



Citation for published version:

Carr, S, Colthurst, K, Coyle, M & Elliott, D 2013, 'Attachment dimensions as predictors of mental health and psychosocial well-being in the transition to university', *European Journal of Psychology of Education*, vol. 28, no. 2, pp. 157-172. <https://doi.org/10.1007/s10212-012-0106-9>

DOI:

[10.1007/s10212-012-0106-9](https://doi.org/10.1007/s10212-012-0106-9)

Publication date:

2013

Document Version

Peer reviewed version

[Link to publication](#)

The final publication is available at www.springerlink.com

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*Attachment dimensions as predictors of mental health and psychosocial wellbeing in
the transition to university*

Abstract

This study sought to investigate the predictive relationship that dimensions of attachment shared with an array of indicators of psychosocial wellbeing and mental health in a sample of students making the transition to higher education. One hundred and thirty one students completed the Vulnerable Attachment Styles Questionnaire (VASQ) prior to enrolment in their first semester of university education. Subsequently, students completed measures related to perceived loneliness, institutional integration, psychological need satisfaction, depressive symptoms, and ways of coping during their first semester. Results suggested that higher scores in relation to the insecurity dimension of the VASQ were instrumental in predicting negative psychosocial wellbeing and mental health. Results discussed the key vulnerability dimensions of attachment when seeking to predict indices of psychosocial wellbeing and mental health.

Introduction

There has been consistent evidence that major change or transition in the life of human beings can be a risk factor for physical and mental disorder (e.g., Dodge & Martin, 1970; Totman, 1979; Fisher, 1986; Fisher & Hood, 1987) and for significant shifts in subjective experiences of psychological wellbeing (e.g., Hirsch & Rapkin, 1987). One of the most significant life changes that many young people make is the transition to university. Fisher and Hood (1987) identified that first year students making this transition show greatly elevated levels of psychological distress and Peel's research (2000) outlined how such students often *expect* to experience difficulties such as significant isolation ("you're just a number, nobody cares"). Lu (1994) has identified that the university transition shares many features with other significantly stressful life events. Accordingly, it may be profitable to examine the university transition through lenses that can help us shed light on how individuals deal with and react to such life events. In this investigation, attachment theory (Bowlby, 1969/1982, 1973, 1980) is forwarded as a potentially important framework for understanding individuals' vulnerability to dampened indices of psychosocial wellbeing and indicators of mental health during the university transition.

A brief outline of attachment theory

Bowlby's (1969/1982, 1973, 1980) theory suggests that infants are biologically predisposed to form selective bonds with special and proximate caring figures in their environment. It is suggested that formative discrimination of attachment figures begins in infancy, where proximity to significant others is of critical importance to the maintenance and restoration of safety. Attachment theorists (e.g., Ainsworth et al., 1978; Bowlby, 1973; Sroufe & Waters, 1977) have argued that different patterns of cognition, affect, and behaviour develop in response to

caregivers' sensitivity, availability, and responsiveness to infants' desire for proximity. As young children develop, attachment theory predicts that the experiences of care and support provided by key caregivers help them to construct (or not) "a feeling of security and help-seeking behaviors that function to protect them in situations of distress and to facilitate their exploration of the social world in general" (Duchesne & Larose, 2007, p. 1502). These systems of cognition, affect, and behaviour are reflections of what Bowlby termed *internal working models* that are constructed in response to the attachment experiences that children encounter. These internal working models can be thought of as a *psychological organisation* that serves to guide beliefs with respect to important issues such as (a) the availability of key attachment figures as a source of comfort and security, (b) judgements about their own self-worth and deservedness in close relations, and (c) how best to deal with and regulate encountered distress (Cook, 2000; Duchesne & Larose, 2007; Sroufe & Waters, 1977). When youngsters develop a *secure* working model they adopt a positive internal representation of themselves in attachment contexts, viewing attachment figures as psychologically available and responsive and developing a positive sense of their self-worth in attachment contexts. However, when they develop an *insecure* working model they adopt a negative internal representation, fearing rejection or inconsistent responses from attachment figures and adopting a negative sense of self (Duchesne & Larose, 2007).

Bowlby (1979/2005) hypothesised attachment as an integral part of human existence throughout the lifespan. Researchers (e.g., Bartholomew, 1990; Shaver, Collins, & Clark, 1996) have suggested that long-term effects of early attachment experiences are predominantly a function of the persistence of internal working models into adulthood. However, it is also necessary that the significant attachment

bonds that played a central role in initial development of attachment working models in childhood are gradually (but never entirely) relinquished and that additional affectional bonds are formed with close significant others through adulthood. These new affectional bonds may also serve to modify and rework internal working models over time.

The research on adult attachment has diverged into two distinct research “traditions.” These lines of research are both derived from the assumptions at the heart of Bowlby’s theory (Jacobwitz, Curran, & Moller, 2002) yet have evolved according to underlying assumptions and measurement techniques of contrasting subcultures (Bartholomew & Shaver, 1998). Many of the distinctions between these two lines of enquiry are reflected in how researchers have approached the *measurement* of attachment constructs. On the one hand, are researchers who “...tend to think psychodynamically, be interested in clinical problems, prefer interview measures and behavioral observations over questionnaires, study relatively small groups of subjects...” (Bartholomew & Shaver, 1998, p. 27). On the other hand, are personality and social psychologists “...who tend to think in terms of personality traits and social interactions, be interested in normal subject populations, prefer simple questionnaire measures, study relatively large samples...” (Bartholomew & Shaver, 1998, p. 27). Not surprisingly, these different lines of research give rise to significant distinctions in terms of how attachment research is conceptually underpinned, how attachment is measured, and how results are interpreted. In this investigation we conceptualise attachment style in a social psychological sense, as a “style of relating” that is both *reflected in* and *influenced by* the quality of close adult relationships.

Self-reported attachment styles

Self-report has been a common method for investigating adult attachment styles for researchers in the social psychological paradigm. However, there has been a degree of debate in the literature about the most conceptually useful way of assessing them. For example, Brennan et al.'s (1998) meta-analysis of 19 adult attachment inventories identified that most inventories appeared to be underpinned by two orthogonal dimensions; attachment *anxiety* (a concern about the availability and responsiveness of partners in close relationships) and *avoidance* (a discomfort with reliance upon others for attachment related purposes). These dimensions have been described by Shaver and Mikulincer (2002, p. 135) as "...best conceptualised as regions in a two-dimensional space that is conceptually parallel to the space defined...in Ainsworth et al.'s (1978) summary of research on infant-mother attachment." Specifically, *low* levels of *both* attachment-related anxiety and avoidance correspond to a secure attachment style. *High* levels of anxiety and *low* levels of avoidance are conceptually consistent with an anxious classification and the region of space where anxiety is low and avoidance is high reflects avoidance. However, with regards to this avoidant area of the conceptualisation researchers (e.g., Bartholomew & Horowitz, 1991; Bifulco et al., 2002a, 2002b) have identified that there appears to be a conceptual distinction between *dismissive* avoidance (low levels of attachment related anxiety and high levels of avoidance) and *fearful* avoidance (high levels of both anxiety and avoidance). The underpinning conceptual logic of such inventories is that they seek to assess the degree to which individuals seem to reflect the categorical differences in relating styles that characterise each attachment classification.

Despite the popularity of the above self-report model, other meta-analyses of adult attachment style inventories have derived different underpinning dimensions for measurement. For example, research groups (e.g., Bifulco et al., 2003; Stein et al., 2002) have identified that another conceptually viable solution to the self-report of attachment styles is located in two alternative orthogonal dimensions. For example, Bifulco et al. (2003) identified a first dimension that reflected a general level of *insecurity* (ranging from “secure” to “insecure”) whereas a second dimension reflected the degree of *proximity seeking* (ranging from a strong aversion to proximity to others, to a strong need for it) individuals employed in their close relationships. It was argued that this model reflected (a) a *general* insecurity of attachment dimension common to *all* insecurely attached individuals regardless of their insecure subtype (i.e., the insecurity dimension – reflecting a deep rooted mistrust of others and their motives) *and* (b) the proximity seeking dimension which reflects the typical *strategy* individuals use to cope with their insecurity (i.e., *some* individuals with high insecurity and a mistrust of others deal with such insecurity by developing an excessive neediness and vigilance to others, whilst *other* individuals with the same generalised basic mistrust develop a defensive aversion to closeness as their way of managing such insecurity). From this perspective, it may be misleading to suggest that the various categories of insecure attachment styles identified in the previously discussed self-report models (i.e., avoidant and anxious subtypes) reflect *distinct* styles of attachment *per se*. Rather, they may ultimately be underpinned by the same conceptual phenomenon (i.e., a generalised attachment insecurity dimension) but simply use different attachment *strategies* (i.e., reflected in variation in the proximity seeking scores) to help them manage their insecurity. This distinction may be important in the sense that it is sometimes significant to identify not only the extent to

which individuals' responses are reflective of specific *categorical conceptions* (the extent to which they seem to reflect anxious or avoidant tendencies) of attachment style but also to gauge the *severity* of the underlying generalised dimension of insecurity individuals exhibit (regardless of the strategies they employ to cope with such insecurity). Using this model, Bifulco et al. (2003) have suggested that when seeking to predict psychopathology it is more useful to obtain information about the strength of the underlying insecurity dimension than a description of how such insecurity is strategically dealt with by the individual. In this investigation we utilised Bifulco et al.'s (2003) model in the form of the *Vulnerable Attachment Style Questionnaire* (VASQ; Bifulco et al., 2003) in order to predict various indices of psychosocial wellbeing and mental health in students making the university transition.

Attachment style as a predictor of wellbeing and mental health indices across the university transition

Ultimately, attachment styles have been hypothesised to reflect an organised pattern of relational expectations, emotions and behaviour that result from individuals' specific attachment histories and give rise to particular scripts that reflect cognitive and emotional schema that are particularly likely to be called upon in times of distress (Mikulincer, Shaver, & Pereg, 2003). Variations in attachment security reflect different beliefs about how best to manage distress, trust in the goodwill of others, and a sense of self-efficacy in relation to drawing upon external and internal resources to deal with threat (Shaver & Hazan, 1993). Specifically, securely attached individuals (through participation in one or more secure attachment relationships) tend to learn that distress is manageable and not overwhelming, that they can overcome the various stressors they encounter, that others have inherently good intentions, and that seeking social and emotional support in times of need is

acceptable and valuable (Mikulincer et al., 2003). Such psychological characteristics form the cornerstones of individuals' attachment styles and it is logical to suggest that they may have a significant link to the manner in which individuals deal with and experience the university transition.

Previous researchers (e.g., Fisher & Hood, 1987) have forwarded attachment theory as a particularly useful framework within which to explore students' experiences of the university transition and there are a number of reasons for this. Firstly, during this potentially stressful transition attachment styles are an individual difference factor that should meaningfully relate to the likelihood that individuals will seek comfort and support through the formation of new social relationships within the university environment. This may be important in the formation of new friendships and may have a bearing on early feelings of isolation and loneliness. Secondly, attachment styles may correspond to variations in the manner in which individuals attempt to cope with the psychological distress and unfamiliarity they encounter (e.g., whether they resort to distancing, social support, or escapism as default coping mechanisms). Thirdly, the above arguments also suggest that the likelihood that individuals will be able to orchestrate experiences in their new environment that allow them to satisfy key psychological needs such as feelings of contextual competence, autonomy, and relatedness may also be linked. Finally, given the above, there is also strong reason to suspect that overriding mental health (such as depressive symptoms) indicators may also differ both as a direct consequence of attachment style (e.g., Bifulco et al., 2003) *and* as an indirect consequence of issues such as isolation, loneliness, and maladaptive coping mechanisms.

Consequently, our investigation sought to explore such relationships between attachment dimensions of the VASQ and indicators of psychosocial wellbeing and

mental health during the university transition. Hirsch and Rapkin (1987) have suggested that when exploring issues related to wellbeing during significant life events it can be useful to adopt a broad definition of the term in order to capture the breadth of psychosocial constructs at play. Accordingly, we explored how attachment styles related to (a) satisfaction of basic psychological needs (feelings of competence, autonomy, and relatedness) in the university context, (b) subjective perceptions of loneliness, (c) perceived quality of institutional integration (in terms of relationships with peers and faculty), (d) specific mechanisms of coping with encountered stressors, and (e) depressive symptoms. We provide a rationale for each of these criterion variables in the method section. From an attachment perspective, we employed Bifulco et al.'s (2003) model of attachment styles (discussed above) through the VASQ and were particularly interested in the extent to which our criterion variables were predicted by the generalised dimension of attachment insecurity (which would be common to all insecure subtypes) or by the interaction between this dimension and the proximity seeking subscale (which would suggest that it is important to also pay attention to the different strategies individuals use to deal with their fundamental insecurity).

Method

Participants

A sample of 300 first year university students across three university degree programmes were initially contacted and asked to take part (voluntarily) in our study. One hundred and ninety two initially agreed to take part (a 64% cooperation rate). Of the initial 192 students who agreed to take part, only 131 (56% male & 44% female) provided full data (i.e., they were present at all data collection sessions). Hence, the final sample consisted of 131 students with an average age of 19 years and 4 months

($SD = 3.24$ years) and comprising over 95% Caucasians. There were no significant differences ($p = .23$) in terms of attachment characteristics when comparing the final sample ($n = 131$) with those who had previously dropped out of the investigation before the final phase ($n = 61$).

Procedures

Participants completed self-report measures of their attachment style during the week prior to commencing their timetabled classes in the first semester of their initial university year. Following this, they completed subsequent assessments of wellbeing and mental health indicators during the final three weeks of the first semester. Each data collection session was administered by the second author and students were instructed to complete the surveys without conferring with peers, to be as honest as they could, and were encouraged to ask any questions concerning items that confused them or that they did not understand. Surveys typically took from 10-30 minutes to complete and consent was obtained from participants prior to participation. Ethical approval was obtained from the lead author's institutional ethics committee.

Measures

Attachment styles. Participants' attachment styles were assessed using the *Vulnerable Attachment Styles Questionnaire* (VASQ; Bifulco et al., 2003). As discussed in our introductory section, the VASQ is designed to assess two orthogonal dimensions of attachment styles; a generalised dimension of attachment insecurity (thought to be common to all insecure attachment subtypes) and a proximity seeking dimension (thought to reflect the strategy individuals employ to deal with their insecurity). The inventory consists of 22 items on a five-point Likert-type scale ranging from 1 (*strongly disagree*) to five (*strongly agree*). The insecurity subscale consists of 12 items (e.g., "I find it hard to trust others," "I feel people are against

me,” “I feel people haven’t done enough for me”) and the proximity seeking subscale consists of 10 (e.g., “I get anxious when people close to me are away,” “I miss the company of others when I am alone,” “I am clingy with others”). Instructions to respondents are broad (“Below are a number of statements concerning the way people feel about themselves in relation to others. Indicate whether you agree or disagree with the description as it applies to you by circling a number from 1 to 5. There are no right or wrong answers”) and they are asked to focus on their feelings in general as opposed to at the current moment in time. The VASQ is unique in that it is one of the few self-report inventories of attachment style that has been developed and validated in relation to an in-depth interview procedure (Attachment Style Interview; ASI, Bifulco et al., 2002a, 2002b). Preliminary data (Bifulco et al., 2003) have suggested that it is strongly associated with clinical assessment provided by the ASI.

Perceived loneliness. Given the association that attachment styles have with beliefs in relation to the goodwill of others and the utility of others during times of stress and need, we reasoned that the social networks individuals form as they interact with the new university context may be linked to their attachment styles. Previous research (e.g., Di Tomasso et al. 2003) has provided evidence that a secure attachment style is related to social skills, social competence, and likely experiences of isolation in young adults. Hence, we assessed subjective perceptions of loneliness using Hughes et al.’s (2004) shortened adaptation of the *Revised-UCLA Loneliness Scale*. Specifically, the three items are (1) “How often do you feel that you lack companionship?” (2) “How often do you feel left out?” and (3) “How often do you feel isolated from others?” The items are rated on a three-point scale and the three items are averaged to form an average loneliness score: 1 (*Hardly ever*), 2 (*some of the time*), 3 (*often*). Participants were asked to think about their responses in relation

to their first semester at university. The instrument has been demonstrated to show strong correlation with measures of objective social isolation in previous studies (e.g., Hughes et al., 2004).

Basic Psychological Need Satisfaction. Self-determination theory is a theoretical framework concerned with human wellbeing (Ryan & Deci, 2000). A key subcomponent of the framework is that human beings have evolved psychological needs that are essential for the maintenance and development of health and wellbeing. Specifically, these are the needs for feelings of *competence* (innate propensity to experience a sense of efficacy and confidence in one's interactions with the surrounding environment), *autonomy* (experience one's behaviour as an expression of the self), and *relatedness* (a propensity to feel a psychological sense of connectedness and belonging to other human beings) and when they are thwarted it is proposed that individuals suffer significant psychological costs. We reasoned that individuals' internal working models of attachment may be individual difference factors that influence their ability to orchestrate an environment in which they are able to enrich such psychological needs and we included them as indicators of wellbeing in our study. Specifically, psychological need satisfaction was assessed using an adaptation of the *Basic Needs Scale* (Baard, Deci, & Ryan, 2004); a set of subscales that tap individuals' perceptions of contextual need satisfaction in relation to competence (6 items, e.g., "Most days I feel a sense of accomplishment at university"), autonomy (7 items, e.g., "I feel like I can pretty much be myself at university"), and relatedness (8 items, e.g., "I get along with people at university"). Items are responded to on a seven-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Perceived institutional integration. We used an adaptation of the *Institutional Integration Scale* (IIS; Pascarella & Terenzini, 1980) in order to tap the degree to

which students felt they had experienced satisfactory social integration with faculty and peers during their first semester of university. Specifically, we employed seven items that tapped perceptions of social integration into university life (e.g., “Most of the lecturers I have had contact with are interested in helping students grow in more than just academic areas,” “The student friendships I have developed here have been personally satisfying”). Items are responded to on a five-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Ways of coping. Research (e.g., Wang et al., 2006) has identified students’ psychological strategies for coping with difficulties to be important correlates of the success with which they negotiate the difficulties they encounter during the university transition. Furthermore, attachment styles have been forwarded as a key player in driving individuals’ default coping mechanisms when they encounter distressing life events (Shaver & Hazan, 1993). Hence, we also assessed individuals’ ways of coping by adapting the *Revised-Ways of Coping Questionnaire* (R-WCQ; Folkman & Lazarus, 1985). Specifically, individuals were asked to write down the one event, situation, or aspect of their first university semester that they felt had been the most distressing and then to rate the extent to which they had coped with the identified stressor using a variety of ways of coping; distancing (2 items, e.g., “I made light of the situation and refused to get too serious about it”), self-control (2 items, e.g., “I tried to keep my feelings about it from interfering with other things too much”), social support (2 items, e.g., “I talked to someone about how I was feeling”), escape-avoidance (2 items, e.g., “I tried to make myself feel better by eating, drinking, smoking, using drugs, or medication”), planful problem-solving (2 items, e.g., “I made a plan of action and followed it”), and positive reappraisal (2 items, e.g., “I

came out of the experience better than when I went in”). Items are responded to on a five-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Depressive symptoms. Given the links between attachment styles and depression (e.g., Bifulco et al., 2002a, 2003) we thought it prudent to include an assessment of depressive symptoms as part of our criterion variable set. We used the *Beck Depression Inventory-II* (BDI-II; Beck, Steer, & Brown, 1996) to assess current (in the last two weeks) self-reported symptoms of depression in the students. Specifically, each of the 21 items on the BDI-II assesses both the presence and severity of the symptoms of depression (e.g., sadness, pessimism, suicidal thoughts, crying) by asking participants to rate each symptom on a scale from 0 (non-existent) to 3 (high levels experienced). Responses to each of the 21 items are then summed to form a total depression score. Scores ranging from 0-15 are considered to reflect minimal depression, from 15-30 moderate depression, and from 30 upwards reflects severe depression (Beck et al., 1996).

Data analysis. Descriptive statistics and bivariate correlations were examined to gain an overview of sample characteristics and variable relationships. Following this, multiple regression analyses were conducted to explore how the dimensions of the VASQ predicted the various criterion variables. In all regression analyses the two predictor variables (i.e., the subscales of the VASQ) were centred (according to the recommendations of Aiken and West, 1991) and their interaction term was calculated based upon these centred predictors.

Results

Descriptive statistics, internal consistency of scales, and bivariate correlations.

Descriptive statistics for the whole sample are displayed in Table 1. The internal consistency of all scales was examined using Cronbach’s (1951) alpha

coefficient, these figures are also displayed in Table 1. The internal consistency values of the VASQ proximity seeking scale, the Institutional Integration Scale, perceptions of competence, and self-control coping mechanisms were slightly lower than is generally considered acceptable (i.e., >0.7 , Nunally, 1978). However, given that the difference was marginal and that deletion of specific items did not significantly improve the consistency of these scales, the decision was made to retain them in further analysis. Correlations are displayed in Table 2 and revealed a number of positive relationships between dimensions of the VASQ and the various criterion variables. Furthermore, no significant differences were identified between males and females for any of the variables examined.

Multiple regression analyses

A series of multiple regression analyses (see Table 3) were conducted to examine whether the attachment characteristics were significant predictors of the various criterion variables. The two centred attachment subscales and their interaction variable were entered into each regression model simultaneously. Multicollinearity indices for the predictors were examined for each regression model. Given that the bivariate association between the VASQ subscales was weak and that SPSS reported consistently low Variance Inflation Factors (in the range of 1 to 2) for all regression models, a high chance of multicollinearity was deemed unlikely (Pedhazur, 1997). As reflected in Table 3, regression models were significant for loneliness, institutional integration, depressive symptoms, perceptions of competence, autonomy, and relatedness, and for escape-avoidance coping. None of the other models (which were for the other indices of coping) reached significance. Specifically, the insecurity dimension of the VASQ was the only significant predictor in all models that reached significance.

Discussion

Our study sought to explore the links between attachment styles (as they are conceptualised by the VASQ, Bifulco et al., 2003) and an array of indicators of psychosocial wellbeing and mental health in students making the transition into university education. For the most part, our data suggested that dimensions of the VASQ were significant predictors of all of the constructs under investigation (with the exception of ways of coping, for which only escape-avoidance mechanisms of coping were significantly predicted).

Firstly, it was identified that psychosocial variables such as perceptions of loneliness and institutional integration during the university transition were linked to individuals' attachment styles at time of entry. Specifically, the dimension of attachment insecurity positively predicted loneliness perceptions and negatively predicted perceptions of integration with peers and faculty. This generally supports the literature on attachment and various measures of psychosocial adjustment (e.g., DiTommaso et al., 2003; DiTommaso & Spinner, 1997). It has been proposed (Goldberg, 2000) that working models of attachment are likely to provide the foundation for social skills in relation to constructs such as social competence (Blain, Thompson & Whiffen, 1993), social support seeking (Cutrona et al., 1994), and social adjustment (Rice, Cunningham, & Young, 1997). Accordingly, it is plausible that the increased loneliness and poorer integration reported by those with greater insecurity scores in our study is a manifestation of such social deficits. Future research is needed to explore whether such subjective perceptions of these psychosocial variables are related to objective assessments and to begin to unravel how such deficits are manifested (what is happening to make these individuals feel "lonelier"?), as students negotiate the university transition.

Additionally, we identified that perceived contextual satisfaction of the needs for feelings of competence, autonomy, and relatedness were negatively predicted by the insecurity dimension of the VASQ. We reasoned that individuals' internal working models of attachment may be individual difference factors that influence their ability to construct an environment in which they are able to enrich these psychological needs and our data also appeared to support this suggestion. It may well be that the deficits in factors such as social competence (Cutrona et al., 1994), social self-efficacy (Rice et al., 1997), social support seeking (Blain et al., 1993), dating competency (Kenny, 1987), and social desirability (Rice, Cole, & Lapsley, 1990) that have been linked to insecurity of attachment contrive to reduce the likelihood that individuals will (a) be part of experiences where they manage to connect to others, (b) feel that they are valued and competent in the eyes of others, and (c) feel like they have the power to orchestrate such positive experiences in the future. It is therefore unsurprising that such basic psychological needs appeared to be thwarted in relation to the insecurity dimension of the VASQ.

A positive relationship was identified between a tendency to report escape-avoidance mechanisms of coping and the insecurity dimension of attachment. This supports previous data (Brennan & Shaver, 1995) which has identified insecure dimensions (both insecure-avoidant and –anxious categories) of attachment exhibit a positive relationship with this specific dimension of coping. It has been hypothesised that this association is likely to reflect the fact that insecure individuals are more likely to resort to pathological (e.g., drinking and drugs) methods of coping due to the fact that they may have less developed coping skills of a more adaptive type (McNally et al., 2003). However, aside from this association our data did not provide significant support for any further relationships between ways of coping with

adversity and attachment security. This is surprising given the support for such associations in the literature and one possible reason for this anomaly may relate to the issues participants reflected upon in relation to coping in our study. Participants were asked to write down the most distressing issue they had encountered during the university semester and reflected on their coping mechanisms in relation to this issue. Examination of the events individuals referred to in this section of the survey revealed that 68% of participants had reflected upon an issue related to coursework. It may be that this type of stressor does not elicit a powerful enough sense of distress to set into play attachment-related patterns of coping. Future research might explore whether more “general reflections” of coping patterns across the semester or a longer term investigation that allows for a greater array of distressing incidents to take place elicit different patterns of results.

Finally, experiences of depressive symptoms during the first semester were also significantly linked to attachment security, exhibiting a positive relationship with the insecurity dimension of the VASQ. In the self-report literature, Birnbaum et al. (1997) reported significantly higher levels of depression (and other mental health issues) in a sample of insecurely attached (both avoidant and anxious) individuals undergoing a significant life change (a divorce). This was not found to be the case for securely attached individuals. These findings hint at the possibility that individuals are vulnerable to responding to significant life changes with negative psychiatric symptoms when they possess components of an insecure attachment style. Furthermore, our data suggested that 17 individuals reported BDI-II scores that fell in the moderate-severe range for the inventory (Beck et al., 1996). All of these participants exhibited VASQ insecurity scores that were above the mean value for this scale (below the mean there were no participants with moderate-severe

depression scores). Clinically, this finding may be significant and suggests that insecurity of attachment may be an important predictor of depressive symptoms in response to the university transition. Future studies might also track the longitudinal development of such mental health indices as vulnerable students continue in their university lives, paying particular attention to its trajectory.

Overall, our data suggest that attachment styles may be particularly important predictors for an array of indicators of psychosocial wellbeing and mental health in response to the university transition. From an attachment theory perspective, it is important to note that our analyses consistently identified that the insecurity dimension of the VASQ was the sole predictor of all criterion variables (that were part of significant models). As we noted in our introduction, the VASQ taps a general dimension of insecurity (e.g., a deep mistrust of others and their actions) together with a dimension (proximity seeking) that reflects the likely *strategy* individuals employ to deal with their insecurity (i.e., an excessive need for others' company *or* an extreme aversion to such proximity). By exploring the role of these dimensions together with their interaction in our regression equations we were able to explore whether it was important to pay attention not only to the underlying dimension of insecurity individuals report, but also to the strategy they employ to deal with it. The lack of predictive capacity of the interaction terms in our regression models suggest that it may not be important to pay attention to how insecurity is manifested (i.e., avoidant and anxious subtypes) when exploring predictive relationships with wellbeing and mental health indicators. Rather, it may be more important to gauge the severity of the underlying generalised dimension of insecurity such individuals share, regardless of the strategies employed to cope with it. Our data supported the utility of

this conceptualisation of attachment, which has also been forwarded by other research groups (e.g., Bifulco et al., 2002a; Stein et al., 2002).

Taken broadly, our results provide initial evidence to suggest that students' attachment styles on entry into higher education may be important individual difference factors that predispose them to vulnerability in relation to a number of negative aspects of psychosocial wellbeing and mental health during the university transition. Further research is needed in a number of important areas in order to develop our initial correlational evidence. Firstly, it will be important for future studies to begin to unravel the complex causal relationships between the variables we included in this investigation. For example, it may be that the relationship between attachment style dimensions and depressive symptoms is moderated by perceptions of loneliness, basic psychological need satisfaction, or university integration and it will be important to unravel the most plausible relationship patterns that our set of variables share with each other. Secondly, it is particularly important to explore how attachment style dimensions relate to the developing *trajectory* of the variables we investigated. Longitudinal studies that track how development of these variables unfolds during the first semester of university education and beyond may be particularly useful with regards to (a) identifying when and how intervention efforts might be implemented, and (b) identifying whether there are particular events, interactions, triggers, or key time periods that are important in shaping the course of the trajectory. Additional considerations for future investigations might be to consider more behavioural indicators of psychosocial wellbeing such as students' objective involvement in social groups and clubs, or the frequency and nature of their interactions with faculty.

The implications of our investigation are important for higher education institutions. Macdonald and Gunn (1997) have contended that students' early experiences in the university environment seem to create a type of "script" that powerfully shapes the way in which they interact with the institution, staff, and peers in the remainder of their higher education. Our study suggests that attachment styles may be powerful individual difference variables that influence the nature of such script production. Accordingly, as Pascarella and Terenzini (1983) have concluded, it is imperative that experiences after enrolment provide an environment that can serve to challenge the initial scripts students seem predisposed to construct. To this end, Peel (2000) has suggested that institutions must pay significant attention to the relational side of student development during the transition into higher education. With reference to wellbeing, some researchers (Pascarella & Terenzini, 1980, p. 72) have suggested, for example, that "the particularly strong contributions of... interactions with faculty and the faculty concern for student development' to student integration" appear to make "...greater estimated contributions... [than] students' peer relationships." Accordingly, it will be important to explore whether concerted efforts at providing students with a sense of relational security as they make the university transition might somehow offset the heightened attachment concerns certain students are prone to experiencing.

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Table 1. Descriptive statistics and alpha values for whole sample ($n = 131$).

Variable	<i>M</i>	<i>SD</i>	Alpha
VASQ			
VASQ insecurity	2.42	.49	.78
VASQ proximity seeking	2.72	.50	.67
Loneliness scale (LS)	1.44	.56	.88
Institutional Integration (II)	3.58	.61	.69
Depressive symptoms	8.46	5.91	.83

Basic Psychological Needs

Feelings of competence	4.57	.92	.66
Feelings of relatedness	5.36	1.02	.86
Feelings of autonomy	5.06	.98	.71

Ways of Coping (WC)

Self-control	3.02	.93	.64
Social Support	2.91	.99	.74
Distancing	3.12	.99	.70
Escape-avoidance	1.93	.94	.70
Problem-solving	2.92	1.04	.81
Positive reappraisal	3.38	.97	.79

NB: VASQ, II, & WC scores range from 1-5, Basic needs scores from 1-7, LS scores from 1-3, and depressive symptoms scores from 0-63.

Table 2. Correlations among all variables ($n = 131$).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1) VASQ insecurity	-	.34	.53	-.37	.41	-.39	-.51	-.46	.13	.06	-.26	.25	.03	.02
2) VASQ proximity seeking		-	.25	-.27	.27	-.24	-.23	-.26	.02	.21	.13	.11	.03	.08
3) Loneliness			-	-.61	.43	-.45	-.69	-.52	.13	.19	-.21	.27	.02	.01
4) Institutional Integration				-	-.34	.58	.65	.57	.12	-.05	.20	-.23	.03	.11
5) Depressive symptoms					-	-.45	-.38	-.40	.23	.11	.18	.04	.07	.05
6) Competence						-	.62	.68	.10	.02	.36	.19	.15	.21
7) Relatedness							-	.60	.15	.07	.29	-.23	.00	.05
8) Autonomy								-	.06	.03	.45	.09	.06	.15
9) Self-control									-	.11	.28	.08	.22	.44
10) Social-support										-	.12	.07	.26	.29
11) Distancing											-	.10	.22	.47
12) Escape-avoidance												-	.01	-.14
13) Problem Solving													-	.40
14) Positive reappraisal														-

Note: r values $\geq .22$ are significant at the .05 level and r values $\geq .28$ are significant at the .01 level.

Table 3. Multiple regression analyses displaying prediction of criterion variables from attachment characteristics ($n = 131$).

Dependent Variable	Model F	Model p	R^2	Significant Predictors	B	$SE B$	β	p
1 Loneliness	7.57	<.001	24%	VASQ insecurity	.58	.12	.54	.00
2 Institutional Integration	3.60	<.01	11%	VASQ insecurity	-.31	.14	-.27	.03
3 Depressive Symptoms	4.50	<.005	15%	VASQ insecurity	4.09	1.18	.42	.00
4 Competence	4.15	<.005	13%	VASQ insecurity	-.56	.21	-.31	.01
5 Relatedness	7.51	<.001	24%	VASQ insecurity	-.99	.22	-.50	.00
6 Autonomy	6.50	<.001	21%	VASQ insecurity	-.71	.22	-.37	.00
7 Self-control	.61	.65	0%					
8 Social Support	1.41	.24	2%					
9 Distancing	2.26	.07	6%					
10 Escape-Avoidance	3.22	<.02	10%	VASQ insecurity	.52	.22	.29	.02
11 Problem-Solving	.52	.72	0%					
12 Positive Reappraisal	.89	.48	0%					