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Investigating the Relationship between Reckless Behaviours, Gender, Psychological Mindedness, and Attachment Security.

Lucas A. Ford and Aileen M. Pidgeon

Abstract

Reckless behaviours, such as reckless driving, sexual behaviours and drug use, are major lifestyle contributors to morbidity and mortality for young adults. The purpose of the current study is to investigate the relationship between reckless behaviours, gender, attachment security and psychological mindedness. Data was collected from university students ($n = 101$) aged between 18 to 30 years old ($M = 21$) and analysed using multivariate analysis of covariance. Gender was found to be a significant predictor of reckless behaviour ($p = .004$), with males reporting significantly higher levels. Participants reporting high levels of attachment security did not report significantly different reckless behaviours than participants with low levels of attachment security. However, participants reporting high levels of psychological mindedness, compared to those with low levels of psychological mindedness, tended to engage in significantly more reckless substance use ($p < .024$). To date, there has been relatively little or no research on the relationship between psychological mindedness and reckless behavior, and these results highlight the inconclusiveness of previous research regarding the relationship between PM and therapy outcome, warranting further research. The results raise questions regarding what behaviours constitute healthy psychological functioning and adjustment in young adulthood. Limitations of the study, including characteristics of the sample and generalisability of the findings, are identified. Implications of the results for developing psychological mindedness and future research are discussed.

Keywords: reckless behaviours, reckless driving, reckless sexual behaviours, reckless drug use, psychological mindedness, attachment security

Introduction

Reckless driving, reckless sexual behaviours and reckless substance use can be major lifestyle contributors to morbidity and mortality for young adults (Arnett, 2005; Australian Bureau of Statistics, 2006). Young adults (18 – 30) are more likely than other groups to engage in reckless driving (Jonah, 1990), reckless sexual behaviours (National Centre in HIV Epidemiology and Clinical Research, 2005), and drug use (Arnett, 2005). Increasing our understanding of the factors that influence these reckless behaviours is important as growing segments of young people are engaging in reckless behaviours (DiClement, Hansen, & Ponton, 1996).

Participation in reckless behaviours has been positively associated with insecure attachment (Kassel, Wardle, & Roberts, 2007). Attachment security has also been found to be positively related to the concept of psychological mindedness (Beitel & Cecero, 2003). While attachment security has been linked to reckless behaviours and psychological mindedness independently, the relationships between psychological mindedness, attachment security, and reckless behaviours have not previously been investigated. The focus of this paper is to investigate the relationship between these variables.

Reckless Behaviours

Reckless behaviours are extensive in young adults (Arnett, 2005; Bradley & Wildman, 2002). While previous researchers have referred to these behaviours as risk taking or risky behaviours, Arnett (1992) argues that a distinction should be made between risk behaviours and reckless behaviours. Risk behaviours have been defined as socially approved, thrill seeking or adventurous behaviours, such as mountain biking or skydiving. Reckless behaviours have been defined as socially unacceptable behaviours with the potential for negative consequences without precautions taken. Consistent with the literature on reckless behaviours (Bradley & Wildman, 2002), these definitions have been followed in the current study.

Involvement in one reckless behaviour increases the likelihood of involvement in other reckless behaviours (Irwin & Shafer, 1992). Jessor (1991, p. 600) noted this tendency and referred to these “organized patterns” of reckless behaviours as a syndrome. Caspi et al’s. (1997) study supported these findings, showing significant correlations between alcohol dependence, unsafe sex and dangerous driving habits in young adults. Significant relationships have also been found between excessive alcohol consumption, smoking, drug use and unsafe sexual experience (Zuckerman & Kuhlman, 2000). Previous research has found that males report engaging in significantly more reckless behaviours than females, particularly regarding reckless driving, where the gender gap is widest (Arnett, 1996; Bradley & Wildman, 2002). These findings are reflected in higher insurance rates for young male drivers in the United States and Canada. In a meta-analysis of 150 studies, Byrnes, Miller, and Schafer (1999) found that males were significantly more likely to engage in reckless behaviours. Moreover, this behavioural difference was most pronounced during the young adult period of development than at any other time. A number of theories have been proposed to explain this tendency for males to engage in more reckless behaviours than females; however, the empirical findings regarding which theory best supports this gender difference in reckless behaviours remains inconclusive (Byrnes et al., 1999). Another factor that has been demonstrated to contribute to reckless behaviour participation is an individual’s attachment security.

Attachment Security

Attachment theory, originally conceptualised by Bowlby (1969), has proposed that human infants have an innate psychobiological system that motivates them to seek and assure proximity to supportive others, otherwise known as attachment figures. Simply stated, if a child’s attachment figure proves to be available, supportive and consistently responsive to the child’s needs in times of stress, then the child will develop secure internal working models of self and others resulting in feelings of security and in trusting, healthy relationships with others (Sroufe & Waters, 1977). Importantly, because individuals with secure attachment have positive views of others and have received support when previously required, they are more likely to turn to others for support as a distress regulation technique. Viewed as an inner resource, attachment security provides individuals with a sense of self

efficacy, the ability to cope with challenges, and the capacity to maintain emotional stability with early attachment experiences influencing the quality of relationships in adulthood (Mallinckrodt, 2000).

Children experiencing their attachment figures as being unreliable, unavailable and unsupportive will develop insecure attachments (Bowlby, 1980). Children can form negative views of self and others, impacting upon their abilities to form successful relationships with others. Moreover, individuals with insecure attachment, who have not developed a positive view of others, are less likely to seek support from others during times of distress. Instead, they are likely to turn to other means of distress and affect regulation, including reckless behaviours (Kassel et al., 2007).

Research on attachment theory has commonly relied on categorical and continuous measures based on the attachment classifications systems of Ainsworth, Blehar, Waters, and Wall (1978), and of Brennan, Clark, and Shaver (1998), whereby individuals are classified as having a specific attachment style. However, Baldwin and Fehr (1995) and Scharfe and Bartholomew (1994) found that assessments using these attachment style classifications can change over relatively short periods of time.

Attachment styles have been shown to be inconsistent across relationships, with children and adults often developing different attachment styles with different people (Baldwin, Keelan, Fehr, & Koh-Rangarajoo, 1994). For instance, depending on the quality of interactions, a child may develop a strong, healthy attachment to his or her mother, but not father (or vice versa). The Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987) was used as a measure of attachment security in the current study. The IPPA also appears to be more reliable with three week test-retest reliabilities above .86 (Armsden & Greenberg, 1987). No study to date has investigated the relationship between attachment security and reckless behaviours using the IPPA.

Reckless Behaviours and Attachment Security

An individual's attachment security has also been demonstrated to contribute to reckless behaviour participation. It should be noted that much of the research presented to demonstrate the inverse relationship between secure attachment and reckless behaviours utilises either categorical or continuous measures of attachment style (anxious, avoidant and secure attachments). While these studies measure attachment security in diverse manners, they are considered relevant to the present study because the theoretical basis for these attachment measures, Bowlby's theory of attachment (1980), is consistent with that of the IPPA (Armsden & Greenberg, 1987) utilised in the current study.

Illicit substance use has been associated with insecure attachment (Caspers, Cadoret, Langbehn, Yucuis, & Troutman, 2005). In a study of adoptees, Caspers et al. (2005) found that insecurely attached participants reported higher prevalence of illicit substance use. The authors also found that participants with insecure attachment tended to have less effective emotional regulation, resulting in increased risk of psychological difficulties and maladaptive coping mechanisms. McNally, Palfai, Levine and Moore (2003) supported these findings in their investigation of the relationships between attachment, coping and alcohol related problems in university students. McNally et al. (2003) found that coping motives mediated the relationship between attachment style and alcohol use, indicating that insecurely attached individuals consume alcohol to regulate emotional distress.

Kassel et al. (2007) found that insecure attachment was related to frequency of drug use and stress motivated drug use. This is consistent with previous research indicating that insecurely attached individuals engage in substance use as a maladaptive coping mechanism. Kassel et al. (2007) found that anxious attachment significantly influenced substance use primarily through its effect on

dysfunctional attitudes and self esteem, leading the authors to propose that individuals who develop insecure internal working models of attachment during childhood are, in a sense, predisposed to experiencing distress. These findings suggest that individuals with insecure attachment are more likely to engage in substance use to alleviate these feelings.

Taubman–Ben-Ari and Mikulincer (2007) found that feelings of distress also play a role in the relationship between attachment security and reckless driving. In a series of three studies by Taubman–Ben-Ari and Mikulincer (2007), high school students were randomly allocated to one of three groups: a group primed with positive affect (e.g. a humorous cartoon), a group primed with neutral affect (e.g. people speaking about day-to-day activities without emotional content), or a group primed with attachment security (e.g. a father and son speaking about their positive relationship and how the father has been responsive to the son’s needs). Participants were primed via poster ($n = 137$), video ($n = 147$), or guided imagination ($n = 225$). The participants were then asked to complete a series of questionnaires, including a questionnaire regarding their likelihood of engaging in reckless driving (e.g. “You are driving home from a pub. You drank two beers and you are a bit tired. The car is full of your friends, who are shouting at you to speed up. What do you think are the chances that you will drive at 140 km/h?”). The authors found that attachment security priming reduced the reported likelihood of reckless driving in securely attached participants while increasing the likelihood of reckless driving in participants with attachment anxiety. The authors propose that attachment security priming reminded anxiously attached participants of their insecurities, causing them to experience distress thereby increasing the likelihood of reporting reckless driving.

Cooper, Shaver, and Collins (1998) also found that experiencing distress in a population of people who were categorised as anxiously attached was related to reckless behaviour participation. The authors found that these people reported the highest levels of reckless behaviours. The authors also found that securely attached individuals were *not* the least likely to engage in reckless behaviours. While securely and insecurely attached individuals both engaged in reckless behaviours to some degree, the authors proposed that the underlying functions and motivations for participation are different; while insecure participants primarily engaged in reckless behaviours in a maladaptive attempt to manage distress symptoms, securely attached individuals engaged in reckless behaviours as a means of “exploring” behavioural domains. In other words, for secure participants, moderate reckless behaviour participation may serve adaptive and developmentally appropriate needs.

As the concept of psychological mindedness has been associated with increased coping ability and decreased levels of distress (Beitel, Ferrer, & Cecero, 2005; Cecero, Beitel, & Prout, 2008), investigating this relationship further is worthwhile, since psychological mindedness may also act as a protective factor for reducing reckless behaviours. The present study will examine this relationship with a view of providing an understanding of the potential therapeutic utility of psychological mindedness in reducing reckless behaviours.

Psychological Mindedness

Psychological mindedness (PM) has been defined as the “predisposition to engage in acts of affective and intellectual inquiry into how and why oneself and /or others behave, think, and feel the way that they do” (Grant, 2001, p. 12). Grant states that PM is a process directed at the explanation or understanding of one’s own and others’ behaviour, while McCallum (1998) and Piper et al. (2001) postulate that PM may be a general skill that enables individuals to reflect on internal processes or external events.

PM has consistently been linked to positive, healthy constructs. For example, Trudeau and Reich (1995) found that PM was significantly and positively related to psychological well being. In addition, the results indicated that psychology students were significantly more psychologically minded than other social science students. However, conflicting results have been found in the study of PM and outcome of therapeutic interventions. For example, Boylan (2006) found that higher PM scores were not predictive of improvement of depression or psychosocial functioning across a sample of adolescents with major depressive disorder. This result is consistent with other studies that failed to find a positive relation between PM and therapy outcome (Conte et al., 1996; McCallum & Piper, 1997), and inconsistent with studies that found PM to be related to favorable therapy outcome in the treatment of complicated grief (McCallum et al., 2003; Piper et al., 2001).

PM has also been shown to be related to adaptive personality characteristics. For instance it was positively correlated with the Extraversion, Openness, Agreeableness, and Conscientiousness NEO-FFI subscales (Costa & McCrae, 1992) in a sample of young adults with psychological difficulties (Nyklicek, Poot & Opstal, 2010). Conversely, significant negative correlations were found between PM and the Neuroticism subscale (Nyklicek et al., 2010). Beitel and Cecero (2003) found similar results in a non-clinical sample.

PM has also been found to be positively correlated with the positive adjustment of college students, indicating that individuals with high PM, compared to individuals with low PM, tend to use more adaptive coping in a new and potentially stressful environment (Cecero et al., 2008). Moreover, in a study which examined the relationship between PM and distress in a sample of 103 university students, Beitel et al. (2005) found that participants who reported high levels of PM also reported low levels of distress in emergency situations. The results suggest that PM may be a factor for facilitating adaptive coping in stressful situations. Since reckless behaviours have been viewed as maladaptive coping mechanisms and PM has been found to increase adaptive coping, individuals with high PM could be expected to engage in fewer reckless behaviours due to a heightened awareness of their thoughts, feelings and behaviours and to a strong ability to cope with distress.

To date no study has examined the relation between PM and reckless behaviours. Therefore, a primary aim of this study was to examine the relation of PM to reckless behaviours in a university population.

Psychological Mindedness and Attachment Security

Research has demonstrated that PM is directly related to attachment security, in addition to being positively related to adaptive personality characteristics and associated with increased adaptive coping. Alvarez, Farber, and Schonbar (1998) found a significant negative correlation between PM and perceptions of early maternal rejection. Individuals with high levels of PM reported having parents who were warm and caring, a factor that would also be important in developing secure attachment.

In a sample of 187 undergraduate students, Beitel and Cecero (2003) found that attachment to peers could significantly predict PM, while attachment to mother and attachment to father could not. This result may be explained by previous findings that, while attachment to parents continues throughout life, friends may replace parents as a primary source of support (Freeman & Brown, 2001). Given that stronger attachment to peers, rather than parents, would be expected during young adulthood, Beitel and Cecero hypothesised that parental attachment would have likely predicted PM if a retrospective measure of attachment had been utilised rather than an instrument measuring current parental relationships. Beitel and Cecero (2003) concluded that PM was associated with healthy internal working models of experience associated with secure attachment.

Thompson (1994) has theorised that children develop schemas, or beliefs about how the world operates, based on the parental relationship, that guide their predictions of the consequences of expressing emotions. Building on this theory, Cassidy (1994) has posited that consistent and responsive interactions with attachment figures enable securely attached individuals to feel comfortable learning about and reflecting on their emotions, suggesting that secure attachment leads to high levels of PM. Supporting this theory, positive interactions with attachment figures appear to result in an increased ability to understand mental states (Fonagy, Steele, Moran, Steele, & Higgitt, 1991).

Hypotheses

Based on research cited above, we predicted that:

1. Gender difference in reckless behaviours, with males reporting significantly higher levels of reckless behaviours than females;
2. Students who report high levels of psychological mindedness will also report high levels of attachment security.
3. Students reporting both high levels of attachment security and psychological mindedness will also report engaging in fewer reckless behaviours compared to students reporting both low levels of attachment security and psychological mindedness.

Methods

Participants

The sample included 101 university students, with 23 males, and 78 females. Participants were asked to provide information regarding their age, gender, education level (undergraduate, postgraduate), residence (on campus, with parents, with students, with non-students, with mixed students and non-students), driver's licence status, and area of study. Ages ranged from 18 to 30 ($M = 21.2$, $SD = 3.23$). Undergraduate students comprised 87% of the sample, 36% living with their parents, 26% with other students and 15% on campus. Students studying psychology, counselling, and behaviour management comprised 45% of the total sample.

Measures

Psychological Mindedness Scale (PM Scale)

The PM Scale (Conte et al., 1990) is a 45 item scale developed to measure reflection about psychological processes as related to the self and others. The PM Scale is comprehensive in scope, assessing both self-reflection and reflection regarding others (Conte, Ratto, & Karasu, 1996). Conte et al. (1996) found that the PM Scale had adequate internal consistency ($\alpha = .87$) and adequate test-retest reliability over a two week period $\alpha = .92$ in a sample of psychiatric patients. Convergent validity was demonstrated by Conte et al. (1995), who found a positive relationship between PM and the Self Evaluation Questionnaire (SEQ; Conte et al., 1995), which was designed to measure ego functioning. Construct validity was demonstrated by Trudeau and Reich (1995), who found a positive relationship between PM and psychological well being (PWB Scale; Ryff, 1989) using a sample of college students.

Inventory of Parent and Peer Attachment (IPPA)

The IPPA (Armsden & Greenberg, 1987) is a 75 item self report measure of attachment security. The IPPA was developed to assess adolescents' and young adults' perceptions of the cognitive and affective aspects of relationships with parents and close friends. In particular, the scale assesses how

well these figures serve as sources of psychological security. The scale is divided into three subscales consisting of 25 items each: Attachment to Mother, Attachment to Father, and Attachment to Peers. The authors found internal reliabilities for the subscales to be $\alpha = .87$ (Attachment to Mother), $\alpha = .89$ (Attachment to Father), and $\alpha = .92$ (Attachment to Peers). In a sample of 18-20 year olds, the test-retest reliability was found to be $\alpha = .86$ for parental attachment and $\alpha = .93$ for peer attachment over a three week period (Armsden & Greenberg, 1987). The Total Attachment Security score was utilised in the present study. Construct validity was demonstrated by Armsden, McCauley, Greenberg, Burke and Mitchell (1991) who found that less secure parental attachment was related to clinical diagnosis of depression.

Risk and Reckless Behaviours Questionnaire (RRBQ)

The RRBQ (Bradley and Wildman, 2002) was developed to measure the frequency of risk and reckless behaviours. Three areas of reckless behaviours are measured by the scale: substance use (five items), sexual behaviour (five items), and driving (four items). The questionnaire also measures risk behaviours (four items), which are defined as socially acceptable thrill seeking behaviours such as sky diving. The reckless behaviour subscales can also be summed, allowing the calculation of a Total Reckless Behaviour score. Bradley and Wildman (2002) found adequate internal consistency for each of the subscales: $\alpha = .73$ for Reckless Driving, $\alpha = .80$ for Reckless Substance Use, $\alpha = .91$ for Reckless Sexual Behaviours, and $\alpha = .63$ for Risk Behaviours. The authors also found test-retest reliabilities for all measures to be in the .80 to .90 range over a two week period.

Results

Preliminary Data Analysis

Raw data was entered and analysed using SPSS version 18.0. Three participants did not complete one subscale of the attachment security measure and were subsequently removed from the analyses. Missing values comprised less than 1% of the remaining data set; item mean scores were calculated and substituted for these missing values. Total scores and subscale scores were calculated, and each scale was inspected for violations of normality.

Consistent with previous research (Hampson et al., 2001; Teese & Bradley, 2008), all reckless behaviour scales were positively skewed and candidates for transformation. Following square root transformation, histograms showed moderate improvement in normality but all Kolmogorov-Smirnov Test of Normality statistics were still significant with the exception of the Total Reckless Behaviour scale, indicating that all scales but one violated the assumption of normality. Given the improvements to the scale distributions, the transformed scores were utilised in the following analyses. Other underlying assumptions for the analysis were supported or accounted for.

Multivariate Analysis of Covariance (MANCOVA)

To ascertain whether reckless behaviours, attachment security, and PM varied significantly as a function of demographics, correlations between age and all variables were examined. A one-way Analysis of Variance (ANOVA), with gender as the independent variable, was also conducted. While age was not significantly related to any variable, gender was significantly related to attachment security, $F(1, 99) = 5.57, p = .02$, reckless driving, $F(1, 99) = 21.52, p < .001$, risk behaviour, $F(1, 99) = 15.19, p < .001$, and total reckless behaviour, $F(1, 99) = 10.29, p = .002$. While females reported significantly higher levels of attachment, males reported significantly higher levels of risk behaviours, reckless driving, and total reckless behaviour. This finding supported the first hypothesis that males would report engaging in significantly more reckless behaviours than females. Gender was subsequently included as a covariate in the analyses. Correlations between risk and reckless behaviours, attachment security, and PM are displayed in Table 1. Results indicated a significant,

positive relationship between PM and attachment security. All risk and reckless behaviour scales were significantly correlated with the exception of two: Reckless Driving/Reckless Sexual Behaviours and Reckless Sexual Behaviours/Risk Behaviours.

Table 1. Pearson Product-Moment Correlations of Risk and Reckless Behaviours, Attachment Security, and PM

Variable	1	2	3	4	5	6	7
1. Psychological Mindedness-		.42*	.12	.09	.11	.16	.15
2. Attachment Security		-	-.04	.04	-.01	.03	.00
3. Reckless Driving			-	.18	.28**	.49*	.67*
4. Reckless Sexual Behaviour				-	.44*	.15	.72*
5. Reckless Substance Use					-	.37*	.80*
6. Risk Behaviours						-	.46*
7. Total Reckless behaviour							-

* $p < .001$; ** $p = .005$

A 2 x 2 MANCOVA was conducted to determine whether reckless and risk behaviours differed according to level of attachment security (high vs. low) and PM (high vs. low). Results indicated a non-significant interaction effect for attachment security and PM. A significant main effect was observed for the covariate, gender, $F(4, 93) = 7.98, p < .001$, partial $\eta^2 = .26$, with males engaging in significantly more risk behaviours and reckless driving than females. A significant main effect for PM, $F(4, 93) = 2.95, p = .024$, partial $\eta^2 = .11$, was also observed, with participants in the high PM group engaging in significantly more reckless substance use and risk behaviours. Group means and standard error for each dependent variable are presented in Table 2. While transformed scores were used in the analyses, non-transformed means are presented to aid interpretability. A main effect for attachment security, $F(4, 93) = .95, p = .442$, partial $\eta^2 = .04$, was non-significant, indicating that reckless behaviour participation did not differ according to attachment level.

Table 2. Means (M) and Standard Error (SE) for High/Low Attachment Security and High/Low PM Groups for Risk and Reckless Behaviours

Measure	Group	M	SE
Reckless Driving	High Attachment	4.55	.82
	Low Attachment	4.97	.81
	High PM	6.05	.81
	Low PM	3.48	.81
Reckless Sexual Behaviours	High Attachment	5.99	.83
	Low Attachment	5.68	.83
	High PM	6.34	.83
	Low PM	5.34	.82
Reckless Substance Use	High Attachment	5.28	.95
	Low Attachment	7.28	.95
	High PM	8.10	.95
	Low PM	4.46	.94
Risk Behaviours	High Attachment	5.28	.82
	Low Attachment	5.62	.81
	High PM	6.88	.81
	Low PM	4.02	.81

Discussion

The purpose of this study was to investigate the relationship between reckless behaviours, gender, psychological mindedness and attachment security. The first hypothesis was that males would report significantly higher reckless behaviours than females. This hypothesis was supported, with males reporting significantly higher reckless driving and total recklessness, which is consistent with other research that found that males report higher levels of reckless behaviours, particularly driving (Arnett, 1996; Bradley & Wildman, 2002). However, significant differences between gender were not found in the present study for reckless substance use and sexual behaviours. Given the potential individual and public health and safety implications associated with reckless driving, the factors contributing to these gender differences require further investigation.

The second hypothesis was that psychological mindedness and attachment security would be significantly, positively correlated. Results presented in Table 1 supported this hypothesis, which is consistent with previous research (e.g. Alvarez et al., 1998; Beitel & Cecero, 2003).

The third hypothesis was that participants with high levels of attachment and participants with high levels of psychological mindedness would report engaging in significantly fewer reckless behaviours. This hypothesis was not supported, as participants who reported higher levels of psychological mindedness also reported significantly higher levels of reckless substance use and risk behaviours. This finding may be interpreted in light of previous research that found significant, positive relationships between psychological mindedness and the personality characteristics of openness and extraversion (Beitel & Cecero, 2003). In this context, individuals who are sociable, outgoing and open to new experiences are perhaps more likely to engage in reckless behaviours (being open to new experiences) and more likely to have opportunities to engage in reckless behaviours (being in social situations). In addition, this finding that higher PM did not result in less reckless behaviours seems to be consistent with other studies that failed to find a positive relation between PM and reduced symptomatology at the conclusion of therapy (Conte et al., 1996; McCallum & Piper, 1997).

Secure attachment has consistently been associated to lower levels of reckless behaviours (Caspers et al., 2005; Kassel et al., 2007; Taubman – Ben-Ari & Mikulincer, 2007). In the current study, a significant difference between high and low attachment groups on reckless behaviours was not observed. While this finding was inconsistent with the majority of research examining the relationship between attachment security and reckless behaviours, the results are similar to those of Cooper et al. (1998) who found that securely attached individuals do tend to engage in reckless behaviours. The results of current study are also conceptually similar to those of Shedler and Block (1990), who found that adolescents who engaged in limited drug experimentation (primarily marijuana) were better psychologically adjusted than both adolescents who had not experimented with drugs and adolescents who were frequent users of drugs. This finding can also be interpreted in terms of Bowlby's attachment theory (1980), which proposes that securely attached individuals may be more likely to take calculated risks in light of returning to a "secure base." In other words, securely attached individuals are more confident in their ability to explore new situations, manage distress, and seek support from others if required. In this context, securely attached individuals may not engage in reckless behaviours to manage distress or to compensate for lacking quality relationships; rather, they may engage in these behaviours as a means of exploration and experimentation.

Limitations and Future Research

The present study had a number of limitations that warrant further comment. Limited generalizability may apply to older individuals as this study was specifically focused on young adults attending

university. Moreover, a large proportion of students participating in the current study (45%) were psychology, counselling and behaviour management students. As this over-representation of psychology, counselling and behaviour management students within the sample may have resulted in an over-representation of psychologically minded individuals and subsequently impacted on the study's findings, future studies should include more students from a variety of backgrounds or consider using a community sample.

Another limitation of the present study is its reliance on self-report measures, which are vulnerable to response biases. For self-presentational reasons, young adults may not accurately report their involvement in reckless behaviours (Aseltine, 1995). As social desirability was not controlled for, it is possible that the results were influenced by over- or under-reporting of reckless behaviours. Future studies should control against social desirability to protect against this possibility.

This study may also have been limited by the measures chosen. Regarding the measurement of reckless behaviours with the Risk and Reckless Behaviours Questionnaire (Bradley & Wildman, 2002), a floor effect was observed, with many participants reporting nil to minimal reckless behaviours. Because this scale may not have been sensitive enough to discriminate between participants engaging in low levels of reckless behaviours, future studies may wish to measure more moderate forms of reckless behaviours to avoid this effect. Furthermore, in the current study, reckless behaviours were operationalised as "socially unacceptable" (Arnett, 1992); however, given the repeated findings that reckless behaviours are prevalent and relatively accepted as a part of life for individuals in the 18 – 30 age bracket, perhaps consideration needs to be given to re-operationalising this variable. Consistent with Erickson's theory of psychosocial development (1968), experimentation and testing limits and personal boundaries appear to be normative and developmentally functional in this phase of life.

Despite these limitations, the results from this initial study exploring the relationship between psychological mindedness, attachment security, gender and reckless behaviours has demonstrated an unexpected relationship between psychological mindedness and reckless behaviours. Given the previously established relationship between psychological mindedness and increased coping ability and distress management, it was predicted that high reported levels of psychological mindedness would be significantly related to lower levels of reckless behaviours. However, the findings did not reflect this proposition.

Instead, the results of the present study suggested that individuals with high levels of psychological mindedness are more likely to engage in reckless substance use. The results also suggested that there were no significant differences between high and low attachment groups in reckless behaviour participation. These findings raise questions regarding what behaviours reflect healthy psychological functioning in young adulthood. Therefore, replication of this research to test these findings is recommended. In addition, further exploration of the avenues by which psychological mindedness influences reckless behaviour is also recommended. As distress has previously been linked to engaging in reckless behaviours (Caspers et al., 2005; Kassel et al., 2007) and previous research has found that psychological mindedness is related to increased coping ability and distress management (Beitel et al., 2005; Cecero et al., 2008), it is recommended that future research include this combination of variables to gain a better understanding of the role of psychological mindedness in reckless behaviour participation.

In conclusion, the present study provides an initial exploration of the relationship between psychological mindedness and reckless behaviours. Given the counterintuitive findings, further studies are recommended to gain a more comprehensive understanding of this important relationship.

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