AN EXAMINATION OF THE ROLE OF EMOTION DYSREGULATION AND AFFECT REGULATION MOTIVES IN THE RELATIONSHIP BETWEEN ATTACHMENT AND ALCOHOL USE AND CONSEQUENCES IN EMERGING ADULTS

by

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Abstract

Previous research has found that insecure attachment styles (i.e., anxious and avoidant) are predictive of emotion dysregulation in emerging adulthood (EA; Arnett, 2000; Shaver & Mikulincer, 2007). Further, emotion dysregulation has been linked to alcohol consequences in EA (Dvorak et al., 2014). However, no studies to date have examined the role of drinking motives in the pathway from insecure attachment to alcohol consequences. Participants in the current study were 218 EAs (ages 18-24, \( M = 21.06; SD = 1.90 \), 64.7% female) who completed measures of attachment styles, emotion dysregulation, drinking motives, and alcohol use and consequences. Using path analysis, insecure attachment emerged as a significant predictor of emotion dysregulation. Coping motives better predicted alcohol consequences than alcohol use, and thus emerged as an important marker of alcohol consequences. Results suggest that attachment-focused, emotion regulation strategies might be efficacious treatment targets for clinical interventions aimed at reducing problematic drinking in EA.
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An Examination of the Role of Emotion Dysregulation and Affect Regulation Motives in the Relationship Between Attachment and Alcohol Use and Consequences in Emerging Adulthood

The developmental period from adolescence to adulthood is associated with multiple transitions. Over the past two decades, this period of development has been identified as a critical period of psychological transition and has been named emerging adulthood (EA; Arnett, 2000, 2006). Many emerging adults pursue postsecondary education, which is often associated with changes in living arrangements, academic environments, and friendship networks (Pittman & Richmond, 2008); increased cognitive, emotional, and behavioural distance from parents (Arnett & Taber, 1994); as well as increased participation in high-risk behaviours, such as increased alcohol use (Fromme, Corbin & Kruse, 2008; Read, Wood, Davidoff, McLacken, & Campbell, 2002; White et al., 2006). Findings from the National Institute on Alcohol Abuse and Alcoholism indicate that 4 out of 5 college students drink alcohol and about half of those who drink engage in binge drinking (NIAAA, 2013). The NIAA defines binge drinking as a pattern of drinking that brings blood alcohol concentration to 0.08 g/dL. This typically occurs after 4 drinks for women and 5 drinks for men in about two hours. Research on alcohol consumption among Canadian college students has yielded similar results. For example, the Canadian Campus Survey (2004) found that 85.7% and 77.1% of college students consumed alcohol during the past year and 30 days, respectively (Adlaf, Demers, & Gilksman, 2005). Although these numbers indicate that alcohol use and binge drinking are highly prevalent among emerging adults who are pursuing a post-secondary education, researchers continue to examine and further explore the underlying factors that contribute to alcohol use in EA.

What is Emerging Adulthood?

In the past half century, the transition to adulthood has become elongated. The majority
of young people today choose to prolong their training and education well into their twenties while delaying adult milestones such as marriage and parenthood until their late twenties and early thirties (Arnett, 2005). The transition from adolescence to adulthood is so long that it now constitutes a separate period of the life course (Arnett, 1998, 2000, 2004). EA is described as a developmental phase characterized by instability and exploration that best distinguishes individuals who are between the ages of 18 to 25 years old (Arnett, 2000). The typical experience of an 18-25 year old in western society differs markedly from that of their parents and grandparents at the same age. According to Statistics Canada (2011), the proportion of young adults aged 25 to 29 who were never married rose from about one-quarter of the population (26.0%) in 1981 to close to three-quarters (73.1%) in 2011. In addition, the proportion of 20- to 24-year-olds who lived common-law decreased from 13.1% in 2001 to 11.8% in 2011.

One reason that has been proposed to explain the delay of marriage and parenthood in EA is the increase in number of years that EAs now devote to higher education (Arnett, 2005). More than ever before, young people are pursuing educational, employment, or other objectives beyond those related to being a spouse or partner. About 60% percent of young people enter college after graduating high school (Mogelonsky, 2004) with some students dropping out only to resume their studies at a later time, further postponing adult milestones. Many EAs see the value in furthering their education beyond a 4-year bachelor’s degree and pursue graduate studies. Significantly, most EAs wait until they have finished school before they start seriously considering marriage and parenthood, and for many this means postponing these commitments until at least their mid-twenties (Arnett, 2005). As a result of the postponement of traditional adult roles, the late teens and early twenties have become a time for exploring various possible
life directions, and the majority of EAs delight in this increased and unprecedented time for self-exploration (Hornblower, 1997).

Perhaps unsurprisingly, when individuals ages 18-25 are asked whether they feel they have reached adulthood, most state that they consider themselves to have reached adulthood albeit in a limited sense. In a study that asked participants in their twenties whether they felt they had reached adulthood, the majority answered, "in some respects yes, and in some respects no" (Arnett, 2001; Nelson & Barry, 2005). This finding has been confirmed in many studies and applies to both men and women, across social classes and ethnic groups, and around the world (Arnett & Fishel, 2013). Even in their late 20s and early 30s, nearly one third of participants did not feel their transition to adulthood was complete (Arnett, 2001), reflecting a subjective sense on the part of most EAs that they have left adolescence but have not yet completely entered young adulthood (Arnett, 1994, 1997, 1998).

Arnett (2005) has proposed the following five distinct features of EA: the age of identity exploration, the age of instability, the age of self-focus, the age of feeling in-between, and the age of possibilities. Importantly, Arnett (2007) conceptualized these features not as universal features of EA but as mini-stages that are more common during EA than in other age periods. Furthermore, the five features are not entered and exited discretely, but gradually (Arnett, 2007). The first defining feature of EA is identity exploration, which occurs more frequently in EA than during adolescence (Arnett, 2005). According to Arnett, the role of identity exploration in EA can be seen clearly with respect to two main areas of identity development: love and work (Erikson, 1950, 1968). In adolescence, individuals make initial explorations in love relationships, with most having their first romantic partnerships and sexual experiences during this time (Arnett, 2005). However, it is during EA that individuals begin to ask themselves more seriously
what kind of person they want as their partner long-term, which requires them to know who they really are and what qualities they value in a partner. In addition, work experiences, although typically beginning in adolescence during secondary school on a part-time basis, become more serious and identity-focused in EA. EAs are more inclined than adolescents to ask themselves what kind of work they would like to do for the long-term, which requires them to know who they are, what their abilities are, what their interests are, and what kind of work they most enjoy (Arnett, 2005). In the areas of love and work, EAs begin to make choices that determine the ease, or lack thereof, of their adult livelihood.

Arnett (2005) cites instability as another key feature of EA. EAs make frequent changes in their lives in terms of romantic partners, jobs, and educational status. Rates of moving spike upward beginning at age 19 and reach their peak in the mid-twenties, then sharply decline (U.S. Bureau of the Census, 2000). The first move EAs typically make is to leave home, often to go to college or university, but sometimes to be independent of their parents. EAs often live with roommates during college, or move in with a boyfriend or girlfriend. Sometimes cohabitation leads to marriage, sometimes it does not—and when it does not, they may move again. For nearly half of EAs, at least one of their moves during the years from 18 to 25 will be back home to live with their parents, prolonging the time period of dependence on parents for financial support (Arnett, 2005).

Another defining feature of EA is self-focus, which should not be confused with selfishness or egocentricity. Rather, EAs are freer than individuals in other developmental periods to make decisions independently, without being required to obtain the permission or consent of others (Arnett, 2005). EAs make independent decisions surrounding what groceries to buy, what jobs to seek, whom to date or live with or break up with, and so on. Focusing on
oneself during EA has its advantages, as it allows EAs to devote their energies to gaining the experiences that will shape their future direction.

Neither adolescents nor fully adults, EA has been described as the age of feeling in-between (Arnett, 2005). Interestingly, research has found that the criteria most relevant to EAs as markers of adult status are not traditional demographic markers, such as finishing education, marriage, or parenthood. Instead, EAs tend to associate more intangible, psychological, gradual qualities with reaching adulthood, such as “accepting responsibility for one’s self” and “making independent decisions,” along with “financial independence” (Arnett, 2005). Most parents of EAs also seem to favor the above “Big Three” markers of adulthood rather than traditional markers (Arnett & Fishel, 2013). The sense that EAs have of adulthood as being a gradual shift helps to explain why most EAs do not feel they have reached adulthood until at least the late twenties.

Last, EA has been described as the age of possibilities (Arnett, 2005). EAs, typically free from traditional adult responsibilities, have the opportunity to make dramatic changes in their lives. It is a time when generally, hopes are high, and optimism is nearly universal (Arnett, 2005). Nearly all EAs feel that life will work out well for them in the long run, even if their lives are not so promising in the present (Arnett, 2005). In summary, EA is a time when one’s self takes precedence, where questions related to one’s identity are explored, where changes are frequent in love, work, and living, and when ultimately, through their choices, EAs determine the direction of their adulthood.

The majority of research has found that EA is a positive period of development. For example, in a longitudinal Canadian study, Galambos, Barker, and Krahn (2006) found a decline in depressive symptoms and a rise in self-esteem in EA participants. However, identity issues
remain prominent in EA and sorting through them while finding satisfying alternatives in love and work can sometimes create anxiety (Arnett, 2007). Further, difficulties experienced in EA can lead to more substantial issues in adulthood.

**The Challenges Associated with Emerging Adulthood**

While EA is often experienced as a positive time of exploration, it can also be a developmental period fraught with challenges and disappointments. For example, explorations in love can result in disappointment and rejection. There can be dissatisfaction with career choices, with some EAs more likely than others to develop a pessimistic attitude toward achieving career-related goals (Arnett, 2000). Entry into the labor market is often stressful and frustrating, especially for EAs with limited education credentials (Cote, 2000; Hamilton & Hamilton, 2006). In addition, the incredibly high expectations EAs often have regarding love and work, such as landing a dream job soon after graduation and finding a soul mate, are not always attainable and often require compromises of EAs’ hopes and dreams (Arnett, 2004). The disappointments of this time and the many decisions that are required have resulted in the term “quarter life crisis,” which captures the alleged difficulties experienced by EAs as they try to find a place in the adult world (Robbins & Wilner, 2001). This is consistent with the period of ‘identity crisis’ described by Erikson (1950) over a half century ago, which was once seen as central to adolescence, but has now shifted into EA (Arnett, 2007).

Whether or not EAs identify with the experience of a “quarter life crisis” might depend on the way they view and subsequently handle the inevitability of life’s challenges. The way in which EAs manage life’s stressors varies across individuals (Arnett, 2007). Disruptions to a sense of stability could be framed as an opportunity for change by some, or it can be a source of sadness and anxiety, which, in the latter scenario, can lead to ineffective coping mechanisms,
such as substance use as a method of self-medication (Arnett, 2005). EA has been identified as the peak age period for many behaviours most societies try to discourage, such as binge drinking, illegal drug use, and risky sexual behaviour (Arnett, 2000, 2005; Schulenberg & Zarrett, 2006). Nevertheless, despite the choice of some EAs to experiment with substances, most will progress into adulthood successfully (Arnett, 2007). Research has found that by the age of 30, three-quarters of Americans are married, nearly all have stable employment and have become financially independent from their parents, and almost none live in their parent’s home (Arnett, 2004; Goldscheider & Goldscheider, 1999). In addition, by the age of 30 nearly all (about 90%) individuals feel that they have fully reached adulthood, and no longer feel in-between (Arnett, 2001).

Although most EAs reach adulthood successfully, the prevalence of mental health issues during EA is relatively high and this is coupled with a greater risk of substance use and abuse. Seventy-five percent of adult mental health problems have an age of onset before age 24, and it is during the early twenties that various risky behaviours reach their peak (Arnett & Fishel, 2013). The relationship an EA has with his or her parents from a young age may provide some insight as to why some of the struggles during EA are particularly derailing. The parent-child relationship continues to influence functioning into the period of EA and can significantly contribute to psychosocial functioning in EA and beyond (Fosco, Caruthers, & Dishion, 2012; Seiffge-Krenke, Overbeek, & Vermulst, 2010).

**Attachment in Emerging Adulthood**

According to attachment theory, the quality of the early attachment relationship between a child and his or her primary caretaker has lasting implications for social information processing, emotion regulation, and self-evaluative processes (Bowlby, 1944; Brennan, Clark, &
Shaver, 1998; Fraley & Waller, 1998; Milan & Acker, 2014). Furthermore, previous research has found that attachment styles are relatively stable over time and active throughout the lifespan (Bowlby, 1988; Collins & Read, 1994; Hazan & Shaver, 1994), and can lead to difficulties with emotion regulation and interpersonal functioning, with insecurely attached individuals experiencing either increased emotional arousal in response to distress (anxious attachment) or emotional suppression (avoidant attachment) (Cassidy, 1994; Elicker, Englund, & Sroufe, 1992; Sroufe, Egeland, & Kreutzer, 1990).

The link between insecure attachment and poor psychosocial and behavioural outcomes in EA has been cited in a number of studies. For example, Dawson, Allen, Marston, Hafen, and Schad (2014) found in a longitudinal study that insecure attachment in adolescence predicted self-reports of externalizing behaviours in EA eight years later, as well as self-reported use of maladaptive coping strategies. Schimmenti, Passanisi, Gervasi, Manzella, and Famà (2014) found that college students who screened positive for problematic internet use also scored higher on scales assessing anxious and avoidant attachment attitudes than those with a negative screening result. In regards to interpersonal and romantic relationships, insecure attachment styles might be at the root of many dysfunctional behaviours contributing to relationship dissatisfaction and dissolution (Hazan & Shafer, 1994). In addition, insecure attachment in EA has been found to serve as a vulnerability factor in the development of depressive (Agerup, Lydersen, Wallander, & Sund, 2015; Chow & Ruhl, 2014; Kenny & Sirin, 2006) and anxious symptoms (Giaouzi & Giovazolias, 2015; Schimmenti & Bifulco, 2015), with some studies finding support for both depressive and anxious symptoms (Jinyao et al. 2012; Riggs & Han, 2009), self-harm (Gratz, Conrad, & Roemer, 2002), borderline personality disorder (Westen, Nakash, Thomas, & Bradley, 2006), obsessive-compulsive disorder (Yabro, Mahaffey,
Abramowitz, & Kashdan, 2013), psychoticism (Koohsar & Bonab, 2011), binge eating behaviour (Han & Pistole, 2014), and disturbed eating (Koskina & Giovanazolias, 2010).

In addition to its association with negative psychosocial outcomes, insecure attachment styles have been found to be predictive of substance use and misuse in EA. For example, insecure attachment styles have predicted increased alcohol consumption in EAs (Andres, Castanier, & Le Scanff, 2014; Kassel, Wardle, & Roberts, 2007; LaBrie & Sessoms 2012; Molnar, Sadava, DeCourville, & Perrier, 2010; Reis, Curtis & Reid, 2012), drug dependence (Schindler, Thomasius, Sack, Gemeinhardt, & Küstner, 2007), and cigarette smoking (Kassel et al. 2007), compared to their securely attached peers. Schwartz et al. (2009) found that when college students felt that they were accepted by their parents (and especially their father figures) as adolescents, they were strongly protected against a number of health risk behaviours, including: illicit drug use, casual sex, driving under the influence of alcohol or drugs, and riding with a driver who has been drinking or using drugs. Relatively recent research in the area of insecure attachment and risk for increased alcohol misuse found that secure attachment was negatively associated with alcohol consumption, alcohol dependence, and alcohol consequences in a sample of male EAs, whereas no association was found between adult attachment style and alcohol problems in female EAs (Reis et al., 2012), suggesting that the adverse effects of alcohol may differentially affect EAs, depending on their attachment security and gender. Finally, a recent study conducted by Sanchez-Queija, Olivia, Parra, and Camacho (2016) found that adolescents who remembered caring mothers during childhood reported less substance use during early adolescence, and those with more cohesive families showed less increase in substance use during adolescence and EA. The researchers speculated that participants with weak family relationships were less likely to approach family figures as a way of coping with
adversity, and instead tended to seek out other less healthy strategies, such as substance use (Sanchez-Queija et al., 2016).

Considered together, these findings present a strong case for the link between insecure attachment in parent-child relationships and negative psychological, emotional, and behavioural outcomes over the lifespan. In order to better understand the pathways linking parent-child attachment relationships to negative psychosocial outcomes in EA, attachment theory will be explored.

**The Development of Attachment Theory**

John Bowlby (1907-1991) is the psychoanalyst behind the theory that has been touted as having a greater impact on American psychology than any other theory of personality development since Sigmund Freud (Ainsworth, 1992). Bowlby’s core contribution to psychology was his recognition of the biologically based evolutionary necessity of the attachment relationship between a child and their caregiver (Wallin, 2007). He understood that the primal nature of attachment as a motivational system is rooted in the infant’s need to maintain physical proximity to the caregiver, not just to promote emotional security but to ensure the infant’s survival (Wallin, 2007). Bowlby’s research highlighted the adverse effects of disruption of bonds with parents, in three volumes titled, “Volume I: Attachment” (1969), “Volume II: Separation” (1973), and “Volume III: Loss” (1980). Through his work, Bowlby challenged the predominant psychoanalytic-driven assumptions of the time and reinvented the way in which parent-child attachment and closer relationships in general were viewed (Bretherton, 1992).

To construct his theory of attachment, Bowlby drew from Darwinian evolutionary theory, Freud’s psychoanalytic theory, and from leading ethnologists of his time (Lowenstein, 2010). The basic assumption underlying Bowlby’s attachment theory is that, due to their extreme
immaturity at birth, human infants can survive only if an adult is willing to provide protection and care. As a result of evolutionary selection pressures, infants evolve behaviours that function to maintain proximity to a protector or caregiver. Adult caregiving is regulated by its own complementary behavioural system. For example, when a baby cries, the parent is typically motivated to soothe him or her. These two behavioural systems, the infant’s and parent’s behavioural regulatory systems, create an emotional bond between parents and their infants that fosters the infant’s survival (Hazen & Shaver, 1994). Previous researchers have found it helpful to conceptualize the attachment system as similar to the physiological systems that regulate body temperature, blood pressure, etc. For example, similar to the body’s response to cooler temperatures that raise the internal temperature, any real/perceived obstacle to proximity maintenance (e.g., parent leaves the room) results in anxiety in an infant, which in turn triggers attachment behaviours that are designed to reestablish proximity (e.g., an infant cries to gain attention from his or her caregiver). Such behaviours continue until the infant feels his or her unconscious “set goal” for proximity is achieved. The degree of proximity required to diminish anxiety depends on the child’s age, emotional and physical state, and perceived environmental threat. The establishment and maintenance of proximity leads to feelings of security and love, whereas disruptions in the relationship typically beget anxiety and sometimes anger or sadness (Hazen & Shaver, 1994).

Bowlby’s research, and the contributions made by his doctoral student, Mary Ainsworth, determined that during infancy and childhood, attachment is the primary behavioural system in use, and that its full activation precludes the activation of other systems (Hazen & Shaver, 1994). This finding speaks to the importance of emotional bonding during infancy and the potential consequences to the infant of failing to maintain a satisfactory attachment bond to a primary
caregiver. By the sixth or seventh month of life, all infants selectively direct attachment behaviours toward one person. That is, they seek proximity and object to being separated from the person who usually responds to their signals of distress. Ainsworth, through empirical studies, discovered that an important factor in an attachment bond is the quality of the response from the primary caregiver. Specifically, familiarity and responsiveness dictate preferences in infants (Hazen & Shaver, 1994). Over time, the caregiver becomes a haven of safety, and a secure base from which the infant can engage in nonattachment behaviours, such as exploration. Ainsworth’s Strange Situation Protocol brought the theoretical framework of Bowlby’s attachment theory to life.

The Strange Situation Protocol (SSP; Ainsworth & Wittig, 1969) was a research tool for assessing parent-child relationships patterns. It was designed to activate an infant’s attachment system through repeated separations from this or her caregiver in an unfamiliar environment (Hazen & Shaver, 1994). The experiment was also meant to activate the exploration system through the availability of attractive toys (Hazen & Shaver, 1994). The original SSP identified three distinct classification categories, “secure,” “insecure-avoidant,” and “insecure-anxious/ambivalent.” “Disorganized attachment” was later added as a fourth category when several children did not fit neatly into the existing classification system (Main & Solomon, 1990). These four attachment styles are further discussed below.

**Attachment Styles**

Following Ainsworth’s findings from the SSP, developmental psychologists began to research attachment styles across the lifespan. Studies replicated cross-culturally have since found that 55% of adults have a secure attachment style, while 25% and 20% have an avoidant and anxious attachment style, respectively (Feeney & Noller, 1990; Mikulincer, Florian, &
Tolmatz, 1990). Research examining gender differences in attachment styles has found that males and females do not fall disproportionately into any one category, supporting Bowlby’s notion that all humans have an inborn need for felt security (Hazen & Shaver, 1994). The following are descriptions of the various attachment styles that emerged from Ainsworth’s research, as well as the typical profile of infants’ primary caregivers.

Secure Attachment

Infants with a secure attachment style have a history of smooth, reciprocally regulated, and joyful interactions with their mother or primary caregiver (Ainsworth, Blehar, Waters, & Wall, 1978; Egeland & Farber, 1984; Grossman, Grossman, Spangler, Suess, & Unzner, 1985). In the SSP, infants with a secure attachment style protest their mother’s departure and become quiet upon their mother’s return, accepting comfort and returning to exploration. Caregivers classified as having a secure attachment style respond to their infant’s emotional and physical needs appropriately, promptly, and consistently. In childhood, caregivers typically help their child regulate stress, and children from secure parents come to depend on their caregivers as a secure base (Lowenstein, 2010).

Anxious/Ambivalent Attachment

Infants with a preoccupied/ambivalent attachment style show sadness during their mother’s departure in the SSP, and allow themselves to be picked up by a stranger. Upon their mother’s return, infants tend to show signs of ambivalence, anger, and a reluctance to warm to her and instead return to playing (Lowenstein, 2010). Caregivers with an anxious/ambivalent attachment style show inconsistent behaviour toward their infants. They might respond to the infant appropriately at times but be neglectful at other times. In childhood, children with anxious/ambivalent attached caregivers react by becoming preoccupied with their caregiver’s
availability and are unable to explore their environment with ease or use their caregiver as a secure base (Lowenstein, 2010). In adulthood, the anxious attachment style is associated with obsessive preoccupation with a romantic partner’s responsiveness. Anxiously attached individuals generally fall in love easily, exhibit jealousy, are subject to fear, anxiety, and loneliness even when in a committed relationship, and have low self-esteem (Collins & Read, 1990; Feeney & Noller, 1990).

**Avoidant/Dismissing Attachment**

Infants with an avoidant attachment style become used to consistent unresponsiveness from their caregiver. In the SSP, infants show little to no signs of distress at their mother’s departure, demonstrate an eager willingness to explore, and have little response to their mother’s return (Lowenstein, 2010). Caregivers with an avoidant attachment style tend to show little response to their infant when he or she is distressed, and discourage their child from crying while at the same time encouraging independence and exploration (Lowenstein, 2010). In adolescence and beyond, avoidantly attached individuals develop a strategy for maintaining felt security, wherein they avoid intimate social contact especially in stressful or distressing circumstances (Hazen & Shaver, 1994). Individuals with an avoidant attachment style have a general distrust of others, and tend to avoid relying on other people, thus avoiding closeness and intimacy (Ciechanowski & Katon, 2006).

**Disorganized Attachment**

In the late 1970s, Main and Weston (1981) observed that many maltreated infants in their low-risk sample were unclassifiable in the SSP. It was clear that such infants were not secure but also could not be classified as anxious or avoidant. Infants with a disorganized attachment style lack organized behavioural strategies for managing stress, as evidenced in the SSP. In other
words, these infants experienced distress or fright in the parent’s presence with no organized means of coping with their problem (Cassidy & Mohr, 2001). The particular combinations of disorganized behaviours vary from child to child but can include: contradictory behaviour patterns, either sequential or simultaneous; unexpected alternations of approach and avoidance toward the attachment figure; marked conflict behaviours, such as prolonged freezing or stilling, slowed “underwater” movements and expressions, odd movements and posture, asymmetrical movements; clear signs of fear of the parent; and clear signs of disorganization and disorientation (Main & Solomon, 1986; Obsuth, Hennighausen, Brumariu, & Lyons-Ruth, 2014). For example, a baby who moves toward the parent by crawling or walking backwards is displaying simultaneous contradictory behaviour by combining approach and avoidance behaviours (Cassidy & Mohr, 2001). Research on the precursors of disorganized attachment have found that anomalous behaviour patterns in such infants are largely the result of interactional experiences with the parents with whom the infant is observed (Cassidy & Mohr, 2001). Data suggest that the more unpredictable, traumatic, and frightening the caregiving environment is, the more likely it is that the infant will be unable to devise a coherent strategy and, as a consequence, will be disorganized (Cassidy & Mohr, 2001). Caregivers who themselves display a disorganized attachment style exhibit disoriented behaviour, have role and boundary confusion, and often express having had experienced maltreatment in childhood themselves (Lowenstein, 2010). Evidence has been found that parents of disorganized infants may have in the past experienced loss or trauma that is unresolved (Main & Hesse, 1990).

**Conceptualization of Adult Attachment**

Research on adult attachment began with Hazan and Shaver’s (1987) development of the attachment Three-Category Measure (e.g., avoidant, anxious/ambivalent, and secure), which was
an attempt to assess in adults the attachment styles defined by Ainsworth in her studies of infant-mother attachment (Ainsworth et al., 1978) but focusing on romantic attachment. Hazan and Shaver (1987) wrote three type-descriptions based on what they believed adults would be like in romantic relationships, according to the three infant attachment categories. Hazan and Shaver’s (1987) descriptions were then turned into agree-disagree items and continuous scales. For example, Bartholomew and Horowitz (1991) in the development of the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991) argued for a four-category model that included Hazan and Shaver’s attachment styles and added a second kind of avoidance (i.e., dismissing-avoidance). Dismissing-avoidant individuals are characterized as avoiding intimacy, being highly self-reliant, and independent (Bartholomew & Horowitz, 1991). These initial models of attachment were based on the notion that the way in which adults’ behaviour, cognition, and emotion is organized in their romantic relationships might parallel the three kinds of attachment relationships identified in studies of infants (Ainsworth et al., 1978).

Another way in which adult attachment has been conceptualized is through narrative-generation procedures. For example, the Adult Attachment Interview (AAI; Main, Kaplan, & Cassidy, 1985) assesses whether adolescents or adults have come to construct coherent narratives regarding childhood experiences with caregivers. Research on adolescent attachment has largely relied on the AAI (Obsuth et al., 2014). Results from the AAI classify individuals into attachment categories based on their responses to the interview questions. A secure attachment is coded when the interviewee is able to construct a coherent narrative about his or her early experiences (Roisman, 2009). Insecure attachment is coded when interviewees idealize caregivers and/or normalize negative experiences (dismissive), or become emotionally
overwhelmed while talking about childhood relationship experiences generally (preoccupied), or loss/abuse in particular (unresolved) (Roisman, 2009).

Brennan, Clark, and Shaver (1998) conducted the first large-sample factor-analytic study that aimed to analyze most of the existing self-report measures of adult romantic attachment. The Experiences in Close Relationships measure (ECR; Brennan et al., 1998) measures adult attachment across two subscales: Avoidance (Discomfort with Closeness and Discomfort Depending on Others), and Anxiety (Fear of Rejection and Abandonment. Brennan et al. (1998) derived four attachment style categories from these two dimensions, which are assessed via the ECR. To date, researchers recommend that attachment patterns be conceptualized in dimensional terms in response to evidence that has found that the conceptual attachment types or styles are regions in a two-dimensional space (Shaver & Fraley, 2004).

In sum, research on attachment styles over time has produced numerous measures to assess adult attachment. Conceptualizing adult attachment on a dimensional rather than strictly categorical manner seems to produce the most nuanced way of looking at adult attachment that is able to account for individual differences across the attachment dimensions. Given the relationship between insecure attachment styles and later poor psychosocial outcomes, it is important to examine the effects of attachment on coping behaviours, such as alcohol use, in EA.

**Attachment and Alcohol Use**

The effects of attachment on alcohol use have not been widely studied in the literature. However, the detrimental effects of long-term alcohol use from a young age are undisputed. For example, a UK study found that heavy episodic drinking at age 16 predicted an increased risk of adult alcohol dependence at age 30, in addition to excessive regular consumption of alcohol, illicit drug use, psychiatric morbidity, homelessness, convictions, school exclusion, lack of
qualifications, accidents, and lower adult social class (Viner & Taylor, 2007). Alcohol use disorders have a high level of comorbidity and are associated with eating disorders, major depression, anxiety disorders, and drug abuse/dependence among other outcomes (Grant et al., 2004). According to a Reiss et al. (2012), research has only recently addressed the impact of attachment on alcohol problems in adolescence and EA. Several studies suggest a positive relationship between insecure attachment style and various measures of drinking behaviour (Kassel et al., 2007), amongst clinical or non-clinical populations (De Rick, Vanheule, & Verhaeghe, 2009; Thorberg et al., 2011).

To date, little is known about the psychological mechanisms through which failures in attachment quality affect alcohol use in general, and in EA specifically. Brennan and Shaver (1995) in a study of college students’ drinking patterns, found that anxious- and avoidant-attached EAs drank more than secure EAs and that the effect was more pronounced for EAs inclined to be avoidant. Recent studies have examined an indirect link between attachment and alcohol use through mediating variables, such as coping motives (McNally, Palfai, Levine, & Moore, 2003), as well as through self-esteem and dysfunctional attitudes (Kassel et al., 2007). In addition, it has been suggested that individuals with particular personality types may be more prone to increased alcohol consumption, such as males who score low on conscientiousness (Clark et al. 2012), although less is known about personality within the context of attachment.

One construct in particular that has been linked to attachment styles is emotion regulation, defined as the ability to regulate one’s affective states. Specifically, insecure attachment has been found to lead to difficulties regulating one’s emotions, which could lead to increased alcohol use.

\textit{Emotion Regulation}
Emotions are biologically based reactions that coordinate adaptive responses to important opportunities and challenges (Tooby & Cosmides, 1990). Emotions come and go quite quickly, typically in a matter of minutes rather than hours or days (Ekman, 1984), and are often seen as “powerful” and “uncontrollable,” because of their ephemeral qualities (Gross, 1998). The regulating of emotions, termed emotion regulation (ER), is a process by which individuals influence which emotions they experience, when they experience them, and how they experience and express them (Gross, 1998). When emotions seem to be ill-matched to a given situation, individuals frequently try to regulate, or adjust, their emotional responses so that the emotions better serve their goals (Gross, 2002).

Gratz and Roemer (2004) developed a measure to assess emotion dysregulation, called the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004). According to Gratz and Roemer (2004), individuals can experience difficulties in the area of emotion regulation in the following dimensions: awareness and understanding of emotions; acceptance of emotions; the ability to engage in goal-directed behaviour and refrain from impulsive behaviour when experiencing negative emotions; and access to emotion regulation strategies perceived as effective. The last dimension attempts to measure the flexible use of situationally-appropriate strategies to modulate emotional responses. Rather than making the assumption that certain emotion regulation strategies are more adaptive than others regardless of context, Gratz and Roemer (2004), in their model of emotion regulation, allow for a subjective appraisal of effectiveness.

Some ER strategies are more constructive than others. Emotion dysregulation is a multifaceted construct, which involves a lack of awareness, understanding, and acceptance of emotions; the inability to control behaviours when experiencing emotional distress; a lack of
access to adaptive strategies for modulating the duration and/or intensity of aversive emotional experiences, and; an unwillingness to experience emotional distress as part of pursuing meaningful activities in life (Gratz & Roemer, 2004). When an individual has difficulties regulating their emotions, emotions may endure (as regulatory attempts are ineffective), or emotions may interfere with appropriate behaviour, or emotions may be expressed or experienced as inappropriate to the particular context/situation, or emotions either change too abruptly or too slowly (Röll, Koglin, & Petermann, 2012). Competency in regulating one’s emotions can be traced back to one’s earliest childhood experiences and is related to the strength of the attachment bond between parent and child.

*Development of Emotion Regulation Skills*

Competency regulating emotions appears to be influenced by parental emotion socialization processes, including the ways parents respond to children’s negative emotions (Eisenberg, Cumberland & Spinrad, 1998; Morris, Silk, Steinberg, Myers, & Robinson, 2007). Gottman, Katz and Hooven (1996) suggest that parents who support emotional expression and use emotion coaching strategies (e.g., helping children express emotions, label emotions, and problem solve their feelings) tend to raise children with better emotion regulation capabilities. Children and adolescents with adequate emotion regulation strategies show higher social competence, have a higher peer status, satisfactory relationship quality, and engage in prosocial behaviour at a higher level than peers with lower skills in regulating their emotions (Röll et al. 2012). In addition, children’s attainments in ER predict their social competence at later points in development (Rydell, Berlin, & Bohlin, 2003; Spinrad et al., 2006).

When children experience important others’ emotions as being out of control, they may have difficulty regulating their own emotions (Rieder & Cicchetti, 1989). For example, research has
found that parents who became upset over their child’s emotional reactions at ages 6 to 8 tended to have a child with emotion regulation difficulties at ages 8 to 10 (Eisenberg et al., 1999). In addition, parents’ punitive reactions at ages 8 to 10 predicted emotion regulation difficulties at ages 10 to 12 (Eisenberg et al., 1999). Further, children who demonstrate early levels of high externalizing behaviour and more maladaptive than adaptive regulation strategies during challenging situations are at a higher risk for developing social and emotional problems later in life (Blandon, Calkins, & Keane, 2010). For example, children who are not able to attain adaptive strategies for emotional self-regulation during preschool age, show various problematic consequences such as diminished social competence and externalizing issues (Blandon et al., 2010; Denham et al., 2003).

By adolescence, increasingly sophisticated cognitive abilities permit new forms of emotion regulation (e.g. reframing, taking another’s point of view, adequately representing distant goals). Adolescents develop a sense of self that includes notions about their emotional and interpersonal style, as well as their preferred methods of ER. Adaptive forms of ER include culturally sanctioned activities such as sports, music, or academics. Other, often maladaptive methods include the use of psychoactive substances (Brandon, 1994), which typically begins during early adolescence (Felix-Ortiz, Munoz, & Newcomb, 1994). The key toward understanding difficulties with emotion regulation in EA and its subsequent correlates may lie in attachment bonds.

**Parent-Child Attachment and Emotion Dysregulation**

The attachment system is intrinsically linked to the regulation of emotions (Cassidy, 1994). Early interactions with attachment figures form a critical context for later emotion regulation (Brenning & Braet, 2013). By definition, it is expected that securely attached
children, through repeated interactions with caregivers who are sensitive, flexible, and who encourage a range of emotions, are able to openly express their emotions, learn (within the attachment relationship) effective ways to manage negative emotions in stressful situations, are able to alleviate their distress, and return to exploration of the environment (Contreras, Kerns, Weimer, Gentzler, & Tomich, 2000). From a developmental perspective, the capacity for dealing with undesirable emotional states or stressful situations is believed to stem from the quality of the individual’s interactions (past or present) with their primary attachment figure (Thompson & Meyer, 2007). In an important paper, Cassidy (1994) posited that, as children develop and become more autonomous, emotion regulation strategies develop within the parent-child dyad and are internalized by the child and applied to other interpersonal contexts. In a parallel model for late adolescents and adults, Shaver and Mukulincer (2002) proposed that individuals who fall under an insecure attachment type engage in different predominant modes of regulating emotions than those who are securely attached.

Emotion regulation strategies are evolutionarily adaptive as they initially prepare children to cope with various types of rearing environments (Simpson & Belsky, 2008). Specifically, ambivalently attached children heighten their display of negative emotions in an effort to gain the attention of their inconsistently available attachment figure. Avoidantly attached children minimize their negative emotions when interacting with their attachment figure, which permits them to maintain a relationship with an attachment figure who cannot tolerate attachment behaviours. Children with disorganized attachments miss opportunities to learn how to mitigate their distress and develop developmentally appropriate emotion regulation strategies (Lyons-Ruth & Jacobvitz, 2008) as they cope with caregivers’ alternating patterns of hostile/intrusive behaviour, role-reversing, misattuned affect, and/or detachment (Madigan et al., 2006).
Similarly, influences of attachment on emotion regulation strategies are expected in middle childhood; however, by this age, children tend to be able to apply their emotion regulation abilities outside the parent–child dyad and carry them forward in social settings. Furthermore, the repertoire of emotion regulation strategies becomes more sophisticated at this stage. Noteworthy markers of emotional development in middle childhood include awareness of multiple complex emotions, awareness of emotion “scripts” in social situations, and use of expressive behaviour to maintain relationship dynamics (e.g., smiling in social settings; Saarni & Weber, 1999). Empirical research in both infants (e.g., Spangler & Grossmann, 1993) and adults (e.g., Mikulincer & Shaver, 2007) supports the idea that different attachment dimensions are associated with different emotion regulation strategies.

Much of the research on emotion regulation focuses either on infancy and childhood or on adulthood. However, adolescence and EA are also relevant developmental phases for emotion regulation given the increased emotionality and the rapid developmental changes that occur during these stages (Zimmerman & Iwanski, 2014). The benefits of a secure attachment style (e.g., protective quality) in adolescence are similar to those evidenced in other developmental periods. For example, Nilsson, Holmqvist, and Jonson (2011) found that a more secure attachment style (i.e., less insecurity), when assessed with the Experiences in Close Relationships questionnaire (ECR; Brennan, Clark, & Shaver, 1998), protected against the experience of symptoms of dissociation in a sample of adolescents having experienced numerous traumas.

Studies have found that EAs report more social support seeking and more adaptive regulation in contrast to adolescents, leading EAs to have higher competence in their individual and social emotion regulation and leading to greater emotional stability (Soto, John, Gosling, & Potter, 2011). Differences in attachment to parents during EA have been found to predict
differences in the use of emotion regulation mechanisms and coping strategies (Cabral, Matos, Beyers, & Soenens, 2012). Cabral et al. (2012), in a study of EA participants, found that having a close emotional bond, feeling supported in autonomy processes, and having (moderately) low levels of separation anxiety toward parents predicted more constructive emotion regulation mechanisms and coping strategies. In addition, Dvorak et al. (2014) in a study of college students found that emotion regulation difficulties were broadly associated with alcohol-related consequences, suggesting a link between difficulties with emotion regulation and substance use in EA.

**Emotion Dysregulation and Alcohol Use**

There is a paucity of research supporting the link between emotion dysregulation and drinking behaviour (Messman-Moore & Ward, 2014). However, emotion regulation is thought to be an important underlying factor associated with substance use, and specifically alcohol use (Bonn-Miller, Vujanovic, & Zvolensky, 2008; Fox, Hong, & Sinha, 2008). It is thought that while not all consumption of alcohol is prompted by exclusively emotional motives, the desire to regulate both positive and negative emotions is a major motivation (Dragan, 2015). A number of studies suggest that individuals who cannot tolerate heightened states of emotions may turn to substances for relief (Siegel, 2015). Supporting this claim, Aldao, Nolen-Hoeksema, and Schweizer (2010) view substances as “emotional regulators” and note the lack of other emotion regulation strategies among those with substance use problems. Clark, Cornelius, Kirisci, and Tarter (2005) found that indicators of psychological dysregulation predicted risk of substance use disorder in participants who were followed from ages 11 through 19. In regard to alcohol use specifically, it has been hypothesized that individuals consume alcohol in response to stressful events (Cooper, Frone, Russell, & Mudar, 1995). Consistent with this theory, daily process
studies have found that individuals consume more alcohol and report an increased desire to drink on days when they report more anxiety (Swendsen et al., 2000), suggesting that drinking alcohol can be considered an emotion regulation strategy when it is consumed with the aim of influencing an emotional state (Dragan, 2015).

Indeed, models of alcohol abuse (Sher & Grekin, 2007; Tice, Bratslavsky, & Baumeister, 2001) suggest that individuals with poorly regulated emotions often turn to alcohol to escape from or down-regulate their emotions, creating risk for alcohol-related consequences and diagnosable problems in relation to alcohol (Aldao et al., 2010; Berking et al., 2011; Dvorak et al., 2014). For example, emotion regulation difficulties have been found in individuals with alcoholism who struggle to remain abstinent (Fox et al., 2008). The motivations behind alcohol use tend to be unique to the individual using, but may provide insight into the intentions of EAs who engage in substance misuse.

Motives for Alcohol Use: The Role of Emotion Dysregulation

Motivational models of alcohol consumption posit that people drink for two distinct reasons: as a way to regulate negative experiences (i.e., tension reduction), and to enhance positive experiences (Cooper et al., 1995). The following three drinking motives in particular, have been found to predict drinking behaviour: coping motives, social motives, and enhancement motives (Cooper, Russell, Skinner, & Windle, 1992). Coping-motivated drinking involves drinking to cope with negative emotions, socially motivated drinking involves drinking to celebrate and enjoy social gatherings, and enhancement-motivated drinking involves drinking to enhance positive experiences or emotions (Buckner, Eggleston, & Schmidt, 2006). In previous studies, coping motives have been found to be related to heavy problematic drinking (Cooper et al., 1992; MacLean & Lecci, 2000; McNally et al., 2003) and are both indirectly (through the
level of alcohol consumed) and directly (independent of the level of alcohol consumed) related to alcohol problems (Cooper et al., 1992), alcohol abuse, and evidence of tolerance or withdrawal (Buckner et al., 2006). Enhancement-motivated drinking is associated with heavy alcohol use and increased frequency of alcohol intoxication (Buckner et al., 2006). In contrast, social drinking motives are typically associated with more normative drinking behaviours (Buckner et al., 2006), and with drinking problems only indirectly via alcohol consumption (Cooper, 1994; see also Kuntsche, Knibbe, Gmel, & Engels, 2006 for a review).

Previous researchers have found some evidence to support drinking motives as a mediator of the relationship between emotion dysregulation and alcohol use. For example, Stewart, Zvolensky, and Eifert (2001) found that the negative reinforcement motives of Coping and Conformity independently mediated the relations between anxiety sensitivity and increased drinking behaviour in a sample of undergraduate students. Difficulties in emotion regulation have been found to be associated with higher levels of alcohol-related problems and higher levels of coping drinking motives, but not with levels of recent heavy drinking, in EAs (MacPherson et al., 2012). Dragan (2015), in a study of female college students, found that positive metacognitions about alcohol use, defined as a specific form of expectancy relating to the use of alcohol as a means of controlling and regulating cognition and emotion (e.g., “Drinking helps me to control my thoughts”), were a significant predictor of drinking behaviour and, moreover, were a full mediator of the relationship between emotion dysregulation and problem drinking. Specifically, Dragan (2015) found that the largest contribution to alcohol use was “limited access to emotion regulation strategies” followed by, in descending order of importance: impulse control difficulties, difficulties engaging in goal-directed behaviour, non-acceptance of emotional responses, and lack of emotional clarity. Dragan’s (2015) findings are consistent with
those of previous researchers, such as Dvorak et al. (2014), who, among others, found that the number of alcohol-related consequences was positively associated with non-acceptance of emotional responses, impulse control difficulties, lack of emotional clarity, and difficulties engaging in goal-directed behaviour. Messman-Moore and Ward (2014) in a study of 424 female college students found that emotion dysregulation predicted coping motives, and that coping motives predicted both alcohol-related consequences and heavy drinking. These findings are in line with prior research, which has found that EAs who drink to cope have higher levels of alcohol consumption (e.g., frequency of alcohol use and heavy episodic drinking), dependence symptoms, and experience more negative alcohol-related consequences.

Despite the extensively supported finding that substances such as alcohol are used to regulate negative affect (Cooper et al., 1995; Mohr, Arpin, & McCabe, 2015; Peacock, Cash, Bruno, & Ferguson, 2015; Rankin & Maggs, 2006), and the widely-studied role of drinking motives in alcohol use, alcohol-related problems, and alcohol-related diagnoses (Bailey & Baillie, 2013; Haller, Wang, Bountress, & Chassin, 2014; Ostafin & Brooks, 2011), few studies have specifically assessed difficulties in emotion regulation as predictors of coping motives and alcohol use. There have been no studies to date that have specifically investigated antecedents of emotion dysregulation, which in turn leads to alcohol use. Previous research has only hinted at potential antecedents of the emotion regulation difficulties to alcohol use pathway. Further, to date there has not been any research that has examined the role of emotion regulation and drinking motives in the relationship between parent-child attachment and alcohol use and consequences in EA. A model that examines the pathway from attachment, a distal variable, to the proximal variables of emotion regulation, drinking motives, and alcohol use and consequences, will lead to a greater understanding of the variables that precipitate alcohol use in
EA. The findings of the present study may help to inform clinical treatment aimed at mending disrupted parent-child relationships during the decisive developmental period of EA.

**Summary and Hypotheses**

It is well established that alcohol use peaks during the developmental period of emerging adulthood, and furthermore that the risk for negative consequences is often first seen in this age group, particularly in post-secondary students. In addition, extant literature confirms the link between parent-child attachment and alcohol use in adolescence and emerging adulthood, with alcohol use and alcohol consequences highest among individuals who report an insecure attachment style. However, little is known about the mechanisms that underlie the relationship between attachment and alcohol use and consequences. While research has identified drinking motives as a mediator of the relationship between affect regulation and alcohol use (Dragan, 2015; Messman-Moore & Ward, 2014), to my knowledge, no study to date has examined a comprehensive model that includes both emotion regulation and drinking motives as mediators of the relationship between parent-child attachment and alcohol use and consequences. There is significant evidence to suggest that individuals with an insecure attachment style report greater difficulty regulating their emotions than those with a secure attachment style, that substances such as alcohol are often used to regulate emotions, and that motives for alcohol use tend to most often surround difficulties with affect regulation. To date, however, the role of attachment in alcohol use and consequences through emotion regulation and drinking motives has not been investigated.

The proposed study aims to address these gaps by investigating attachment styles, emotion regulation, alcohol use, and drinking consequences. In addition, I will assess the reported motives for alcohol use and whether these motives are influenced by the individual’s
level of emotion dysregulation. Although attachment styles have been found to be relatively stable across the lifespan, recent research suggests that they are also susceptible to environmental influences (Konrath, Chopik, Hsing, & O’Brien, 2014). For clinicians working with EAs struggling with emotion regulation and/or problematic behaviours that tend to follow from emotion regulation difficulties, EA may be an ideal time to challenge EAs’ habitual ways of reacting to their emotions, to guide them toward an awareness of choices available to them that are better aligned with their unique set of values, and to seek out or rebuild their support systems.

We first need to examine the mechanisms that underlie the relationship between attachment and alcohol use and consequences in order to properly tailor EA-directed clinical interventions. The present research study aims to contribute to the current understanding of the potential mediating factors on the relationship between attachment and alcohol use and drinking consequences in emerging adulthood. The purposes of the present study include the following:

1. To explore the relationship between multiple attachment representations (insecure – anxious, insecure – avoidant) and difficulties with emotion regulation. It is hypothesized that EAs who report an insecure attachment style (anxious or avoidant) will endorse greater emotion dysregulation than EAs who report a secure attachment style.

2. To examine the role of emotion dysregulation and drinking motives in the path from attachment to alcohol use and consequences. It is anticipated that EAs with an insecure attachment style (avoidant or anxious) will report greater difficulty regulating their emotions and will endorse affect regulation motives for alcohol use (i.e., enhancement or coping), which, in turn, will be associated with heavier alcohol use and greater alcohol consequences.
Please see Figure 1 for a diagrammatic representation of the hypothesized sequential relationships between the key variables under investigation.

Figure 1. Diagrammatic representation of the hypothesized sequential relationships between the following key study variables: insecure attachment, emotion dysregulation, coping and enhancement motives, and alcohol use and consequences.

Methods

Participants

A total of 218 participants were recruited from the community and from a large, urban university in downtown Toronto. Participants ranged in age from 18 to 24 ($M=21.06$; $SD=1.895$) and were living in Canada at the time of the initial survey completion. The final sample included 141 (64.7%) females, 76 (34.9%) males, and one (0.4%) individual who identified as “genderqueer”. Of the final sample of participants, 17.8 percent indicated that they have graduated with a college or university degree, 3.2 percent had completed some community college or university without graduating, 5.9 percent had completed high school or equivalent, and 0.5 percent had not completed high school. The majority of participants, 71.1 percent, indicated that they were currently in school, and 57.5 percent indicated they were currently completing a college or university degree. Thirty-seven percent of participants identified as Caucasian, 18.3 percent as Chinese, 11.9 percent as Filipino, 6.4 percent as Latin American, 0.5
percent as Japanese, 1.8 percent as Korean, 4.1 percent Black (e.g. African, Haitian, Jamaican, Somali), 5.9 percent as South Asian (e.g. East Indian, Pakistani, Punjabi, Sri Lankan), 1.8 percent as Arab/West Asian (e.g. Armenian, Egyptian, Iranian, Lebanese, Moroccan), and 3.2 percent as South East Asian (Cambodian, Indonesian, Laotian, Vietnamese). The remaining 4.1 percent identified their ethnicity as “Other”.

**Procedure**

Participants were recruited through various public community websites including Craigslist and Kijiji, as well as through posters advertising the study, which were placed in various locations on the University of Toronto campus (See Appendix A for the sample advertisement). Interested individuals were instructed to email the primary investigator to arrange a brief telephone screening. During the screening interview, if a prospective participant did not meet the inclusion criteria, they were informed that they did not meet the requirements of the study and were thanked for their interest. To be eligible to participate in the study, participants needed to be between 18-24 years old, consumed alcohol at least twice in the past month, must not ever have received treatment for an alcohol problem or attended Alcoholics Anonymous, have no current diagnosis of schizophrenia, bipolar disorder, or psychosis, and be able to answer the phone screening questions in English. If participants passed the screening interview (answered “yes” to all questions), and expressed a continued interest in participating in the study, a time was scheduled for participants to come to the lab within seven days to begin the study. Participants were emailed directions to the university along with a reminder of their appointment time. They were also reminded to bring photo identification to the appointment as confirmation of their age.
Following a discussion of informed consent (See Appendix B for a copy of the informed consent document), participants were directed to an online survey which was administered through Fluidsurveys (See Appendix C for the measures included in the online survey). Upon completion of the survey, a printable “Helpful Resource Sheet” appeared on the screen, which outlined contact information for national and provincial online resources and telephone hotlines that provide a range of services related to mental health and alcohol problems (See Appendix D). A hardcopy of this handout was also included in materials the participant received to take home with them. Participants were compensated with $20 in cash for completing the initial Baseline survey as well as $6 in subway tokens or the cost of a parking ticket.

**Measures**

**Attachment styles.** Attachment styles were assessed using the Attachment Styles Questionnaire (ASQ; Feeney, Noller, & Hanrahan, 1994), a 40-item self-report questionnaire designed to measure adult attachment based on the two-dimensional framework of Bartholomew and Horowitz (1991). The 40 items are assigned to five scales: Confidence, Discomfort with Closeness, Need for Approval, Preoccupation with Relationships, and Relationships as Secondary. Discomfort with Closeness is a theme central to Hazan and Shaver’s (1987) conceptualization of avoidant attachment. Need for Approval reflects respondents’ need for acceptance and confirmation from others, and characterizes Bartholomew’s fearful and preoccupied groups. Preoccupation with Relationships, which involves an anxious and dependent approach to relationships, is a core feature of Hazan and Shaver’s (1987) original conceptualization of anxious/ambivalent attachment. The Relationships as Secondary scale is consistent with Bartholomew’s (1990) concept of dismissing attachment. Finally, Confidence (in Self and Others) reflects a secure attachment orientation. The ASQ incorporates a 6-point Likert-
type response format ranging from 1 (strongly disagree) to 6 (strongly agree). According to one study done on the ASQ assessing reliability of the measure, the attachment scales reached the minimally reliability level of .60 set by Nunnally (1978) (Van Oudenhoven, Hofstra, & Bakker, 2003). The stability of attachment coefficients ranged from .59 to .76 (Van Oudenhoven et al., 2003). The ASQ was to capture a broader conceptualization of attachment not limited to romantic relationships. Other attachment measures, such as the Experiences in Close Relationships Scale-Revised (ECR-R; Fraley, Waller, & Brennan, 2000), measure attachment in emotionally intimate (romantic) relationships, whereas items on the ASQ refer to attachment to others in general. In the present study, the ASQ demonstrated good internal consistency (α = .85).

**Emotion Dysregulation.** Emotion dysregulation was assessed with the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004). The DERS is a 36-item measure designed to evaluate clinically relevant difficulties in emotion regulation. The DERS is comprised of six subscales, each assessing a different dimension of emotion dysregulation: Nonacceptance (nonacceptance of emotions; e.g., “When I’m upset, I feel guilty for feeling that way”), Goals (difficulties engaging in goal-directed behaviour while distressed; e.g., “When I’m upset, I have difficulty getting work done”); Impulse (difficulties refraining from impulsive behaviours when experiencing negative emotions; e.g., “When I’m upset, I become out of control”); Awareness (lack of awareness of emotions; e.g., “When I’m upset, I acknowledge my emotions” – reverse scored); Strategies (perception of limited access to adaptive emotion regulatory strategies; e.g., “When I’m upset it takes me a long time to feel better”); and Clarity (lack of understanding of emotions; e.g., “I have difficulty making sense out of my feelings”). Items are scored on a 5-point Likert scale ranging from 1 (almost never) to 5 (almost always).
Total scores on the DERS can range from 36 to 180. The DERS has demonstrated both construct and discriminant validity, and also shows adequate test-retest reliability, with a range of .57 to .89 for the subscales (Gratz & Roemer. 2004). Moreover, the DERS has demonstrated high internal consistency ($\alpha = .93$), and all of the six subscales have demonstrated good internal consistency ($\alpha > .80$) (Gratz & Roemer, 2004). In the present study, the DERS demonstrated good internal consistency ($\alpha = .87$).

**Drinking motives.** Motives for alcohol use were assessed using the Drinking Motives Questionnaire-Revised (DMQ-R; Cooper, 1994). The DMQ-R is a 20-item questionnaire that assesses the frequency with which individuals drink for four reasons: to cope with negative affect (coping motives; e.g., “To forget your worries”), to enhance positive affect (enhancement motives; e.g., “Because it gives you a pleasant feeling”) for social reasons (social motives; e.g., “To be sociable”) and to avoid social consequences (conformity motives; e.g., “Because your friends pressure you to drink”). Participants indicate the frequency with which they drink for each item using a 5-point Likert scale ranging from 1 (Almost never/never) to 5 (Almost always/always). The average of these items yields the subscale scores. The internal consistency of the scales has been reported to fall between .84 and .91 in other studies (Cooper, Russell, Skinner, & Windle, 1992; MacLean & Lecci, 2000; O’Connor & Colder, 2005). This measure has also been shown to have good predictive validity in determining drinking behaviours and alcohol consequences and good to excellent test-retest reliability (Cooper, 1994; Grant, Stewart, O’Connor, Blackwell, & Conrod, 2007). In the current study, the DMQ demonstrated an overall good internal consistency ($\alpha = .89$).

**Alcohol consumption.** Participants completed a series of items pertaining to quantity and frequency of alcohol use using the timeline follow-back method (TLFB; Sobell & Sobell, 1992).
The TLFB is a retrospective, calendar-based drinking assessment method that provides a detailed picture of an individual’s drinking over a designated time period, in the current study, the past 30 days. In the present study, several memory aids were used to enhance recall (e.g., calendar; key dates such as anchors for reporting drinking; standard drink conversion). The questions asked included: what type of alcohol did you drink; how long did you spend drinking; how much alcohol did you drink, and; who were you drinking with (i.e., alone, with friends, family, strangers, or acquaintances. A standard drink is defined as one bottle of beer, one cooler, one glass of wine, or a single shot of liquor (a double shot of liquor counts as two drinks). The TLFB has been extensively evaluated with a wide variety of clinical and nonclinical populations (Sobell & Sobell, 1992, 1995, 2000) and was chosen by the American Psychiatric Association as having met criteria for inclusion in their *Handbook of Psychiatric Measures* (American Psychiatric Association, 2000). From the TLFB data, average drinks per drinking day was computed and was used as the primary consumption measure as it is less subject to the potential pitfalls of retrospective responding (e.g., inaccurate memory of days spent drinking and number of drinks consumed) and is therefore a valid measure of alcohol use.

**Alcohol consequences.** Alcohol consequences were assessed using the Young Adult Alcohol Consequences Questionnaire (YAACQ; Read, Kahler, Strong, & Colder, 2006). The YAACQ is a 48-item questionnaire consisting of eight factors to assess alcohol problems in the past year across various domains. Participants indicate whether or not they have experienced consequences in the following areas, by providing a “yes” or “no” response: Social-interpersonal (e.g., “While drinking, I have said or done embarrassing things”), Impaired Control (e.g., “I often have thought about needing to cut down or to stop drinking”), Self-Perceptions (e.g., “I have felt badly about myself because of drinking”), Self-Care (e.g., “I haven’t been as sharp mentally
because of my drinking”), Risk Behaviours (e.g., “I have driven a car when I knew I had too much to drink to drive”), Academic/Occupational (e.g., “The quality of my work or school has suffered because of drinking”), Physical Dependence (e.g., “I have felt anxious, agitated, or restless after stopping or cutting down on drinking”), and Blackout Drinking (e.g., “I have woken up in an unexpected place after heavy drinking”). Development of the YAACQ was based on the YAAPST (Hurlburt & Sher, 1992) and included additional items from the Drinker Inventory of Consequences (DrInC; Miller, Tonigan, & Longabaugh, 1995) as well as from the Diagnostic and Statistical Manual, Fourth Edition (DSM-IV; American Psychiatric Association, 1994), and items written by the authors. Read et al. (2006) ensured that all symptoms of alcohol abuse and dependence as defined by the DSM-IV were assessed by the YAACQ. The YAACQ yields a total score representing a broad spectrum of consequences, as well as subscales focusing on particular domains of consequences. In terms of the statistical significance of the subcategories, all factor loadings have been found to be significant at the \( p < .01 \) level. Concurrent validity of the YAACQ total score was assessed by examining associations between the YAACQ and the RAPI. The YAACQ has been found to be significantly positively correlated with scores from respondents who completed the RAPI (\( r = .79, p < .001; n = 126 \)) and with both past 90-day average frequency (\( r = .36, p < .001; n = 339 \)) and quantity (\( r = .31, p < .001; N = 340 \)). In terms of the concurrent validity of the YAACQ subscales, subscales were significantly positively correlated with the RAPI (all \( p < .001 \)). In the current study, the YAACQ demonstrated an overall excellent internal consistency (\( \alpha = .94 \)).

**Results**

Summary scores were computed for the attachment, emotion dysregulation, motives, alcohol use, and alcohol consequences variables. The three subscales for attachment were
computed by summing the relevant items for each attachment subscale (secure, anxious, and avoidant) and dividing each sum by the number of items in each the scale. Emotion dysregulation was computed by summing all items from the DERS. The drinking motives were computed by taking the average of the items relevant to each motive (cope and enhance). Alcohol use was computed by summing the number of drinks consumed for each past month drinking day dividing that sum by 30 days. Finally, alcohol consequences was computed by summing all the items of the YAACQ.

Preliminary analyses involved examining descriptive data for attachment, emotion dysregulation, motives for using alcohol, and alcohol use and consequences. Next, the relationship between insecure attachment styles and emotion dysregulation was examined. Finally, a path analysis (AMOS; Arbuckle, 2003) was conducted to assess various pathways from each attachment subscale to emotion dysregulation to motives to alcohol use and consequences.

**Preliminary Analyses**

Descriptive statistics for attachment (secure, anxious, avoidant), emotion dysregulation, motives for using alcohol, alcohol use, and alcohol consequences are listed in Table 1. Means and standard deviations were calculated for the total sample. The most frequently occurring attachment style was secure (confidence relating to others), followed by avoidant (relationships as secondary and discomfort in relationships), and last, anxious (need for approval and preoccupation with relationships). In regard to drinking motives, enhancement was endorsed more frequently than coping. On average, participants consumed close to four drinks each day they consumed alcohol and experienced, on average, slightly more than six alcohol consequences associated with their drinking in the past year.
Bivariate correlations between attachment styles, emotion dysregulation, drinking motives, alcohol use, and alcohol consequences are presented in Table 2. Both anxious and avoidant attachment were significantly and positively associated with emotion dysregulation. Further, emotion dysregulation was significantly associated with both drinking to cope and drinking to enhance. Drinking to cope and drinking to enhance were significantly and positively associated with average drinks per drinking day. All variables included in the analysis were significantly and positively associated with alcohol consequences.

**Hypothesis 1: The Relationship Between Attachment Styles and Emotion Dysregulation**

The first hypothesis involved examining the relationship between attachment styles (secure, avoidant, and anxious) and emotion dysregulation. As hypothesized, emotion dysregulation was significantly and positively correlated with anxious and avoidant attachment styles (See Table 2). Given that the attachment styles are not discrete categories and there is some overlap between them (see Table 2), a linear regression analysis was conducted to examine the relationship between each of the styles of attachment and emotion dysregulation where each attachment style was simultaneously regressed on emotion dysregulation. Results from this analysis are listed in Table 3. When all attachment styles were entered simultaneously, avoidant and anxious attachment emerged as significant predictors of emotion dysregulation over and above secure attachment. In total, attachment style accounted for 47.5% of the variance in emotion dysregulation scores, $F(3, 213) = 64.219, p < .001$.

**Hypothesis 2: Path Analysis - Models from Attachment to Alcohol Use and Alcohol Consequences**

The next step in the analysis involved examining pathways from insecure attachment (i.e., avoidant and anxious) to emotion dysregulation, affect regulation motives for drinking (i.e., coping and enhancement), and finally to alcohol use and alcohol problems. AMOS version 5.0
(Arbuckle, 2003) was used to examine path coefficients and tests of the overall fit of each of the two models (one model with alcohol use as the outcome variable and one model with alcohol consequences as the outcome variable). A critical task in path analysis is to determine the extent to which the specified model fits the empirical data. This is accomplished through the assessment of several goodness-of-fit indices. The chi-square statistic tests the appropriateness of a structural equation model. However, the chi-square statistic is dependent on sample size, which could lead to the rejection of plausible models despite an irrelevant discrepancy between the sample and the model. To address the shortcomings of the chi-square statistic, the Root Mean Square Error of Approximation (RMSEA; Steiger & Lind, 1980) and the Comparative Fit Index (CFI; Bentler, 1990) were used as model fit indices. The RMSEA assesses the difference between an optimal model with a known population covariance matrix and a hypothesized model with an estimated covariance matrix, and expresses this discrepancy by degree of freedom. RMSEA values less than .05 indicate good fit (Byrne, 2001). The CFI compares a hypothesized model with an independence model while taking sample size into account. CFI values can range from 0 to 1.00, although a well-fitting model has a cutoff value close to .95 (Hu & Bentler, 1999). Values greater than .90 represent a good fit and values greater than .95 represent an excellent fit.

Further, bootstrapping was used to test indirect (i.e., mediation) pathways from insecure attachment \(\rightarrow\) emotion dysregulation \(\rightarrow\) drinking motives \(\rightarrow\) alcohol use and alcohol consequences. Bootstrapping involves repeatedly sampling from the data set and estimating the indirect effect in each resampled data set (Preacher & Hayes, 2008). Unlike the Sobel test (Sobel, 1982, 1986), bootstrapping does not impose the assumption of normality of the sampling distribution and is therefore a reasonable and more robust method of obtaining confidence limits for specific indirect effects under most conditions (Preacher & Hayes, 2008).
Insecure attachment, emotion dysregulation, affect regulation motives, and alcohol use. The first path model examined paths from: 1) insecure attachment to emotion dysregulation; 2) emotion dysregulation to coping and enhancement motives; and 3) coping and enhancement motives to alcohol use. As illustrated in Figure 2, insecure attachment was significantly and positively associated with emotion dysregulation. Emotion dysregulation was significantly and positively associated with both coping and enhancement motives. Enhancement motives were significantly and positively associated with alcohol use, however, the relationship between coping motives and alcohol use was non-significant. The goodness of fit indice for this model is shown in Figure 2. Structural pathways between variables were significant for the model predicting alcohol use, with the exception of the pathway between coping motives and alcohol use. The fit of the model was good based on a non-significant chi-square value ($p<0.196$), a RMSEA value of .052 and a CFI value of .098. The indirect effects for emotion dysregulation and motives were further examined using bootstrapping, a nonparametric resampling procedure method advocated for testing mediation that does not impose the assumption of normality of the sampling distribution (Preacher & Hayes, 2008). Results of these analyses are shown in Table 4. Results from the bootstrapping analysis indicate significant indirect effects of all mediators (emotion dysregulation, coping motives, and enhancement motives) on the relationship between insecure attachment and alcohol use.

Insecure attachment, emotion dysregulation, affect regulation motives, and alcohol consequences. The second path model examined paths from: 1) insecure attachment to emotion dysregulation; 2) emotion dysregulation to coping and enhancement motives; and 3) motives to alcohol problems. As illustrated in Figure 3, insecure attachment was significantly and positively associated with emotion dysregulation. Emotion dysregulation was significantly and
positively associated with both coping and enhancement motives. Both coping and enhancement motives were significantly and positively associated with alcohol consequences. The goodness of fit indice for this model is shown in Figure 3. Structural pathways between variables were significant for all variables in the alcohol problems model. The fit of the model was excellent based on a non-significant chi-square value ($p<0.417$), a RMSEA value of .008 and a CFI value of 1.00. The indirect effects for emotion dysregulation and motives were further examined using a bootstrapping resampling method. Results are displayed in Table 5. Results from the bootstrapping analysis indicate significant indirect effects of all mediators (emotion dysregulation, coping motives, and enhancement motives) on the relationship between insecure attachment and alcohol consequences.

**Discussion**

The purpose of the present study was to examine the underlying mechanisms in the relationship between attachment styles, alcohol use, and alcohol consequences in a sample of 218 emerging adults recruited from the community. Specifically, the current study investigated the role of emotion dysregulation and affect regulation motives to drink (i.e., drinking to cope with negative affect or to enhance positive affect) on the relationship between insecure attachment and alcohol use and alcohol consequences. It was expected that previous findings from the literature would be replicated (Messman-Moore & Ward, 2014; Dragan, 2015; Dvorak et al., 2014) and it was hypothesized that emerging adults with an insecure attachment style (i.e., anxious or avoidant attachment style) would experience difficulties regulating their emotions. Further, it was anticipated that there would be indirect (i.e., mediation) pathways from insecure attachment→emotion dysregulation→drinking motives→alcohol use and alcohol consequences. As predicted, emotion dysregulation and affect regulation motives mediated the
relationship between insecure attachment and both alcohol use and consequences. Coping motives better predicted alcohol consequences than alcohol use, and therefore emerged as an important marker of alcohol consequences. Overall, the current findings indicate that a distal variable, such as insecure attachment, can affect alcohol use and consequences in EA, via emotion dysregulation and affect regulation motives. The findings of the present study are discussed in further detail below, and are presented in order of analysis.

_Frequencies of Attachment, Emotion Dysregulation, Motives, and Alcohol Use and Consequences_

Preliminary analyses involved examining frequencies for the key variables of the present study. These included: attachment styles, emotion dysregulation, drinking motives, average drinks per drinking day in the past month, and past year alcohol consequences. In general, the current findings were consistent with the literature on rates for the key study variables. In the present study, the highest mean attachment style score was secure, followed by avoidant, and last anxious. The frequency of attachment styles found in the current sample is consistent with literature on attachment distributions of adolescents and adults. For example, it has been found that the majority of adolescents and adults are securely attached, while 35% have an avoidant or anxious attachment style (Ein-Dor, Mikulincer, Doron, & Shaver, 2010). In regard to drinking motives, EAs in our sample endorsed enhancement motives more often than coping motives. This finding is consistent with the literature, which has found that most EAs endorse social and enhancement motives for drinking, with fewer endorsing coping and conformity motives (Cooper et al., 2015; Crutzen, Kuntsche, & Schelleman-Offermans, 2013). Further, research consistent with the current findings has indicated that when considering binge drinking, enhancement and social drinking motives have the strongest positive associations (Cooper et al.,
Patrick and Schulenberg (2011) found that an increase in binge drinking between ages 18 and 22 was most positively correlated with slopes of using alcohol “to get high” and because of “boredom.” Although the present study did not examine binge drinking in particular, the relatively high rates of alcohol use in the current sample together with the endorsement of enhancement motives is in line with previous research.

There is a paucity of research in the area of emotion dysregulation in EA, with the majority of studies focusing instead on infancy and childhood emotion regulation. In the present study, the emotion dysregulation scores of EAs were similar to those of the sample involved in the DERS validation study (the DERS was initially validated on a sample of undergraduate students). This finding was expected, and suggests that EAs in the current sample, although recruited from the community at large, experience difficulties with emotion regulation to a similar extent as university students. The mean DERS score in the current sample was 83, with a range of 40-152, indicating that participants were moderately dysregulated. Findings from the literature on emotion dysregulation in EA support the present findings. For example, EA is perceived as a time of prolonged emotional insecurity regarding role status (Roisman, Masten, Coastworth, & Tellegen, 2004). Moreover, it has been found that expressed anger only slowly decreases in EA (Galambos, Barker, & Krahn, 2006), and depression may even increase until age 30 (Soto, John, Gosling, & Potter, 2011). Emotional stability, an indicator of emotion regulation skills, remains low in adolescence and is not yet fully established during EA (Zimmerman & Iwanski, 2014), which may help to explain the relatively high rates of emotion dysregulation found in the present study.

In regard to alcohol use and consequences, participants in the present study reported drinking the same number of drinks on an average drinking occasion as participants in the
validation sample for the consequences measure, the YAACQ (Read et al., 2006), but reported, on average, fewer consequences than were found in the validation sample. This difference can be explained in two ways. First, it could be indicative of a difference in the inclusion criteria between the present study and the YAACQ validation study. In order to participate in the present study, participants had to have consumed at least two drinks in the past month, whereas Read et al.’s (2005) inclusion criteria was more stringent as they only included past month weekly drinkers. Further, in the present study a range of participants were included from the community whereas Read et al. (2005) validated the YAACQ on a population of undergraduate students, a population that experiences changes in drinking behaviour and subsequent drinking consequences (e.g., hangovers, vomiting, memory loss) during college (Read et al., 2005) and who likely experience inflated rates of alcohol use and consequences. The participants in the present study were recruited from a large urban city, and therefore represent the diverse experiences of EAs pursuing various career and academic paths.

**Hypothesis 1: The Relationship Between Attachment Styles and Emotion Dysregulation**

It was anticipated that insecure attachment would be positively and significantly associated with emotion dysregulation in the current sample of EAs. When attachment styles (i.e., secure, anxious, and avoidant) were entered simultaneously, avoidant and anxious attachment emerged as significant predictors of emotion dysregulation over and above secure attachment, supporting my predictions. The findings of the present study contrast with previous research on emotion regulation in EA, which has found that EAs, in contrast to adolescents, report greater social support seeking and more adaptive regulation (Zimmerman & Iwanski, 2014). However, given that attachment is frequently considered to be an affect regulation strategy (Laurent & Powers, 2007), the relatively high emotion dysregulation in the present study
seems to be indicative of EAs’ lack of developed emotion regulation strategies as a result of insecure attachment styles.

Attachment styles are associated with distinct emotion regulation strategies. For example, avoidant attachment is associated with the use of deactivating strategies, such as suppression or minimizing of distress, inhibition of support seeking, and coping autonomously (e.g., Lopez & Brennan, 2000; Mikulincer, Shaver, & Pereg, 2003). Attachment anxiety, on the other hand, is associated with the use of hyperactivating strategies, such as intense attempts to obtain support, reassurance, and care (e.g., Lopez & Brennan, 2000; Mikulincer et al., 2003). This is in contrast to securely attached EAs, where having a close emotional bond, feeling supported in autonomy processes, and having moderately low levels of separation anxiety toward parents predicts more constructive emotion regulation mechanisms and coping strategies (Cabral et al., 2012). In the present study, there was a significant, positive relationship between insecure attachment (both avoidant and anxious styles) and emotion dysregulation, which suggests that patterns of relating and interacting with others, which begin to develop in infancy, significantly impact the ability to regulate emotions in EA. An important implication of this finding is that EAs’ earliest interactions influence their ability to regulate their emotional experiences. The consequences of the insecure attachment→emotion dysregulation relationship was examined by considering the role of drinking motives on the pathway from insecure attachment→alcohol use and consequences. It was hypothesized that drinking motives would play an important role in the pathway from attachment to alcohol use and consequences, and examined its function as a mediator of the relationship between attachment and alcohol use and consequences.

*Hypothesis 2: Path Analysis - Models from Attachment to Alcohol Use and Alcohol Consequences*
The final hypothesis sought to examine the relationships between variables on the path from insecure attachment→emotion dysregulation→drinking motives→alcohol use and alcohol consequences. Two separate models were proposed, wherein the outcome variable was alcohol use in the first model, and alcohol consequences in the second model. It was predicted that structural pathways between all variables would be significant in both models.

In the current study, there was a focus on drinking motives—reasons individuals endorse for drinking alcohol—because motives are considered proximal predictors of alcohol consumption (White, Anderson, Ray, & Mun, 2016). That is, previous research on drinking motives considers these motives as the final mechanism leading to alcohol consequences. Cooper’s (1994) framework of drinking motives has been the most widely studied, and outlines the following four reasons associated with drinking: social facilitation (external); enhancement motives (internal), coping motives (internal), and conformity motives (external). The present study focused on the internal, affect regulation motives in Cooper’s (1994) model, which include drinking to cope with negative affect (coping motives) and drinking to enhance fun and pleasure (enhancement motives). The present study focused on enhancement and coping motives because literature indicates that, unlike social and conformity motives, internal motives are associated with increased alcohol consumption and related problems (Cox, Hosier, Crossley, Kendall, & Roberts, 2006; Lambe, Mackinnon, & Stewart, 2015). For example, in adolescence, it has been found that those most susceptible to problematic drinking are those who drink as a form of coping in order to regulate negative emotions (Cooper, 1994).

The current findings both support and challenge previous work on the role of drinking motives in alcohol use and consequences. In the alcohol use model, it was found that enhancement motives impacted alcohol use directly, whereas coping motives did not. Although
this finding was surprising, as it was expected that both coping and enhancement would impact alcohol use directly, it is consistent with previous research on social and enhancement motives. For example, previous research has found that individuals consume greater quantities of alcohol when they feel motivated to have fun (i.e., enhancement motives or social motives) than when they are motivated to reduce negative affect (i.e., coping motives), although enhancement, social, and coping motives were all associated with increased alcohol consequences (Van Damme et al., 2013). Moreover, the link between enhancement motives and alcohol use may be especially salient in EA when considering their typical social environment. EAs, compared to other age groups, more commonly partake in social interactions that involve drinking, regardless of whether or not EAs are in school (Arnett, 2000; Delucchi, Matzger, & Weisners, 2008), and drinking to enhance positive emotions is commonly endorsed in studies that have looked at motivated drinking in EA. For example, Kong and Bergman (2010) concluded that enhancement drinking motives appear to play a significant role in alcohol misuse in EA based on the cognition that alcohol stimulates positive emotional and physical changes, which enhances social situations.

As mentioned above, there was no significant direct relationship between coping motives and alcohol use in the present study. However, numerous studies have found that the association between drinking to cope and alcohol consequences is stronger than that of drinking to cope and consumption (Cooper, Frone, Russell, & Mudar, 1995; Grant, Stewart, O’Connor, Blackwell, & Conrad, 2007; Overup, Dibello, Brunson, Acitelli & Neighbors, 2015). According to prior studies of motivated drinking in EA, it may be that drinking to cope is a less salient influence of alcohol misuse for EAs, and instead, as previously mentioned, positive reasons such as drinking to enjoy social situations and to obtain positive physical and emotional pleasure may be more
relevant (Cooper et al., 1995; Read et al., 2003). When considering alcohol use patterns in EA, it appears that EAs are less motivated to drink to reduce negative affect and are more likely to consume alcohol in greater quantities when motivated to increase pleasure and fun. However, and as discussed in more detail below, when considering alcohol consequences, coping motives appear to play a larger role. Apart from coping motives, all other variables included in the path analysis from attachment → alcohol use were, as expected, significantly and positively related. An examination of the path model from attachment → alcohol consequences provides greater insight on the relationship between attachment, emotion dysregulation, drinking motives, and alcohol consequences in EA.

The second model examined the pathway from insecure attachment → alcohol consequences, via emotion dysregulation and drinking motives. Although coping motives was not significantly related to alcohol use in the previous model, it was strongly associated with alcohol consequences in the present model. These findings suggest that, while coping motives are not necessarily predictive of increased alcohol use, drinking to cope is an important predictor of alcohol consequences. Outwardly, this particular finding may seem counterintuitive. Intuition tells us that alcohol use ought to be related to alcohol consequences, insofar as the more alcohol EAs consume the greater number of consequences they will experience. However, the specific motive behind EAs’ alcohol use seems to make the difference in the number of consequences experienced, regardless of how many drinks were consumed. These findings are consistent with previous research, which has found that while other drinking motives (i.e., enhancement) are typically associated with alcohol consequences indirectly, through alcohol use, coping motives predict alcohol problems directly, even after accounting for alcohol use (Goldstein et al., 2012). Further, past work in this area has determined that drinking to cope, more than any other
drinking motive, is most predictive of problematic drinking, at least for adolescents and young adults (Kuntsche, Knibbe, Gmel, & Engels, 2005). These findings suggest that drinking to reduce negative affect is a risky way to approach drinking as it can result in detrimental consequences.

Another critical finding from the present study that contributes to a better understanding of the relationship between attachment styles and alcohol consequences in EA was the relationship found between emotion dysregulation and coping motives, on the path to alcohol use and alcohol consequences. The current findings indicate that there is a stronger relationship between emotion dysregulation and coping motives than between emotion dysregulation and enhancement motives, which suggests that coping, rather than enhancement motives, drive the relationship from emotion dysregulation to alcohol consequences. This finding suggests that difficulties regulating emotions underlies coping-motivated drinking in EA and supports previous work which has highlighted the relationship between emotion dysregulation and coping motives. For example, in the substance use literature, difficulties in emotion regulation have been linked to both substance abuse (Cheetham, Allen, Yucel, & Lubman, 2010; Kashdan, Fersizidis, Collins, & Muraven, 2010) and to coping motives (Bonn-Miller, Vujanovic, & Zvolensky, 2008). Further, cross-sectional studies have demonstrated that greater difficulty controlling impulsive behaviours when distressed is associated with higher drinking to cope (Adams, Kaiser, Lynam, Charnigo, & Milich, 2012; Jones, Chryssanthakis, & Groom, 2014), which, in turn, is associated with problematic drinking and alcohol dependence (Adams et al., 2012).

Overall, the current findings suggest that there are qualitative differences between coping- and enhancement-motivated drinkers, such as the typology of their alcohol use. Previous researchers have found an association between different motives and different patterns of alcohol consumption and drinking consequences (e.g., Carey & Cary, 1995; Cooper, 1994; Cooper et al.,
1995). Unfortunately, to date, not much is known about the differences in how drinking is approached when comparing coping-motivated and enhancement-motivated drinkers, despite the assertion made by Kuntsche, Knibbe, Engels, and Gmel (2010) that, “It is clear from the literature that enhancement and coping drinkers form two distinct groups” (p. 47). In a study that examined social anxiety and reasons for drinking in EA, Norberg, Norton, Oliver, and Zvolensky (2010) found that although college men and women reported similar frequencies of drinking in positive situations and to enhance positive emotions, women reported drinking more often in negative situations and to cope with aversive emotions than men. Although the present study did not examine gender differences in alcohol use and consequences, the Norberg et al. (2010) findings provide some evidence that gender differences may be involved in coping- versus enhancement-motivated drinking. In a study of internally-motivated student alcohol use, Arbeau, Kuiken, and Wild (2011) found that coping-motivated drinking was strongly and positively associated with affect regulation, whereas, in contrast, positive affect (but not negative affect) predicted daily endorsement of enhancement motivated drinking. This findings suggests that although both coping and enhancement motives are associated with affect regulation, coping-motivated drinkers are driven by a need to regulate affect whereas enhancement-motivated drinkers are more often driven by a need to build on the positive affect that they are already experiencing. Taken together, previous research offers possible explanations for the differences that were found in the current study between coping-motivated and enhancement-motivated drinking.

Some relatively recent research in the area of alcohol consequences has found differences in the types of alcohol consequences experienced by coping- versus enhancement-motived drinkers. For example, Merrill and Read (2010) found that even the few direct consequences of
enhancement motives (e.g., blackouts) differ from those of coping motives (e.g.,
academic/occupational problems and poor self-care), which suggests that coping-motivated
drinking is associated with long-term consequences affecting multiple areas of individuals’ lives.
Future studies could examine nuances in coping- versus enhancement-motivated drinking to gain
a better understanding of: 1) the differences between coping- and enhancement-motivated
drinkers in how alcohol is consumed (e.g., social versus solitary drinking, the types of alcohol
consumed, number of drinks consumed per hour in an average drinking day), and 2) the types of
consequences typically experienced in coping- versus enhancement-motivated drinking in EA.
Future research may help to further delineate the differences between types of motivated drinkers
and could aid in the understanding of the risk factors associated with coping- versus
enhancement-motivated drinking.

When considered together, results from the present study add to the extant literature on
the relationships between attachment, emotion dysregulation, drinking motives and
consequences. The present study is, to my knowledge, the first study to date to evaluate the role
of attachment styles, a distal variable, in the pathway to alcohol use and consequences via
emotion dysregulation and drinking motives. As a result of examining both the distal and
proximal variables that may be involved in alcohol misuse, the present study was able to identify
some important areas of intervention, namely emotion dysregulation and drinking motives, that,
when addressed by interventionists, may help to interrupt the trajectory leading from insecure
attachment styles to alcohol consequences in EA. Although EAs cannot change the
circumstances under which they were raised, the current study provides evidence for the need to
intervene at the more proximal level by providing EAs with the knowledge and skills needed to
better regulate their emotions in times of distress.
**Limitations and Future Directions**

Although findings from the present study make a significant contribution to literature in the area of alcohol use in EA, the study is subject to some limitations. First, the present study was cross-sectional in nature. A cross-sectional study design may, due to its nature, strengthen associations and precludes assumptions about directionality and causality, as other variables may better account for the associations observed. Longitudinal data are required to fully understand the relationships between attachment styles, emotion dysregulation, drinking motives, and alcohol use and consequences. An additional limitation of the present study was the relatively small sample size used to test a complex meditational model. However, despite the small sample size, the present study was able to identify statistical significant pathways that are supported by previous work in the area. Moreover, participants in the present study represented an ethnically-diverse set of EAs. Future studies may wish to use a larger sample size and examine variables in a longitudinal manner. In addition, future longitudinal studies could examine daily diary data for drinking motives to get a better sense of daily drinking motives.

Another limitation was the self-report nature of the current study. Although self-reports of drinking patterns (Carey, Carey, Maisto, & Henson, 2006) and motives (Cooper et al., 2015) have been shown to be reliable and valid, gathering information from other relevant sources, such as participants’ parents, may lend strength to future studies. Particularly when assessing attachment styles, it would be interesting to simultaneously assess participants’ parents’ attachment styles or ask for details from parents on the relationship they have to their EA child. Future studies could include qualitative assessments of the parent-child attachment relationship by asking about childhood experiences and current relationship dynamics with parents, although this would be a more time consuming process. Future research might also examine other
individual difference variables, such as alcohol expectancies for use, in relation to attachment, emotion dysregulation, drinking motives and drinking. Including an alcohol expectancies variable in future analyses could be helpful since previous research has found that alcohol expectancies for use may demonstrate differential relations to behaviour, together with motives to drink (Bekman et al., 2011). Other affective variables known to influence both alcohol use and drinking motives that were not examined in the present study but that may warrant examination in future studies, include anxiety sensitivity (Howell, Leyro, Hogan, Buckner, & Zvolensky, 2010), distress tolerance (Howell et al., 2010), alexithymia (Thorberg et al., 2009), and cognitive expectancies regarding emotion dysregulation (Thorberg & Lyvers, 2006).

**Clinical Implications**

The findings of the present study have important implications for clinicians treating EAs with alcohol use issues. Whether treating EAs in a university or community setting, the following treatment recommendations may be useful when working with EAs who present concerns related to their relationships with important others (e.g., attachment/relational issues), difficulties regulating their emotions (e.g., experiencing emotion dysregulation), drinking motives related to regulating affect (i.e., drinking to cope or to enhance), and alcohol use and consequences. The results of the present study revealed significant and positive associations between attachment styles, emotion dysregulation, drinking motives, and alcohol use and consequences. Thus, focusing clinical interventions on one area (e.g., emotion regulation difficulties) will likely positively affect other associated areas (e.g., alcohol consequences) in the path from insecure attachment to alcohol use and consequences. Treatment interventions for alcohol use in EA tend to focus on addressing emotion dysregulation by teaching affect
regulation strategies, and addressing drinking motives by providing healthier replacement coping strategies.

Before particular interventions are discussed, some general clinical considerations will be highlighted that may help guide clinicians in treating EAs regardless of clinicians’ expertise in using particular interventions. One consideration to take into account is the particular environment that an EA is situated in (e.g., EAs who are in university versus those who are working or looking for work), as each situation will bring with it unique challenges. For example, EAs entering into post-secondary education may face interpersonal and psychosocial issues, including but not limited to feeling connected to others, adjusting to a new life as a post-secondary student, managing the new influences of peers over parents, and, particularly for women, struggling with body dissatisfaction (Pompeo, Kooymen, & Pierce, 2013). These challenges can impact EAs’ abilities to cope with stressors, and may lead to problematic behaviour in the form of substance use and abuse. Clinicians working with EAs in a university setting should be mindful of EAs’ heightened levels of distress during this period of transition, particularly for EAs who are in the first year of their studies (Pompeo et al., 2013). An additional consideration for clinicians is the psychosocial history of the client. Clinicians may find it worthwhile to gather information about clients’ psychosocial history and patterns of relating to important others, because such information can help clinicians determine the origins of clients’ presenting concerns. Inquiring about the factors that maintain EAs’ particular ways of behaving may help to untangle the various risk factors that are involved in sustaining problematic alcohol use. Group therapy, an alternative to individual therapy, can be a poignant therapy format, particularly in EA, because the focus on group members’ experiences has the potential to broaden EAs’ perspectives. When EAs are given the opportunity to share their stories in front of
non-judgmental peers who are experiencing similar difficulties, it may help EAs feel less isolated in their struggles and provide them with a supportive network of peers. Adopting a specific approach to psychotherapy can help to structure and inform individual and group counselling sessions. One approach in particular, motivational interviewing, will be explored, as the literature has found that motivational interviewing is an efficacious intervention for treating alcohol misuse in EA.

Motivation Interviewing (MI; Baer & Peterson, 2002; Miller & Rollnick, 2002) is a nonconfrontational and nonjudgmental, harm reduction approach to the exploration of options for change that has been successfully used to engage autonomy-focused EAs presenting in therapy with issues related to alcohol use (Scholl & Schmitt, 2009). In fact, multiple scholarly reviews have demonstrated the effectiveness of harm reduction approaches, such as MI, with college students (e.g., Carey, Scott-Sheldon, Carey, & DeMartini, 2007; Larimer & Cronce, 2007; White, 2006). MI is integrative, blending elements of humanistic behaviour therapy, such as empathy, unconditional positive regard, warmth, and authenticity, and cognitive behaviour therapy techniques, for example eliciting change statements and summaries highlighting desire for change (Scholl & Schmitt, 2009). An additional technique central to MI involves assessing clients’ readiness for, and ambivalence about, changing their behaviours. An advantage of MI over other interventions is that it can be deployed in one or two sessions. For example, an experienced MI clinician can both work with ambivalence and roll with resistance to move EAs toward readiness even with EAs who are in the precontemplative stage and are resistant to change (Scholl & Schmitt, 2009).

Research has found that EAs can be relatively dismissive of the negative consequences associated with drinking during college, and attribute less risk to binge drinking than non-college
EAs (Colby, Colby, & Raymond, 2009). This lack of regard for the risk of drinking can pose as a barrier to treatment, particularly when working with EAs who are pursuing post-secondary education. Moreover, research examining drinking misperceptions and peer drinking norms in Canada has found that EAs most often overestimate the frequency of drinking and the quantities consumed in social contexts (Perkins, 2007). Perkins (2007) has stated that such misperceptions may pressure or encourage otherwise moderate drinking EAs to drink more heavily in situations where they feel ambivalence in this regard. Misperceptions may also allow EAs predisposed to high risk drinking to do so freely with the belief that they do not have a problem because they are just like everyone else (Perkins, 2007). Thus, the misperceptions that EAs have regarding peer alcohol use becomes a potential barrier to treatment because EAs may not identify themselves as having a problem with alcohol and can therefore be resistant to change. Clinicians using MI interventions may find it helpful to spend some time providing psychoeducation to EAs about actual drinking norms and misperceptions about drinking.

In addition to MI interventions, treatment interventions that are specifically tailored toward EAs’ attachment styles may help clinicians assess the core of EAs’ emotion regulation difficulties. Interventions that target EAs’ habitual ways of relating to others and provide alternative emotion regulation strategies may help clinicians to intervene on the path from insecure attachment to alcohol consequences. For example, an EA with an avoidant attachment style might avoid experiencing emotions through using alcohol to cope with negative affect. Addressing an EA’s counterproductive and potentially harmful way of dealing with his or her emotions may be a useful first step in therapy, followed by providing EAs with healthier strategies to regulate their emotions. Strategies from emotion-focused therapy (EFT; Greenberg,
as well as mindfulness-based interventions can help individuals gain an awareness of their emotions and begin manage them more effectively.

To conclude, the findings of the present study demonstrate that a distal variable, such as attachment style, affects alcohol use and consequences in EA, via emotion dysregulation and affect regulation motives. The findings of the current study lend support to a harm-reduction model, rather than an abstinence model of alcohol use intervention. Importantly, harm reduction approaches, such as MI, can help to reduce the number of drinking consequences experienced by EAs and provide EAs with practical strategies for reducing risks associated with their alcohol use. Clinical interventions that help EAs better navigate challenges associated with the developmental transition of EA may work to reduce the consequences associated with alcohol use during this vulnerable developmental time, and can provide EAs with the tools needed to lead successful and fulfilling lives well into adulthood.
### Tables and Figures

**Table 1**

*Descriptive Statistics for Attachment, Emotion Dysregulation, Drinking Motives, Alcohol Use, and Alcohol Consequences*

<table>
<thead>
<tr>
<th>Variable</th>
<th>M(SD)</th>
<th>Range of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attachment dimensions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secure attachment</td>
<td>33.43 (6.53)</td>
<td>10-47</td>
</tr>
<tr>
<td>Anxious attachment</td>
<td>49.53 (12.53)</td>
<td>17-76</td>
</tr>
<tr>
<td>Avoidant attachment</td>
<td>57.66 (11.92)</td>
<td>30-95</td>
</tr>
<tr>
<td><strong>Emotion dysregulation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotion dysregulation total</td>
<td>83.16 (23.43)</td>
<td>40-152</td>
</tr>
<tr>
<td><strong>Drinking motives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coping</td>
<td>2.10 (.94)</td>
<td>1-5</td>
</tr>
<tr>
<td>Enhancement</td>
<td>2.98 (1.05)</td>
<td>1-5</td>
</tr>
<tr>
<td><strong>Alcohol variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average drinks per drinking day</td>
<td>3.93 (2.51)</td>
<td>1-15.45</td>
</tr>
<tr>
<td>No. of drinking consequences past year</td>
<td>6.56 (4.67)</td>
<td>0-23</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01, ***p < .001*
Table 2

_Bivariate Correlations of Attachment, Emotion Dysregulation, Affect Regulation Motives, Alcohol Use, and Alcohol Consequences_

<table>
<thead>
<tr>
<th>Variable</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Secure Attachment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Avoidant Attachment</td>
<td>-.572**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Anxious Attachment</td>
<td>-.547**</td>
<td>.448**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Emotion Dysregulation</td>
<td>-.492**</td>
<td>.445**</td>
<td>.663**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Cope</td>
<td>-.379**</td>
<td>.395**</td>
<td>.420**</td>
<td>.577**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Enhance</td>
<td>-.161*</td>
<td>.111</td>
<td>.191*</td>
<td>.185*</td>
<td>.347**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Average drinks per drinking day</td>
<td>-.077</td>
<td>.125</td>
<td>-.010</td>
<td>.031</td>
<td>.204**</td>
<td>.322**</td>
<td></td>
</tr>
<tr>
<td>8. # of alcohol consequences in past year</td>
<td>-.129</td>
<td>.298**</td>
<td>.128**</td>
<td>.328**</td>
<td>.477**</td>
<td>.419**</td>
<td>.369**</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01

Table 3

_Regression Coefficients for Predicting Emotion Dysregulation from Attachment Styles_

<table>
<thead>
<tr>
<th>Attachment style</th>
<th>Emotion dysregulation</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td></td>
<td>-.436</td>
<td>.236</td>
<td>-.122</td>
<td></td>
</tr>
<tr>
<td>Avoidant</td>
<td></td>
<td>.266</td>
<td>.121</td>
<td>.135*</td>
<td></td>
</tr>
<tr>
<td>Anxious</td>
<td></td>
<td>1.00</td>
<td>.113</td>
<td>.535**</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05, **p < .01
### Table 4

*Indirect Effects of Emotion Dysregulation and Motives in the Path from Insecure Attachment to Alcohol Use - Bootstrapped 95% Confidence Intervals Lower and Upper Bounds*

<table>
<thead>
<tr>
<th>Indirect effect</th>
<th>Standardized coefficient</th>
<th>95% Bootstrapped confidence intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lower bound</td>
</tr>
<tr>
<td>Insecure attachment → emotion dysregulation → coping motives</td>
<td>.042*</td>
<td>.352</td>
</tr>
<tr>
<td>Insecure attachment → emotion dysregulation → enhancement motives</td>
<td>.015*</td>
<td>.042</td>
</tr>
<tr>
<td>Emotion dysregulation → motives → alcohol use</td>
<td>.013**</td>
<td>.046</td>
</tr>
<tr>
<td>Insecure attachment → emotion dysregulation → motives → alcohol use</td>
<td>.024**</td>
<td>.039</td>
</tr>
</tbody>
</table>

### Table 5

*Indirect Effects of Emotion Dysregulation and Motives in the Path from Insecure Attachment to Alcohol Consequences - Bootstrapped 95% Confidence Intervals Lower and Upper Bounds*

<table>
<thead>
<tr>
<th>Indirect effect</th>
<th>Standardized coefficient</th>
<th>95% Bootstrapped confidence intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lower bound</td>
</tr>
<tr>
<td>Insecure attachment → emotion dysregulation → coping motives</td>
<td>.042*</td>
<td>.352</td>
</tr>
<tr>
<td>Insecure attachment → emotion dysregulation → enhancement motives</td>
<td>.015*</td>
<td>.042</td>
</tr>
<tr>
<td>Emotion dysregulation → motives → alcohol consequences</td>
<td>.054*</td>
<td>.150</td>
</tr>
<tr>
<td>Insecure attachment → emotion dysregulation → motives → alcohol consequences</td>
<td>.100*</td>
<td>.116</td>
</tr>
</tbody>
</table>
Figure 2. Path model of associations between insecure attachment, emotion dysregulation, alcohol use motives to cope and enhance, and past month alcohol use.
Figure 3. Path model of associations between insecure attachment, emotion dysregulation, alcohol use motives to cope and enhance, and past year alcohol consequences.
References


Ein-Dor, T., Mikulincer, M., Doron, G., & Shaver, P. R. (2010). The attachment paradox: How can so many of us (the insecure ones) have no adaptive advantages? *Perspectives on Psychological Science, 5*, 123-141.


Depression and Anxiety, 29, 789-796.


National Institute on Alcohol Abuse and Alcoholism. (2013). “College Drinking”.


Appendices
PARTICIPANTS NEEDED for ALCOHOL STUDY

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

We are looking for young adults between 18 and 24 years old, to participate in a daily diary study on alcohol use

If you...
- Currently live in or around the GTA
- Are between 18 and 24 years old
- Are fluent in written and spoken English
- Are willing to participate in a 28-day study using an online daily survey

To learn more and see if you are eligible to participate, please contact us for a brief screening
416-978-0702 or project.emerge@utoronto.ca

Scan the QR code below to send us an email.

You may be eligible to participate in this study.

You will be compensated for your participation.

Replies to this ad are confidential.

THANK YOU!
Appendix B
Informed Consent Form

Research Title: Attachment, Emotion Dysregulation, and Interpersonal Difficulties: Within- and Between-Person Influences on Alcohol Use and Alcohol Problems in Emerging Adulthood

Short Title: Alcohol Use and Problems in Emerging Adulthood

Principal Investigator:
Dr. Abby Goldstein, Department of Applied Psychology and Human Development, OISE, University of Toronto

Co-Investigators:
Dr. Sherry Stewart, Department of Psychology, Dalhousie University
Dr. Sean Mackinnon, Department of Psychology, Dalhousie University
Natalie Vilhena-Churchill, M.A., Department of Applied Psychology and Human Development, Ontario Institute for Studies in Education (OISE), University of Toronto
Sarah Haller, M.A. Candidate, Department of Applied Psychology and Human Development, Ontario Institute for Studies in Education (OISE), University of Toronto

Purpose
You are being asked to participate in a research study at the University of Toronto, funded by the Foundation for Alcohol Research. The purpose of this study is to help us understand reasons for drinking and drinking problems in young adults and how differences in the ways people deal with emotions and relationships influence their alcohol use. You are being asked to take part in this study because you responded to an advertisement and were then interviewed by a research assistant over the phone. This interview was done to determine whether you met the requirements for the study and to see if you were interested in further participation. Participation in this study is entirely voluntary. You may refuse to participate in the study at any time. In addition, if you decide to participate now, you may still withdraw from the study at any time.

Procedure
This study involves three phases, each described in more detail below:

1. Initial assessment and training on use of the online daily survey
2. 28 days of self-monitoring using the online daily survey
3. Monthly updates for one year
4. Final assessment in one year

If you choose to participate in this study, you will complete three different assessments. The first assessment will take place today. This will involve a self-report questionnaire that you will complete on a computer in the lab. This will take approximately 45 minutes to complete and will include questions about: your drinking pattern over the past 30 days, consequences you may have experienced because of drinking, and how you manage your mood and your relationships. We will also ask you some questions about your background, like your age, gender, and relationship status. Finally, we will ask you some questions about difficulties in other areas, such as experiences of trauma, anxiety, depressed mood, and problems with drug use. Once you have finished the questionnaire, the research assistant will provide you with training on the use of the online daily survey. This training will take approximately 30 minutes, depending on any previous experience you have had with online surveys. The training will cover the use of the online survey and any questions you have about the 28-day self-monitoring period. We want to be sure you are comfortable using the online survey and doing the self-monitoring before you leave the lab today, but you will also be able to contact us if you have any questions about the study after leaving here today. We will ask you to provide us with your email address at the end of today’s session, and we will send you an email with your personal ID code and instructions for accessing and using the survey. You will also get a copy of the instructions when you leave here today.

During the 28 days that you are completing the daily surveys one of our research assistants will be in regular email contact with you. The research assistant will contact you weekly to see how you are doing with the self-reporting and to answer any questions you might have. A research assistant will also be in contact with you each time you miss a survey. If you miss three consecutive surveys, we will assume you are intending to withdraw from the study and will contact you via email or telephone to confirm whether you have indeed withdrawn.

Once the 28 days of self-monitoring are over, we will have you come back to the laboratory so you can receive your payment.

The final assessment will take place one year after today. We will keep in touch with you through email throughout the year with a brief monthly survey and a reminder to let us know if you are changing your contact information. After you complete the final survey, you will be paid an additional $20.

**What is Daily Monitoring?**

The daily monitoring we are doing will be done electronically through a Web-based survey that is available online. We ask that you log into the survey website each evening, between the hours of 5 and 8 PM. You will be asked the same questions each time you log into the survey. These questions ask you about your mood and experiences with other people (friends, family, partner, acquaintances) THAT DAY and about your drinking THE DAY/NIGHT BEFORE. So, if you are filling out the survey on a Monday, you will be answering questions about your mood and relationships on Monday and any drinking you did on Sunday or Sunday night. If you drank alcohol on the previous day, we will ask you how much you drank, how much time you spent drinking and if you had any negative effects from your drinking (e.g., you missed class the next day, you felt sick, you got into an argument with a friend, etc.). If you decide to participate in
this study, a research assistant will review all of this with you before you leave today and will answer any questions you might have about how to use the online daily survey.

**What is the Purpose of This Study?**

The goal of this study is to help us better understand why young adults drink alcohol. There is some research suggesting that how people handle their emotions and their relationships has an effect on drinking. We hope to learn more about how drinking is linked with mood and relationships as people go about their everyday lives. We want to learn more about these influences so that we can develop better ways of preventing and treating problem drinking in the future.

**Are There Any Risks or Benefits?**

There are no known harms associated with participating in this study. By completing the self-monitoring of your mood, relationships, and alcohol use, you may begin to notice some patterns that were not apparent before. For example, you may notice that your mood is low for several days in a row or that you are drinking more often than you thought. In addition, during the course of completing the survey, you may notice that you reported experiencing difficulties in some areas, including problems with your alcohol use, anxious or depressed mood, experiences of trauma, or drug use issues. If you noticed difficulties in any of these areas, it may be helpful to talk to someone about this. At the end of this study session, we will provide you with contact information for several helpful resources so that you can talk to someone if you wish. In addition, if you choose to withdraw from the survey at any time, you will either be led to a list of various resources, or we will email them to you with the email address you provided to participate in the study.

This may also be a benefit to participating in the study. You might get a better understanding of how your mood and your relationships are related to your drinking. Having a list of resources and information on alcohol problems may be helpful to you (or a loved one/friend) in the future.

Your participation in this study will help us gain a better understanding of what kinds of treatments might work best for young adults who have problems with their drinking and how we can support people who are looking for help with drinking problems.

**How Will I Be Compensated?**

This study requires you to take a few minutes out of your day, every day, for 28 days. We want to be sure you are compensated for the time you are putting in to the study. We will pay you $25 today for completing the initial questionnaires and the training on the use of the online survey. As a thank-you for your ongoing efforts, we will give you a gift each week after you check-in with the research assistant. This gift is a $20 gift card to Amazon.ca which you will receive if you completed at least 5 daily surveys that week. At the very end of the study, you will receive another $20 for filling out the final survey. We will also give you a bonus $25 if you complete 80% of the self-monitoring assessments over the 28 days of self-monitoring. So, in total, you have the opportunity to receive $70 as well as $80 in gift cards (total value: $150).
How Will My Confidentiality Be Protected?

All the data you provide is confidential. You will not be required to put your name on the questionnaires and your name (or other identifying information) will not be used in any reports or presentations that arise from the study. The consent form is stored separately from any study data. We will store your first name and contact information (i.e., email address and phone number) separately from your survey data. The only way we can connect you to your data is through an ID code that we will provide you with. We will use this ID code to match your data from today with your daily diary responses and the data you give us one year from now. Only research personnel affiliated with the study will have access to these separate encrypted and password-protected data files and ID codes. Your contact information will be promptly deleted upon completion of the final survey or should you request this to be done by contacting the principal investigator of the study (Dr. Abby Goldstein) directly. Once the file containing your first name and contact information has been deleted, only the ID code will be used to connect your initial survey responses with the corresponding daily diary entries and final survey responses. Should you decide to withdraw your data after we have deleted your first name and contact information, you will be asked to provide your ID code as we will not be able to locate or delete your data within the file without it. All contact information is stored on a secure, password-protected memory key in a locked filing cabinet at the University of Toronto.

Limits to confidentiality

Under certain rare circumstances we may need to inform individuals outside of the study about your responses. Specifically, we are required to report the following: if you indicate that you intend to seriously harm yourself or harm another person, or if you disclose knowledge or suspicion of child abuse or neglect. In addition, if your responses imply any of the above, we may contact you to clarify the nature of your responses and determine whether we need to inform individuals outside of the study.

Anonymity and confidentiality will be respected to the fullest extent permitted by law, but court authorities may have the power to subpoena data regarding illegal activities, should unusual and special circumstances warrant such an investigation. If this occurs, we will resist disclosing any information about you or your participation in this study and will immediately contact institutional supports and legal counsel.

Can I Refuse or Withdraw?

As noted above, you may refuse to participate in this study. You may choose to skip questions you find uncomfortable without penalty. If you decide to participate now, but then later decide you are no longer interested, you may withdraw from the study at any time. If you withdraw from the study during the online survey, we will still provide you with contact information for resources where you can go to talk to someone if you have any concerns about your alcohol use or about problems with anxious or depressed mood, trauma experiences, or drug use. If you choose to withdraw from the study following the submission of a survey, we will provide you with an ID code that you can keep and use to identify your data in order to have it removed. In
this case we ask that you contact us, provide us with your ID code (listed on the card we provide at the end of today’s session) and let us know that you’d like your data removed from the study. As noted above, following completion of the final survey we will delete the file containing your first name and contact information. Therefore, we will not be able to locate or delete your data without you providing your ID code.

Questions?

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

Dr. Abby L. Goldstein, Principal Investigator

Department of Applied Psychology and Human Development
OISE, University of Toronto
252 Bloor Street West
Toronto, ON M5S 1V6
Tel: (416)978-0703
Email: 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.

INFORMED CONSENT FORM – Participant Copy

Please check the options that apply below.

I have read all of the information outlined above and:

I have no questions about this research project.

I have asked all my questions and they have been answered by the research staff to my satisfaction.

I have the contact information of whom to call if I have questions in the future.

I give my consent to participate in the research study.
INFORMED CONSENT FORM – Researcher Copy

Please check the options that apply below.

I have read all of the information outlined above and:

I have no questions about this research project.

I have asked all my questions and they have been answered by the research staff to my satisfaction.

I have the contact information of whom to call if I have questions in the future.

I give my consent to participate in the research study.

________________________________________  __________________________________________
Signature of participant                        Date
### Appendix C

**Online Survey Measures**

**Attachment Styles Questionnaire (ASQ)**

Show how much you agree with each of the following items by rating them on this scale:

<table>
<thead>
<tr>
<th>Item</th>
<th>Rating Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall, I am a worthwhile person.</td>
<td>1: Totally disagree, 2: Strongly disagree, 3: Slightly disagree, 4: Slightly agree, 5: Strongly agree, 6: Totally agree</td>
</tr>
<tr>
<td>2. I am easier to get to know than most people.</td>
<td>1: Totally disagree, 2: Strongly disagree, 3: Slightly disagree, 4: Slightly agree, 5: Strongly agree, 6: Totally agree</td>
</tr>
<tr>
<td>3. I feel confident that other people will be there for me when I need them.</td>
<td>1: Totally disagree, 2: Strongly disagree, 3: Slightly disagree, 4: Slightly agree, 5: Strongly agree, 6: Totally agree</td>
</tr>
<tr>
<td>4. I prefer to depend on myself rather than other people.</td>
<td>1: Totally disagree, 2: Strongly disagree, 3: Slightly disagree, 4: Slightly agree, 5: Strongly agree, 6: Totally agree</td>
</tr>
<tr>
<td>5. I prefer to keep to myself.</td>
<td>1: Totally disagree, 2: Strongly disagree, 3: Slightly disagree, 4: Slightly agree, 5: Strongly agree, 6: Totally agree</td>
</tr>
<tr>
<td>6. To ask for help is to admit that you’re a failure.</td>
<td>1, 2, 3, 4, 5, 6</td>
</tr>
<tr>
<td></td>
<td>Totally disagree</td>
</tr>
<tr>
<td>---</td>
<td>------------------</td>
</tr>
<tr>
<td>7.</td>
<td>People’s worth should be judged by what they achieve.</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Totally disagree</td>
</tr>
<tr>
<td>8.</td>
<td>Achieving things is more important than building relationships.</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Totally disagree</td>
</tr>
<tr>
<td>9.</td>
<td>Doing your best is more important than getting on with others.</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Totally disagree</td>
</tr>
<tr>
<td>10.</td>
<td>If you’ve got a job to do, you should do it no matter who gets hurt.</td>
</tr>
<tr>
<td></td>
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<td>Totally disagree</td>
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<td>11.</td>
<td>It’s important to me that others like me.</td>
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<td></td>
<td>Totally disagree</td>
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<tr>
<td>12.</td>
<td>It’s important to me to avoid doing things that others won’t like.</td>
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<td></td>
<td>Totally disagree</td>
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</table>
13. I find it hard to make a decision unless I know what other people think.

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14. My relationships with others are generally superficial.

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15. Sometimes I think I am no good at all.

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16. I find it hard to trust other people.

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17. I find it difficult to depend on others.

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18. I find that others are reluctant to get as close as I would like.

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</table>

19. I find it relatively easy to get close to other people.

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20. I find it easy to trust others.

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21. I feel comfortable depending on other people.

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22. I worry that others won’t care about me as much as I care about them.

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23. I worry about people getting too close.

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24. I worry that I won’t measure up to people.

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25. I have mixed feelings about being close to other people.

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26. While I want to get close to others, I feel uneasy about it.

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27. I wonder why people would want to be involved with me.

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28. It’s very important to me to have a close relationship.

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29. I worry a lot about my relationships.

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<td>Strongly agree</td>
<td>Totally agree</td>
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30. I wonder how I would cope without someone to love me.

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<td>Totally agree</td>
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31. I feel confident about relating to others.

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32. I often feel left out or alone.

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<th>disagree</th>
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<th>Slightly agree</th>
<th>agree</th>
<th>Totally agree</th>
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<tbody>
<tr>
<td>33.</td>
<td>I often worry that I do not really fit in with other people.</td>
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<td>1: Totally disagree</td>
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<td>3: Slightly disagree</td>
<td>4: Slightly agree</td>
<td>5: Strongly agree</td>
<td>6: Totally agree</td>
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<tr>
<td>34.</td>
<td>Other people have their own problems, so I don’t bother them with mine.</td>
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<td>4: Slightly agree</td>
<td>5: Strongly agree</td>
<td>6: Totally agree</td>
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<tr>
<td>35.</td>
<td>When I talk over my problems with others, I generally feel ashamed or foolish.</td>
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<td>1: Totally disagree</td>
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<tr>
<td>36.</td>
<td>I am too busy with other activities to put much time into relationships.</td>
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<tr>
<td>37.</td>
<td>If something is bothering me, others are generally aware and concerned.</td>
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<tr>
<td>38.</td>
<td>I am confident that other people will like and respect me.</td>
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39. I get frustrated when others are not available when I need them.

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40. Other people often disappoint me.

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**Difficulties in Emotion Regulation Scale (DERS)**

1. I am clear about my feelings.

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<th>5</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Almost never (0-10%)</td>
<td>Sometimes (11-35%)</td>
<td>About half the time (36-65%)</td>
<td>Most of the time (66 – 90%)</td>
<td>Almost always (91-100%)</td>
</tr>
</tbody>
</table>

2. I pay attention to how I feel.

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<td>Almost always (91-100%)</td>
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</table>

3. I experience my emotions as overwhelming and out of control.

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<td>Almost always (91-100%)</td>
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</tbody>
</table>

4. I have no idea how I am feeling.
<table>
<thead>
<tr>
<th></th>
<th>Almost never (0-10%)</th>
<th>Sometimes (11-35%)</th>
<th>About half the time (36-65%)</th>
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<th>Almost always (91-100%)</th>
</tr>
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<tbody>
<tr>
<td>5</td>
<td>I have difficulty making sense out of my feelings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
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<td>Most of the time (66 – 90%)</td>
<td>Almost always (91-100%)</td>
</tr>
<tr>
<td>6</td>
<td>I am attentive to my feelings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Almost never (0-10%)</td>
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<td>Most of the time (66 – 90%)</td>
<td>Almost always (91-100%)</td>
</tr>
<tr>
<td>7</td>
<td>I know exactly how I am feeling.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Almost never (0-10%)</td>
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<td>Most of the time (66 – 90%)</td>
<td>Almost always (91-100%)</td>
</tr>
<tr>
<td>8</td>
<td>I care about what I am feeling.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>9</td>
<td>I am confused about how I feel.</td>
<td>1</td>
<td>2</td>
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<td>4</td>
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<td></td>
<td>Almost always</td>
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<tr>
<td>10. When I’m upset, I acknowledge my emotions.</td>
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<tr>
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<table>
<thead>
<tr>
<th>11. When I’m upset, I become angry with myself for feeling that way.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> Almost never (0-10%)</td>
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<table>
<thead>
<tr>
<th>12. When I’m upset, I become embarrassed for feeling that way.</th>
</tr>
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<tbody>
<tr>
<td><strong>1</strong> Almost never (0-10%)</td>
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<table>
<thead>
<tr>
<th>13. When I’m upset, I have difficulty getting work done.</th>
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<tbody>
<tr>
<td><strong>1</strong> Almost never (0-10%)</td>
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<thead>
<tr>
<th>14. When I’m upset, I become out of control.</th>
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<td>24.</td>
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</tbody>
</table>
25. When I'm upset, I feel guilty for feeling that way.

<table>
<thead>
<tr>
<th></th>
<th>1 Almost never (0-10%)</th>
<th>2 Sometimes (11-35%)</th>
<th>3 About half the time (36-65%)</th>
<th>4 Most of the time (66 – 90%)</th>
<th>5 Almost always (91-100%)</th>
</tr>
</thead>
</table>

26. When I'm upset, I have difficulty concentrating.

<table>
<thead>
<tr>
<th></th>
<th>1 Almost never (0-10%)</th>
<th>2 Sometimes (11-35%)</th>
<th>3 About half the time (36-65%)</th>
<th>4 Most of the time (66 – 90%)</th>
<th>5 Almost always (91-100%)</th>
</tr>
</thead>
</table>

27. When I'm upset, I have difficulty controlling my behaviors.

<table>
<thead>
<tr>
<th></th>
<th>1 Almost never (0-10%)</th>
<th>2 Sometimes (11-35%)</th>
<th>3 About half the time (36-65%)</th>
<th>4 Most of the time (66 – 90%)</th>
<th>5 Almost always (91-100%)</th>
</tr>
</thead>
</table>

28. When I'm upset, I believe there is nothing I can do to make myself feel better.

<table>
<thead>
<tr>
<th></th>
<th>1 Almost never (0-10%)</th>
<th>2 Sometimes (11-35%)</th>
<th>3 About half the time (36-65%)</th>
<th>4 Most of the time (66 – 90%)</th>
<th>5 Almost always (91-100%)</th>
</tr>
</thead>
</table>

29. When I'm upset, I become irritated with myself for feeling that way.

|   | 1 Almost never (0-10%) | 2 Sometimes (11-35%) | 3 About half the time (36-65%) | 4 Most of the time (66 – 90%) | 5 Almost always (91-100%) |
30. When I'm upset, I start to feel very bad about myself.

<table>
<thead>
<tr>
<th></th>
<th>Almost never (0-10%)</th>
<th>Sometimes (11-35%)</th>
<th>About half the time (36-65%)</th>
<th>Most of the time (66 – 90%)</th>
<th>Almost always (91-100%)</th>
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</table>

31. When I'm upset, I believe that wallowing in it is all I can do.

<table>
<thead>
<tr>
<th></th>
<th>Almost never (0-10%)</th>
<th>Sometimes (11-35%)</th>
<th>About half the time (36-65%)</th>
<th>Most of the time (66 – 90%)</th>
<th>Almost always (91-100%)</th>
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32. When I'm upset, I lose control over my behaviors.

<table>
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<tr>
<th></th>
<th>Almost never (0-10%)</th>
<th>Sometimes (11-35%)</th>
<th>About half the time (36-65%)</th>
<th>Most of the time (66 – 90%)</th>
<th>Almost always (91-100%)</th>
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</table>

33. When I'm upset, I have difficulty thinking about anything else.

<table>
<thead>
<tr>
<th></th>
<th>Almost never (0-10%)</th>
<th>Sometimes (11-35%)</th>
<th>About half the time (36-65%)</th>
<th>Most of the time (66 – 90%)</th>
<th>Almost always (91-100%)</th>
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</tbody>
</table>

34. When I'm upset, I take time to figure out what I'm really feeling.

<table>
<thead>
<tr>
<th></th>
<th>Almost never (0-10%)</th>
<th>Sometimes (11-35%)</th>
<th>About half the time (36-65%)</th>
<th>Most of the time (66 – 90%)</th>
<th>Almost always (91-100%)</th>
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</tbody>
</table>

35. When I'm upset, it takes me a long time to feel better.
Drinking Motives Questionnaire (DMQ)

The next questions concern reasons that people sometimes give for drinking alcohol. Thinking of all the times you drink, how often would you say you drink for each of the following reasons?

HOW OFTEN DO YOU DRINK…

Response options:
1 = Almost never/Never
2 = Some of the time
3 = Half of the time
4 = Most of the time
5 = Almost always/Always

1. To Forget your worries
2. Because your friends pressure you to drink
3. Because it helps you enjoy a party
4. Because it helps when you feel depressed or nervous
5. To be sociable
6. To cheer up when you are in a bad mood
7. Because you like the feeling
8. So that others won’t kid you about not drinking
9. Because it is exciting
10. To get high
11. Because it makes social gatherings more fun
12. To fit in with a group you like
13. Because it gives you a pleasant feeling
14. Because it improves parties and celebrations
15. Because you feel more self-confident & sure of yourself
16. To celebrate a special occasion with friends
17. To forget about your problems
18. Because it is fun
19. To be liked
20. So you won’t feel left out

**Alcohol Use Measure: Alcohol Use Timeline Followback (TLFB)**

We are interested in your alcohol use over the past 30 days (1 month) and to know what you were drinking, how long you spent drinking, how much alcohol you drank, and who you were drinking with at the time.

**Remember: A drink means one bottle of beer, one cooler, one glass of wine, or a single shot of liquor (a double shot of liquor counts as two drinks)**

<table>
<thead>
<tr>
<th>For each day that you were drinking, please indicate:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) <strong>TYPE:</strong> Type of alcohol</td>
</tr>
<tr>
<td>2) <strong>TIME:</strong> Amount of time spent drinking (in minutes)</td>
</tr>
<tr>
<td>3) <strong>DRINKS:</strong> Number of standard drinks consumed**</td>
</tr>
<tr>
<td>4) <strong>WHO:</strong> Who you drinking with at the time</td>
</tr>
<tr>
<td>(i.e., alone, with friends, with family, or with strangers)</td>
</tr>
</tbody>
</table>

Please complete the following:

<table>
<thead>
<tr>
<th>Start Date (Day 1):</th>
<th>End Date (Yesterday):</th>
</tr>
</thead>
<tbody>
<tr>
<td>MONTH / DAY / YEAR</td>
<td>MONTH / DAY / YEAR</td>
</tr>
<tr>
<td>Sunday</td>
<td>Monday</td>
</tr>
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<td>--------</td>
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<tr>
<td>Example:</td>
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<tr>
<td>1) Vodka</td>
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<td>2) 180 min</td>
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<tr>
<td>(3hrs)</td>
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<td>3) 5</td>
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<td>4) Friends</td>
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<td>6</td>
<td>7</td>
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<td>13</td>
<td>14</td>
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<td>20</td>
<td>21</td>
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<td>27</td>
<td>28</td>
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</tbody>
</table>
**Young Adult Alcohol Consequences Questionnaires (YAACQ)**

Below is a list of things that sometimes happen to people either during, or after they have been drinking alcohol. Next to each item below, please click the bubble in either the YES or NO column to indicate whether that item describes something that has happened to you IN THE PAST YEAR.

In the past year...

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>NO</th>
<th>YES</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>While drinking, I have said or done embarrassing things.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>The quality of my work or schoolwork has suffered because of my drinking.</td>
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<tr>
<td>3.</td>
<td>I have felt badly about myself because of my drinking.</td>
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<td>4.</td>
<td>I have driven a car when I knew I had too much to drink to drive safely.</td>
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<td>5.</td>
<td>I have had a hangover (headache, sick stomach) the morning after I had been drinking.</td>
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<td>6.</td>
<td>I have passed out from drinking.</td>
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<td>7.</td>
<td>I have taken foolish risks when I have been drinking.</td>
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<tr>
<td>8.</td>
<td>I have felt very sick to my stomach or thrown up after drinking.</td>
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<td>9.</td>
<td>I have gotten into trouble at work or school because of drinking.</td>
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<tr>
<td>10.</td>
<td>I often drank more than I originally had planned.</td>
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<td>11.</td>
<td>My drinking has created problems between myself and my boyfriend/girlfriend/spouse, parents, or other near relatives.</td>
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<tr>
<td>12.</td>
<td>I have been unhappy because of my drinking.</td>
<td></td>
<td></td>
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<tr>
<td>13.</td>
<td>I have gotten into physical fights because of drinking.</td>
<td></td>
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<tr>
<td>14.</td>
<td>I have spent too much time drinking.</td>
<td></td>
<td></td>
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<tr>
<td>15.</td>
<td>I have not gone to work or missed classes at school because of drinking, a hangover, or illness caused by drinking.</td>
<td></td>
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<tr>
<td>16.</td>
<td>I have felt like I needed a drink after I’d gotten up (that is, before breakfast).</td>
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<tr>
<td>17.</td>
<td>I have become very rude, obnoxious or insulting after drinking.</td>
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<tr>
<td>18.</td>
<td>I have felt guilty about my drinking.</td>
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<td>19.</td>
<td>I have damaged property, or done something disruptive such as setting off a</td>
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<tr>
<td>false fire alarm, or other things like that after I had been drinking.</td>
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<tr>
<td>20.</td>
<td>Because of my drinking, I have not eaten properly.</td>
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<tr>
<td>21.</td>
<td>I have been less physically active because of drinking.</td>
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<tr>
<td>22.</td>
<td>I have had “the shakes” after stopping or cutting down on drinking (eg., hands shake so that coffee cup rattles in the saucer or have trouble lighting a cigarette).</td>
<td></td>
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<tr>
<td>23.</td>
<td>My boyfriend/girlfriend/spouse/parents have complained to me about my drinking.</td>
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<tr>
<td>24.</td>
<td>I have woken up in an unexpected place after heavy drinking.</td>
<td></td>
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<tr>
<td>25.</td>
<td>I have found that I needed larger amounts of alcohol to feel any effect, or that I could no longer get high or drunk on the amount that used to get me high or drunk.</td>
<td></td>
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<tr>
<td>26.</td>
<td>As a result of drinking, I neglected to protect myself or my partner from a sexually transmitted disease (STD) or an unwanted pregnancy.</td>
<td></td>
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<tr>
<td>27.</td>
<td>I have neglected my obligations to family, work, or school because of drinking.</td>
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<tr>
<td>28.</td>
<td>I often have ended up drinking on nights when I had planned not to drink.</td>
<td></td>
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<tr>
<td>29.</td>
<td>When drinking, I have done impulsive things that I regretted later.</td>
<td></td>
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<tr>
<td>30.</td>
<td>I have often found it difficult to limit how much I drink.</td>
<td></td>
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<tr>
<td>31.</td>
<td>My drinking has gotten me into sexual situations I later regretted.</td>
<td></td>
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<tr>
<td>32.</td>
<td>I’ve not been able to remember large stretches of time while drinking heavily.</td>
<td></td>
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<tr>
<td>33.</td>
<td>While drinking, I have said harsh or cruel things to someone.</td>
<td></td>
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<tr>
<td>34.</td>
<td>Because of my drinking I have not slept properly.</td>
<td></td>
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<tr>
<td>35.</td>
<td>My physical appearance has been harmed by my drinking.</td>
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<tr>
<td>36.</td>
<td>I have said things while drinking that I later regretted.</td>
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<td>37.</td>
<td>I have awakened the day after drinking and found that I could not remember a part of the evening before.</td>
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<td>38.</td>
<td>I have been overweight because of drinking.</td>
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<td>39.</td>
<td>I haven’t been as sharp mentally because of my drinking.</td>
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<td>40.</td>
<td>I have received a lower grade on an exam or paper than I ordinarily could</td>
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<tr>
<td>117</td>
<td>have because of my drinking.</td>
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<tr>
<td>41.</td>
<td>I have tried to quit drinking because I thought I was drinking too much.</td>
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<td>42.</td>
<td>I have felt anxious, agitated, or restless after stopping or cutting down on drinking.</td>
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<td>43.</td>
<td>I have not had as much time to pursue activities or recreation because of drinking.</td>
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<td>44.</td>
<td>I have injured someone else while drinking or intoxicated.</td>
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<td>45.</td>
<td>I often have thought about needing to cut down or stop drinking.</td>
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<tr>
<td>46.</td>
<td>I have had less energy or felt tired because of my drinking.</td>
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<tr>
<td>47.</td>
<td>I have had a blackout after drinking heavily (i.e., could not remember hours at a time).</td>
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<tr>
<td>48.</td>
<td>Drinking has made me feel depressed or sad.</td>
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</tbody>
</table>
Appendix D
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.

*Telephone:* 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.

*Telephone:* 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.

*Telephone:* 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.

*Telephone:* 1-866-531-2600  
*Website:* [http://www.mentalhealthhelpline.ca/](http://www.mentalhealthhelpline.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.

**Telephone:** 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:** http://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.

**Telephone:** 1-800-668-6868  
**Email:** info@kidshelpphone.ca  
**Website:** http://www.kidshelpphone.ca/Teens/Home.aspx

**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.

**Telephone:** 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.

**Telephone:** 1-866-797-0000  
**Website:** http://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.

**Telephone:** Crisis line - 416-597-8808 (accepts collect calls)  
**Email:** info@trccmwar.ca  
**Website:** http://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.
Telephone: 1-800-668-2437
or 416-392-2437

Mobile Crisis Teams

The Gerstein Centre
Community visits, ten-bed short-stay residence, telephone support.

Telephone: 416-929-5200
Location: Serves city of Toronto
Website: 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.

Telephone: 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.

Telephone: 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.

Telephone: 416-255-7359
Email: info@jeantweed.com
Location: 215 Evans Avenue, Etobicoke
Website: 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.

Telephone: 416-504-1710
Location: 485 Queen Street West, 3rd Floor, Toronto
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.

Telephone: 416-504-1710 x228; Location: Toronto West
Telephone: 416-504-1710 x229; Location: Toronto East
Website: http://www.ymcagta.org/en/who-we-work-with/educators/gambling/index.html

Drug and Alcohol Registry of Treatment (DART)
Information and referral to alcohol and drug treatment services in Ontario.

Telephone: 1-800-565-8603
Website: http://www.drugandalcoholhelpline.ca/

Youth Services

Turning Point Youth Services
Mental health, counselling, and support services to at-risk and vulnerable youth 12-24 and their families.

Telephone: 416-925-9250
Location: 95 Wellesley Street East, Toronto (Wellesley St. E & Jarvis St.)
Website: http://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.

Telephone: 416-286-9449
Email: info@nativechild.org
Location: 156/156A Galloway Rd, Toronto, ON, M1E 1X2
(Scarborough South: Galloway Rd & Kingston Rd)
Website: http://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.

Telephone: 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: http://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.

**Telephone:** 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)

**Youth Unlimited**  
Counselling, neighbourhood, school and street outreach, young mother's group, case management, life skills, job search skills.

**Telephone:** 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:** [http://www.youthunlimitedgta.ca/](http://www.youthunlimitedgta.ca/)

**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.

**Telephone:** 416-495-8832  
**Email:** eschild@regesh.com  
**Location:** 149 Willowdale Ave, Toronto, ON, M2N 4Y5  
(North York Central: Yonge St & Sheppard Ave E)  
**Website:** [http://www.regesh.com/](http://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.

**Telephone:** 416-264-1007  
**Email:** fchristmas@bbnc.ca  
**Location:** 2849 Kingston Rd, Toronto, ON, M1M 1N2  
(Scarborough South: Kingston Rd & St Clair Ave E)  
**Website:** [http://www.bbnc.ca/](http://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.
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.

Telephone: Office Phone/Crisis Phone - 416-495-0926
Email: info@bellwood.ca
Location: 1020 McNicoll Ave, Toronto, ON, M1W 2J6
(Toronto West: 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.

Telephone: 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/sexualhealth/sh_clinics.htm#

Centre for Addictions and Mental Health
Telephone: 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: http://www.camh.ca/en/hospital/Pages/home.aspx

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)
Telephone: 416-756-6001

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

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

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

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

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

No/Low Cost Therapy Services

Family Services Toronto, Intake line
Several branches, intake line for all branches
Tel: 416-595-9618

OISE Psychology Clinic
Low-cost therapy and psychoeducational assessments, run September to May every year. 252 Bloor Street, West, 7th Floor, Toronto, ON M5S 1V6
Tel: 416-978-0620 or 416-978-0654

Toronto Centre for Cognitive Therapy
36 Toronto Street Suite 850 Both OHIP and Fee for services
Tel: 416-777-6699
Website: www.cbt.ca

Toronto Institute for Relational Psychotherapy
$20-40, low-wait times, services for anxiety, depression, relationship issues, family of
origin, social anxiety, low self-esteem
Tel: 416-465-2392

Woodgreen Community Services
815 Danforth Avenue Suite 100 Drop in/ongoing counselling Wednesdays 4-7pm
Tel: 416-645-6000 ext 2512
Website: www.woodgreen.org