200 emerging adults will participate.

Procedure
• If you agree to participate in this research study, you will be asked to complete a series of online questionnaires that require you to respond to survey questions using one of the several options provided
• If you agree to participate in this research study, you will also be required to provide a valid e-mail address (telephone number optional) so that the investigators are able to contact you after one year has passed to complete the same online survey again
• The entire survey will take approximately 45 minutes to answer
• You will have the option to enter your e-mail address into a raffle to win 1 of 4 $50 gift certificates from Amazon.ca towards the purchase of books, electronics, music, movies, TV shows, software, video games, etc. for your participation.
• Participation in the study will involve answering questions about:
  o How you deal with your identity, relationships, and emotions
Difficult experiences you may have had while growing up including where applicable, your views about being loved, fed, and emotionally, physically, or sexually abused
- Ways you have coped with challenges (resilience)
- Experiences you may have had with alcohol and drug use as well as gambling

**Right to Refuse**
- Participation is completely voluntary, and you are under no obligation to agree to participate in this study
- You have the right to withdraw from the research at any time without penalty
- You may choose to skip questions you find objectionable for any reason without penalty
- If you choose to withdraw from the study during of the initial or follow-up questionnaire, simply click on the “withdraw” button at the bottom of each screen
- If you choose to withdraw from the study following completion of the initial or follow-up questionnaire, you may contact us with your anonymous ID code which the researchers will then use to locate your data and delete your information from the database

**Risks**
- Although there are no known risks with participating in this study, completing the questionnaires may raise some questions about your substance use or gambling, interpersonal relationships, and/or negative experiences from childhood
- These issues may make some participants feel uncomfortable or upset.
- We will provide you with the contact information for resources that you may access if you would like to discuss any of these issues with a trained mental health professional.

**Benefits**
- By sharing your experiences, you may gain a better understanding of how your childhood experiences have impacted your current functioning
- By sharing your experiences, you will provide us with a better understanding of how childhood experiences impact a person’s functioning in emerging adulthood and how people cope with some difficult challenges
- This information will help us to develop better policies and practices for working with teens and emerging adults who have experiences similar to yours
- You will also receive a list of helpful contacts for future reference

**Compensation**
- You will have the option to enter your e-mail address into a raffle to win 1 of 4 $50 gift certificates from Amazon.ca towards the purchase of books, electronics, music, movies, TV shows, software, video games, etc. for your time in completing the online survey, in appreciation for your assistance with the study
- Each winner will be notified and forwarded their $50 gift certificate from Amazon.ca to the e-mail address provided during the survey

**Confidentiality**
- All information will be kept confidential
• You will not be asked to report your name on any of the questionnaires you complete
• Your first name and e-mail address (and phone number should you choose to provide one) will be stored in a separate database from your survey responses
• All contact information and questionnaire responses will be stored in two separate password-protected databases
• An alphanumeric code is the only potentially identifying piece of information that will link your contact information to your initial survey data. However, only research personnel affiliated with the study will have access to these separate encrypted and password-protected databases and alphanumeric codes.
• Your contact information will be promptly deleted upon completion of the follow-up survey or should you request this to be done by contacting the principal investigator of the study (Dr. Abby Goldstein) directly
• Your name (or other identifying information) will not appear in any reports or presentations that may arise from this study

Other Information
If you are interested in obtaining a brief report of the results, please feel free to contact the research investigators.

Questions
Should you have any questions or concerns about this study, or if any issues arise because of your participation, please feel free to contact the principal investigator:

Dr. Abby Goldstein, Principal Investigator
Department of Adult Education and Counselling Psychology
Ontario Institute for Studies in Education, University of Toronto
252 Bloor Street West, Toronto, Ontario, Canada, M5S 1V6
Tel.: 416-978-0703
E-mail: abbyl.goldstein@utoronto.ca

Should you have any questions about your rights as a research participant, please feel free to contact the Office of Research Ethics at the University of Toronto:

Office of Research Ethics, University of Toronto
Tel: (416) 946-3273
E-mail: ethics.review@utoronto.ca

I have read the above form and understand the conditions of my participation. My participation in this study is voluntary, and if for any reason, at any time, I wish to leave the study I may do so without having to give an explanation and with no penalty whatsoever. I am also aware that the data gathered in this study are confidential and anonymous with respect to my personal identity. I also confirm that I am between 18 and 24 years of age.

Please print this screen if you would like a copy of this page for your own records. Clicking the “I consent” button indicates that you have agreed to participate in this study, including the present survey and 1-year follow-up survey.
Appendix C
Online Questionnaire

**Childhood Maltreatment and Substance Use Survey**

Thank you for your participation. Please enter your ID code exactly as it appeared in the e-mail you used to access this page in the “Login” box below:

Login ID code: ____________

Thank you for logging in to our online survey. The questionnaires in this online survey have a range of questions about experiences in your life. There are no right or wrong answers. Your answers will help us understand emerging adults better. Just answer honestly and remember if there is a question(s) you find too difficult to answer, feel free to skip it.

Thank you for being willing to share your experiences!

☐ Click to withdraw from the research study   ☐ Click to continue with survey
Appendix C
Demographic Items

PERSONAL BACKGROUND

Today’s Date is: ________________
Gender: □ Male  □ Female

Who am I?

1. People sometimes identify themselves by ethnicity or race. Do you consider yourself (please check):
   □ Single race
   □ Bi-racial
   □ Multi-racial (3 or more)

2. Check all the boxes that show how you identify yourself:
   □ Aboriginal or First Nations  Group/Band: ____________________
   □ White
   □ Chinese
   □ Filipino
   □ Latin American
   □ Japanese
   □ Korean
   □ Black (e.g., African, Haitian, Jamaican, Somali)
   □ South Asian (e.g., East Indian, Pakistani, Punjabi, Sri Lankan)
   □ Arab / West Asian (e.g., Armenian, Egyptian, Iranian, Lebanese, Moroccan)
   □ South East Asian (e.g., Cambodian, Indonesian, Laotian, Vietnamese)
   □ Other ____________________________________________

3. a) Your YEAR of Birth: ______ Year

   b) How old are you now? _________

4. Are you currently in school? □ YES  □ NO

5. If yes, what grade level?
   □ Below grade 10
   □ Grade 10
   □ Grade 11
   □ Grade 12
   □ Community College
   □ University
   □ Other: ____________________
6. If you are not currently in school, what is the highest grade you completed?
   - Some elementary school (primary to grade 5)
   - Completed elementary school (completed grade 5)
   - Some middle school (grade 6 to grade 8)
   - Completed middle school (grade 8)
   - Some high school (grade 9 to grade 12)
   - Graduated high school (completed grade 12)
   - General Educational Development (GED)
   - Some community college or some university
   - Graduated community college or university
   - Some graduate school (post university)
   - Completed graduate degree (Master’s, Ph.D., MD)
   - Other: (please describe)____________________

7. Overall, what marks do you usually get in school?
   - A (80% - 100%)
   - B (67% - 79%)
   - C (60% - 66%)
   - D (50% - 59%)
   - Less than D (below 50%)

8. What is your relationship status?
   - Single
   - Married or Common Law
   - Separated
   - Divorced
   - Widowed

9. Are you a parent?  □ YES  □ NO

10. If yes, how many children do you have? _________

11. If yes, how many children are currently living with you? _________

12. What is your sexual orientation/identity?
   - heterosexual (“straight”)  □ gay/lesbian  □ bisexual  □ unsure

13. Have you been pregnant or fathered a child?  □ YES  □ NO  □ Not sure

14. If yes, how many times have you been pregnant or fathered a child? _________

15. What is your current employment status?
   - Employed full-time
   - Employed part-time
   - Unemployed
Who do I live with?

16. Who do you live with? (Please check the following that apply)

☐ With two biological married or common-law parents

☐ With one biological parent and one other parent (e.g. partner of biological parent, step parent)

☐ With one parent only

☐ With other relatives

☐ With adoptive parent(s)

☐ In a group home

☐ With foster parent(s)

☐ On my own or with a friend/spouse/partner

☐ Other living arrangement: (please describe) __________________________________________

17. Have you ever lived independently and then moved back home to live with your parent(s) or foster parent(s)?  ☐ YES  ☐ NO

18. How many people currently live in your home or household?  __________________________

19. How many times have you moved to a different home in the last 5 years?

☐ Never  ☐ Once  ☐ 2 or 3 times

☐ 4 or 5 times  ☐ 6 to 9 times  ☐ 10 times or more

20. How many different places (apartments/houses etc) have you lived in the last 5 years?  _____

Family Income

21. a) In the house / place you lived in most of your life, how would you describe the financial situation?

☐ Well-above average  ☐ Somewhat below average

☐ Somewhat above average  ☐ Well-below average

☐ About average

21. b) In the house / place you lived in most of your life, did your caregivers ☐ Own or ☐ Rent?

What my parents do...

22. Thinking about a father figure who has been most involved in your life, how far did this father figure go in school? (Please check one)

☐ No father figure  ☐ Some High School

☐ Don’t know  ☐ Graduated High School

☐ Some Elementary School  ☐ College or University
23. Most typically, was he: □ employed full-time? □ employed part-time? □ not employed?

24. He worked as a (job title) ____________________ (e.g., teacher, trucker, electrician, etc.)

25. His annual income was ____________ (amount) □ don’t know

26. This father figure is my (relation to you) ____________ (e.g., biological dad, step-dad etc.)

27. Thinking about a mother figure who has been most involved in your life, how far did this mother figure go in school? (Please check one)
   □ No mother figure □ Some High School
   □ Don’t know □ Graduated High School
   □ Some Elementary School □ College or University
Appendix C
Childhood Trauma Questionnaire (CTQ)

These questions ask about some of your experiences growing up as a child. Although these questions are of a personal nature, please try to answer as honestly as you can. For each question, check a numbered column box that best describes how you feel.

<table>
<thead>
<tr>
<th>When I was growing up…</th>
<th>Never True</th>
<th>Rarely True</th>
<th>Sometime True</th>
<th>Often True</th>
<th>Very Often True</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I didn’t have enough to eat.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. I knew that there was someone to take care of me and protect me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. People in my family called me things like “stupid,” “lazy,” or “ugly.”</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. My parents were too drunk or high to take care of the family.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. There was someone in my family who helped me feel that I was important or special.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. I had to wear dirty clothes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. I felt loved.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. I thought that my parents wished I had never been born.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. I got hit so hard by someone in my family that I had to see a doctor or go to the hospital.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Number</td>
<td>Statement</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>--------</td>
<td>---------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>10</td>
<td>There was nothing I wanted to change about my family.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>People in my family hit me so hard that it left me with bruises or marks.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>I was punished with a belt, a board, a cord, or some other hard object.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>People in my family looked out for each other.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>People in my family said hurtful or insulting things to me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>I believe that I was physically abused.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>I had the perfect childhood.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>I got hit or beaten so badly that it was noticed by someone like a teacher, neighbor, or doctor.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>I felt that someone in my family hated me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>People in my family felt close to each other.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Someone tried to touch me in a sexual way, or tried to make me touch them.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Someone threatened to hurt me or tell lies about me unless</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I did something sexual with them.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>22.</td>
<td>I had the best family in the world.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23.</td>
<td>Someone tried to make me do sexual things or watch sexual things.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24.</td>
<td>Someone molested me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>25.</td>
<td>I believe that I was emotionally abused.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26.</td>
<td>There was someone to take me to the doctor if I needed it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27.</td>
<td>I believe that I was sexually abused.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>28.</td>
<td>My family was a source of strength and support.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>29.</td>
<td>I believe that I was neglected.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
The IASC is not available in the public domain and thus the IASC was ordered for the current study. The following is a description of the seven IASC subscales:

**TABLE 1**

<table>
<thead>
<tr>
<th>Inventory of Altered Self-Capacities Scale</th>
<th>What It Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal Conflicts (IC)</td>
<td>Problems in relationships with others and a tendency to be involved in chaotic, emotionally upsetting relationships.</td>
</tr>
<tr>
<td>Idealization-Delusion (ID)</td>
<td>A predisposition to dramatically change one’s opinions about significant others, generally from a very positive view to an equally negative one.</td>
</tr>
<tr>
<td>Abandonment Concerns (AC)</td>
<td>A general sensitivity to perceived or actual abandonment by significant others and the tendency to expect and fear the termination of important relationships.</td>
</tr>
<tr>
<td>Identity Impairment (II)</td>
<td>Difficulties in maintaining a coherent sense of identity and self-awareness across contexts. There are two subscales of the II: Self-awareness (II-S) taps a lack of understanding of oneself and sense of identity, whereas Identity Diffusion (II-D) evaluates the tendency to confuse one’s feelings, thoughts, or perspectives with those of others.</td>
</tr>
<tr>
<td>Susceptibility to Influence (SI)</td>
<td>A proclivity to follow the directions of others without sufficient self-consideration and to accept uncritically others’ statements or assertions.</td>
</tr>
<tr>
<td>Affect Dysregulation (AD)</td>
<td>Problems in affect regulation and control, including mood swings, problems in inhibiting the expression of anger, and inability to easily regulate dysphoric states without externalization. There are two subscales of the AD: Affect Instability (AD-I) taps the actual phenomenon of rapidly changing mood, whereas Affect Skills Deficits (AD-S) assesses the underlying deficits in affect control thought to underlie some affect dysregulation.</td>
</tr>
<tr>
<td>Tension Reduction Activities (TRA)</td>
<td>The tendency to react to painful internal states with externalizing behaviors that—although potentially dysfunctional—distract, soothe, or otherwise reduce internal distress.</td>
</tr>
</tbody>
</table>

Source for Table:

Appendix C
Gambling Frequency

This section is about gambling or betting money. Please answer the questions even if you have never gambled.

Have you ever gambled? (please check one)
☐ Yes    ☐ No

How often (if ever), have you gambled?
_______ times (Enter ‘0’ if you have not done it)

How often (if ever), have you bowled, shot pool, played golf, or some other game of skill for money?
_______ times (Enter ‘0’ if you have not done it)

How often (if ever), have you bet on horses, dogs, or other animals (at OTB, the track, or with a bookie)?
_______ times (Enter ‘0’ if you have not done it)

How often (if ever), have you played the stock and/or commodities market?
_______ times (Enter ‘0’ if you have not done it)
Appendix C
OSDUS Gambling Items

This section is about gambling or betting money. Please answer the questions even if you have never gambled.

1. How often (if ever) in the LAST 12 MONTHS, have you done each of the following? (Enter ‘0’ if you have not done it.)

   a) Played CARDS for money?  
      _______ times
   b) Played BINGO for money?  
      _______ times
   c) Bet money in SPORTS POOLS?  
      _______ times
   d) Bought SPORTS LOTTERY tickets (such as Sports Select or Proline)?  
      _______ times
   e) Bought any other LOTTERY tickets, including instant lottery (such as 6-49, scratch cards, pull-tabs)?  
      _______ times
   f) Bet money on VIDEO GAMBLING MACHINES, SLOT machines, or any other gambling machines?  
      _______ times
   g) Bet money at a CASINO in Ontario?  
      _______ times
   h) Bet money over the INTERNET (on any game)?  
      _______ times
   i) Bet money on POKER over the INTERNET?  
      _______ times
   j) Played DICE for money?  
      _______ times
   k) Bet money in OTHER ways not listed above?  
      _______ times

2. What is the largest amount of money you have gambled at one time in the LAST 12 MONTHS? (Please check one)
   □ $1 or less
   □ $2 to $9
   □ $10 to $49
   □ $50 to $99
   □ $100 to $199
   □ $200 or more
   □ Did not gamble in the last 12 months
   □ Never gambled in lifetime
Appendix C
South Oaks Gambling Screen-Revised for Adolescents (SOGS-RA)

This section is about gambling or betting money. Please answer the questions even if you have never gambled.

1. Has your betting, in the LAST 12 MONTHS, ever caused any problems for you such as arguments with family and friends, or problems at school or work?
   - Yes
   - No
   - Did not gamble in the last 12 months
   - Never gambled in lifetime

2. In the LAST 12 MONTHS, have you ever gambled more than you had planned to?
   - Yes
   - No
   - Did not gamble in the last 12 months
   - Never gambled in lifetime

3. In the LAST 12 MONTHS, has anyone criticized your betting or told you that you had a gambling problem, regardless of whether you thought it was true or not?
   - Yes
   - No
   - Did not gamble in the last 12 months
   - Never gambled in lifetime

4. In the LAST 12 MONTHS, have you had arguments with family or friends because of the money you spend on gambling?
   - Yes
   - No
   - Did not gamble in the last 12 months
   - Never gambled in lifetime

5. In the LAST 12 MONTHS, have you ever skipped or been absent from school or work due to betting activities?
   - Yes
   - No
   - Did not gamble in the last 12 months
   - Never gambled in lifetime

6. In the LAST 12 MONTHS, have you borrowed money or stolen something in order to bet or to cover gambling debts?
   - Yes
   - No
   - Did not gamble in the last 12 months
   - Never gambled in lifetime
7. In the LAST 12 MONTHS have you borrowed money for gambling and not paid it back?
   ☐ Yes
   ☐ No
   ☐ Did not gamble in the last 12 months
   ☐ Never gambled in lifetime

8. In the LAST 12 MONTHS have you gone back to win back money you lost gambling?
   ☐ Yes
   ☐ No
   ☐ Did not gamble in the last 12 months
   ☐ Never gambled in lifetime

9. In the LAST 12 MONTHS have you liked to stop betting but didn’t think you could?
   ☐ Yes
   ☐ No
   ☐ Did not gamble in the last 12 months
   ☐ Never gambled in lifetime

10. In the LAST 12 MONTHS have you told others you were winning at gambling when you weren’t?
    ☐ Yes
    ☐ No
    ☐ Did not gamble in the last 12 months
    ☐ Never gambled in lifetime

11. In the LAST 12 MONTHS have you felt bad about the amount you bet, or what happens when you bet money?
    ☐ Yes
    ☐ No
    ☐ Did not gamble in the last 12 months
    ☐ Never gambled in lifetime

12. In the LAST 12 MONTHS have you hidden signs of gambling from friends or family?
    ☐ Yes
    ☐ No
    ☐ Did not gamble in the last 12 months
    ☐ Never gambled in lifetime
Appendix C
Gambling Motive Questionnaire (GMQ)

The following is a list of reasons people give for gambling. Thinking of all the times you gamble, how often would you say that you gamble for each of the following reasons? Please rate the frequency you think you gamble for the following reasons by checking a numbered column box on the 5-point scale below.

If you have never gambled please check here □ and go on to the next questionnaire.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Almost never/Never</th>
<th>Some of the time</th>
<th>Half of the time</th>
<th>Most of the time</th>
<th>Almost always/Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. As a way to celebrate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. To relax</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Because you like the feeling</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Because it’s what most of your friends do when you get together</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. To forget your worries</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Because it’s exciting</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. To be sociable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Because you feel more self confident or sure of yourself</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. To get a “high” feeling</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. Because it is something you do on special occasions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. Because it helps when you are feeling nervous or depressed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. Because it’s fun</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. Because it makes a social gathering more enjoyable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. To cheer up when you’re in bad mood</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. Because it makes you feel good</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
**Appendix D**
**Resource Sheet**

**Resource Sheet**

**Within Ontario**

**Telephone Helplines**

**ConnexOntario**
Provincial helpline providing free and confidential health information services (including contact information for services and supports within the caller’s community if requested) relating to problems with alcohol, drugs, gambling, and mental health over the phone operating 24 hours a day, 7 days a week

**Tel:**
- Drug and Alcohol Helpline: 1-800-565-8603
- Mental Health Helpline: 1-866-531-2600
- Ontario Problem Gambling Helpline: 1-888-230-3505

**Within the Greater Toronto Area**

**Telephone Helplines**

**Gerstein Crisis Centre Telephone Call Line**
Free, voluntary, and confidential crisis intervention service over the phone and in-person, 24 hours a day, 7 days a week.

**Tel:** 416-929-5200

**Distress Centre Telephone Call Line**
Crisis line offering free services for individuals in distress who require urgent emotional care and for individuals who have been physically or sexually assaulted or who are at risk of being assaulted

**Tel:**
- Distress Centre Central: 416-598-0166
- Distress Centre North York: 416-486-3180
- Distress Centre Scarborough: 416-439-0744
- Distress Centre Peel: 905-278-7208

**Mental Health Service Information Ontario (MHSIO)**
Information about mental health services and supports in communities across Ontario

**Tel:** 1-866-531-2600
Website: www.mhsio.on.ca

Black Youth Helpline
Intake assessment and intervention, case management, counselling and support, referral navigation, and parent support program. Open to all youth with focus on Black youth, their parents and significant others, and particularly at-risk youth. Helpline open 24/7, hours for appointments flexible.
Tel: 416-285-9944
Email: blackyouth@bellnet.ca
Location: 1183 Finch Ave W, Ste 504, Toronto, ON, M3J 2G2 (Keele St and Finch Ave W)
Website: www.blackyouth.ca

Kids Help Phone
For children and young adults (aged 5-20) with a wide variety of concerns, including child abuse Telephone and online counselling, information, and referral, confidential.
Tel: 1-800-668-6868
Email: info@kidshelpphone.ca
Website: www.kidshelpphone.ca

Assaulted Women’s Helpline
Telephone crisis counselling, information and support, referral to emergency shelters, legal information and community services, as well as culturally appropriate resources for abused women, liaison with diverse communities, confidential and anonymous
Tel: Crisis Line - 416-863-0511; Toll free -1-866-863-0511
Website: http://www.awhl.org/

Telehealth Ontario
Registered nurses provide 24 hour telephone information and referral on health related issues: assist callers to make informed decisions about symptoms, treatment and health care, emphasis on disease prevention and health promotion
Tel: 1-866-797-0000
Website: www.health.gov.on.ca

Toronto Rape Crisis Centre: Multicultural Women Against Rape
Crisis intervention and culturally sensitive counselling, support and referral for survivors of rape/sexual assault/incest, support for families and friends of survivors, self help groups for sexually assaulted women
Crisis line: 416-597-8808 (accepts collect calls)
Email: info@trccmwar.ca
Website: www.trccmwar.ca

AIDS & Sexual Health Info Telephone Call Line
Anonymous counselling, information, and referrals on HIV/AIDS care, HIV rapid testing, Sexually Transmitted Infections, women's health issues, birth control, abortion and options, sexual orientation, sexuality and gender issues, harm reduction in drug use and needle exchange programs. Multilingual counsellors are available.  
Tel: 1-800-668-2437 or 416-392-2437

## Mobile Crisis Teams

**The Gerstein Centre**  
Community visits, ten-bed short-stay residence, telephone support  
Tel: 416-929-5200  
Location: Serves city of Toronto  
Website: [http://www.gersteincentre.org/](http://www.gersteincentre.org/)

**The Scarborough Mobile Crisis**  
Community crisis assessment and intervention, mobile crisis team response in the home or other community setting, telephone crisis line  
Tel: 416-495-2891  
Location: Serves East York and Scarborough

**Integrated Community Mental Health Crisis Response Program**  
Continuum of services include mobile crisis intervention, support available in the consumer's home or at meeting place of their choice, telephone access and support available to family members, significant others, and caregivers  
Tel: 416-498-0043  
Location: Serves Etobicoke and North York

## Substance Use Services

**Jean Tweed Centre for Women**  
Programs and services for women with issues related to substance abuse and/or problem gambling  
Tel: 416-255-7359  
Email: info@jeantweed.com  
Location: 215 Evans Avenue, Etobicoke  
Website: [www.jeantweed.com](http://www.jeantweed.com)

**YMCA Substance Abuse Treatment Program**  
Free, confidential, and non-judgmental one-to-one counselling for individuals suffering from substance use addiction ages 14-24  
Tel: 416-504-1710  
Location: 485 Queen Street West, 3rd Floor, Toronto
Website: www.ymcatoronto.org/en/youth/other-support-services/outreach-awareness/index.html

YMCA Youth Gambling Program
Services for ages 15-18 and 19-24 provided. Educational support including curriculum support, risk assessment, signs of problem gambling and other services for ages 15-24
Tel: 416-504-1710 x228; Location: Toronto West
Tel: 416-504-1710 x229; Location: Toronto East
Website: www.ymcatoronto.org/en/youth/other-support-services/outreach-awareness/index.html

Drug and Alcohol Registry of Treatment (DART)
Information and referral to alcohol and drug treatment services in Ontario
Tel: 1-800-565-8603
Website: www.dart.on.ca

Youth Services

Turning Point Youth Services
Mental health, counselling, and support services to at-risk and vulnerable youth 12-24 and their families
Tel: 416-925-9250
Location: 95 Wellesley Street East, Toronto (Wellesley St. E & Jarvis St.)
Website: www.turningpoint.ca

Native Child & Family Services of Toronto – House of Ghesig
Social and recreational activities, traditional dance, addictions counselling, individual and family counselling, case management, support groups, and parenting skills classes for Aboriginal people
Tel: 416-286-9449
Email: info@nativechild.org
Location: 156/156A Galloway Rd, Toronto, ON, M1E 1X2 (Scarborough South: Galloway Rd & Kingston Rd)
Website: www.nativechild.org

Second Base (Scarborough) Youth Shelter
Emergency shelter (capacity 56), meals and clothing for residents, crisis intervention, guidance, help with school problems, finding housing, employment counselling, case management, individual and family counselling for youth 16-21
Tel: (Office Phone/Crisis Phone): 416-261-2733
Email: ptaylor@secondbase.ca
Location: 702 Kennedy Rd, Toronto, ON, M1K 2B5 (Scarborough Central: Kennedy Rd &
Eglinton Ave E)
Website: www.secondbase.ca

**Touchstone Youth Services**
Emergency shelter (capacity 32), crisis counselling, individual counselling, education, health and housing support, recreation, and referrals for homeless youth 16-24
Tel (Office Phone/Crisis Phone): 416-696-6932
Email: info@touchstoneyc.org
Location: 1076 Pape Ave, Toronto, ON, M4K 3W5 (East York: Pape Ave & O'Connor Dr)
Website: www.touchstoneyc.org

**Youth Unlimited**
Counselling, neighbourhood, school and street outreach, young mother's group, case management, life skills, job search skills
Tel (Office Phone/Crisis Phone): 416-383-1477
Email: yu@youthunlimitedgta.com
Location: 50 Gervais Dr, Ste 302, Toronto, ON, M3C 1Z3 (North York East: Don Mills Rd & Eglinton Ave E)
Website: www.touchstoneyc.org

**Regesh Family and Child Services**
Diagnosis and treatment planning, crisis intervention, individual therapy for children, youth and adults, strategies for enriching school performance, child management sessions, aftercare follow-up for youth discharged from residential centres or foster care, parenting courses for teen mothers and families with young children or teens
Tel: 416-495-8832
Email: eschild@regesh.com
Location: 149 Willowdale Ave, Toronto, ON, M2N 4Y5 (North York Central: Yonge St & Sheppard Ave E)
Website: www.regesh.com

**Birchmount Bluffs Neighbourhood Centre**
Information and referral, informal, one-on-one counselling, pre-employment services, access to computers, internet, fax, photocopier, workshops and presentations, leadership programs, arts programs, advocacy, homework club, youth advisory committee, specific programs for males and females
Tel: 416-264-1007
Email: fchristmas@bbnc.ca
Location: 2849 Kingston Rd, Toronto, ON, M1M 1N2 (Scarborough South: Kingston Rd & St Clair Ave E)
Website: www.bbnc.ca
Barbra Schlifer Commemorative Clinic
Women 18 years and over who are survivors of sexual assault, partner assault, incest or child sexual abuse. Individual and group counselling, information and referral to community agencies.
Tel: 416-323-9149
Email: counselling@schliferclinic.com
Location: 489 College St, Ste 503, Toronto, ON, M6G 1A5 (Toronto West: Bathurst St & College St)
Website: www.schliferclinic.com

Bellwood Health Services
Residential, day and outpatient treatment, individual counselling, holistic perspective. Focus on alcohol, drug, gambling, sexual addictions, eating disorders and Post Traumatic Stress Disorder (PTSD)/trauma with addictions, group therapy, methadone tapering and addiction treatment, physical and nutritional health, stress management, relapse prevention, and family services.
Tel: (Office Phone/Crisis Phone): 416-495-0926
Email: info@bellwood.ca
Location: 1020 McNicoll Ave, Toronto, ON, M1W 2J6 (Scarborough North: Victoria Park Ave & McNicoll Ave)
Website: http://www.bellwood.ca/

Sexual Health Clinic - The Talk Shop
Birth control counselling, low cost or free birth control, free condoms, emergency contraceptive pills, STD testing & free treatment, HIV testing, pregnancy testing/counselling & referral, sexuality/relationship counselling
Tel: 416-338-2373
Location: Mel Lastman Square, 5100 Yonge Street (two blocks north of Sheppard Avenue)
By TTC: Take Yonge line subway (exit North York Centre)
Website: http://www.toronto.ca/health/cdc/cdc_clinics/shc.htm

Centre for Addictions and Mental Health
Tel: Generalized Assessment, Triage, and Support Program - 416) 979-6878
    Addiction Assessment - 416) 535-8501 ext. 6128 or 7064
    Toll free - 1-800-463-6273
Email: CAMH_MIC@camh.net
Location: 250 College Street, Toronto (College St. & Spadina Ave.)
Website: www.camh.net
Hospital Emergency Departments

Please call 9-1-1 for medical emergencies and/or if you or someone else is in danger
*Hospital emergency rooms can be called and/or visited if you feel that you are at risk for harming yourself, harming someone else, or if you feel you cannot cope with your current distress.

North York General Hospital
Location: 4001 Leslie Street Toronto, Ontario M2K 1E1 (Leslie St & Sheppard Ave)
Tel: 416-756-6001

St. Michael's Hospital (Psychiatric Emergency Department)
Location: 30 Bond Street, Toronto, Ontario, M5B 1W8 (Yonge St & Queen St)
Tel: 416-864-5346

Toronto Western Hospital
Location: 399 Bathurst St. Toronto, ON, Canada M5T 2S8 (Bathurst St & Dundas St W)
Tel: 416-603-5757

Scarborough General Hospital
Location: 3050 Lawrence Avenue East, Scarborough, Ontario, M1P 2V5 (Lawrence Ave E & McCowan Rd)
Tel: 416-431-8200 ext. 6300

Toronto General Hospital
Location: 200 Elizabeth St. Toronto, ON, M5G 2C4 (College St & University Ave)
Tel: 416-340-3946

York Central Hospital
Location: 10 Trench Street, Richmond Hill, ON L4C 4Z3 (Major MacKenzie Drive, between Bathurst St & Yonge St)
Tel: 905-883-2041