ATTACHMENT, DEVELOPMENTAL TASKS AND COPING IN THE TRANSITION TO UNIVERSITY

by

Hannah E. Sloan, BA (Hons)

Submitted in partial fulfilment of the requirements for the degree of Doctor of Psychology (Clinical)

Deakin University

March, 2015
DEAKIN UNIVERSITY

ACCESS TO THESIS – A

I am the author of the thesis entitled

Attachment, Developmental tasks and Coping in the Transition to University

submitted for the degree of Doctor of Psychology (Clinical)

This thesis may be made available for consultation, loan and limited copying in accordance with the Copyright Act 1968.

'I certify that I am the student named below and that the information provided in the form is correct'

Full Name: Hannah Sloan...........................................................................................................

(Please Print)

Signed: ....................................................................................................................................

Signature Redacted by Library

Date: 25/03/2015 ....................................................................................................................
I certify the following about the thesis entitled (10 word maximum)

Attachment, Developmental tasks and Coping in the Transition to University

submitted for the degree of Doctor of Psychology (Clinical)

a. I am the creator of all or part of the whole work(s) (including content and layout) and that where reference is made to the work of others, due acknowledgment is given.

b. The work(s) are not in any way a violation or infringement of any copyright, trademark, patent, or other rights whatsoever of any person.

c. That if the work(s) have been commissioned, sponsored or supported by any organisation, I have fulfilled all of the obligations required by such contract or agreement.

I also certify that any material in the thesis which has been accepted for a degree or diploma by any university or institution is identified in the text.

‘I certify that I am the student named below and that the information provided in the form is correct’

Full Name: Hannah Sloan....................................................

Signed: ................................................................. Signature Redacted by Library

Date: ....25/03/2015.............................................................
ACKNOWLEDGEMENTS

This thesis could not have been realised without the support of many important people to whom I am very grateful. Firstly, my academic advisor and mentor Dr Gery Kerantzas. Thank you for your ongoing support and guidance, your encouragements not only allowed me to commence this journey of research but enabled me to extend myself both academically and professionally.

To my mentors, Jeanette Lawrence and Agnes Dodds, your ongoing support and guidance both professionally and personally over many years has meant so much to me. I offer you both my sincerest gratitude.

I would like to acknowledge the support from the Services for Australian Rural and Remote Allied Health (SARRAH), and their scholarship funded by the Commonwealth Department of Health that provided great assistance to me during my final year of study.

I would like to also formally thank my parents James and Lorraine whose ongoing love, support and encouragement has allowed me to dream big and accomplish goals that seemed unattainable- this thesis being one of those goals. Thank you for proof reading drafts, reassuring me and keeping me focused throughout this journey.

Lastly, to my husband Ash, it takes great patience and love to encourage another to pursue their goals at all costs. For your listening ear, your ongoing encouragements and constant motivating enthusiasm, I sincerely thank you. This dissertation is as much yours as mine.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE OF CONTENTS</td>
<td>i</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>iv</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>ii</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>iii</td>
</tr>
<tr>
<td>CHAPTER 1</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Thesis Overview</td>
<td>5</td>
</tr>
<tr>
<td>CHAPTER 2</td>
<td>7</td>
</tr>
<tr>
<td>Examining the Transition to University</td>
<td>7</td>
</tr>
<tr>
<td>2.1 Trends in University application and attendance rates</td>
<td>7</td>
</tr>
<tr>
<td>2.2 Research into University Adjustment</td>
<td>11</td>
</tr>
<tr>
<td>2.3 Chapter Summary</td>
<td>18</td>
</tr>
<tr>
<td>CHAPTER 3</td>
<td>19</td>
</tr>
<tr>
<td>Coping and Developmental Tasks in the Adjustment to University</td>
<td>19</td>
</tr>
<tr>
<td>3.1 Conceptualisations and Approaches to Coping</td>
<td>19</td>
</tr>
<tr>
<td>3.2 Coping and the Transition to University</td>
<td>27</td>
</tr>
<tr>
<td>3.3 The negotiation of Developmental Tasks</td>
<td>31</td>
</tr>
<tr>
<td>3.4 Approach and Avoidance Motivations and Developmental Tasks</td>
<td>35</td>
</tr>
<tr>
<td>3.5 Chapter Summary</td>
<td>39</td>
</tr>
<tr>
<td>CHAPTER 4</td>
<td>40</td>
</tr>
<tr>
<td>Attachment Theory and a Proposed Mediational Model of University Adjustment</td>
<td>40</td>
</tr>
<tr>
<td>4.1 The Attachment Behavioural System</td>
<td>40</td>
</tr>
<tr>
<td>4.2 Attachment Styles</td>
<td>46</td>
</tr>
<tr>
<td>4.3 Attachment and the Transition to University</td>
<td>48</td>
</tr>
<tr>
<td>4.4 Attachment and its Links to Coping</td>
<td>52</td>
</tr>
<tr>
<td>4.5 Attachment and the Accomplishment of Developmental Tasks</td>
<td>59</td>
</tr>
<tr>
<td>4.6 Limitations of Past Research</td>
<td>61</td>
</tr>
<tr>
<td>4.7 Research Aims and Hypotheses</td>
<td>62</td>
</tr>
<tr>
<td>4.8 Chapter Summary</td>
<td>67</td>
</tr>
<tr>
<td>CHAPTER 5</td>
<td>68</td>
</tr>
</tbody>
</table>
### LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE 1</td>
<td>Sample Characteristics for participants over three time points</td>
<td>69</td>
</tr>
<tr>
<td>TABLE 2</td>
<td>Sample Correlations, Descriptives and Reliability for Observed Variables in the Hypothesised SEM for University Adjustment</td>
<td>87</td>
</tr>
<tr>
<td>TABLE 3</td>
<td>Absolute skewness and Kurtosis Values at Time point One</td>
<td>88</td>
</tr>
<tr>
<td>TABLE 4</td>
<td>Power estimates for all Pathways in the Proposed Model</td>
<td>92</td>
</tr>
<tr>
<td>TABLE 5</td>
<td>Unstandardised Specific Indirect Effects with 95% Confidence Interval Estimates</td>
<td>93</td>
</tr>
<tr>
<td>TABLE 6</td>
<td>Sample Correlations, Descriptive Analyses and Reliability for Observed Variables in the Longitudinal SEM for University Adjustment</td>
<td>97</td>
</tr>
<tr>
<td>TABLE 7</td>
<td>Repeated Measures ANOVA mean, standard deviation and Significance</td>
<td>99</td>
</tr>
<tr>
<td>TABLE 8</td>
<td>Absolute skewness and Kurtosis Values at the Final Time Point</td>
<td>100</td>
</tr>
<tr>
<td>TABLE 9</td>
<td>Power estimates for all Pathways in the Longitudinal Model</td>
<td>104</td>
</tr>
<tr>
<td>TABLE 10</td>
<td>Unstandardised Specific Indirect Effects with 95% Confidence Interval Estimates</td>
<td>105</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

FIGURE 1 A Mediational Model for the Proposed Associations between Attachment, Coping, University Adjustment and the Negotiation of Developmental Tasks ................................................................. 64

FIGURE 2 Specific Indirect Effects of Avoidant Attachment on University Adjustment via Reflective Coping .......................................................... 82

FIGURE 3 Final Model of Adult Attachment and University Adjustment ............. 90

FIGURE 4 Final Longitudinal Model of Attachment and University Adjustment ........................................................................................................ 102
ABSTRACT

The transition into university represents an opportunity for growth and development, but it is also fraught with many challenges and stressors. Because of various challenges, the transition to university is an emotional time that requires students to draw upon coping strategies to manage distress. While some of this stress relates to negotiating a new learning/academic environment, another significant challenging aspect relates to the negotiation of new social relationships. To this end, theories of relationships and distress regulation are theoretical frameworks that are well suited to enhance understanding regarding how students cope with the transition to university. As such, attachment theory, a widely studied theory of relationships and distress regulation is an orienting framework that guides this thesis. Furthermore, previous research has shown that how students adjust to university may also be related to how they cope with stressors, but also in how they negotiate the more general developmental tasks of young adulthood. In this thesis, a mediation model of university adjustment is proposed, in which coping strategies and the negotiation of developmental tasks are hypothesised to partially mediate the link between attachment and adjustment to university. Specifically, the aims of this study were to: (1) analyse the proposed mediational model cross-sectionally and (2) analyse the mediational model longitudinally. First year university students were sampled on three occasions (during orientation week at the start of the university year, during the examination period at the end of semester one, and during the examination period at the end of semester two – the completion of the first academic year). The cross sectional component of the study involved 522 students ($M = 20.45$, 135 men, 383 women), and the longitudinal component involved 89 students ($M = 21.03$, 17 men, 71 women). Path analysis was employed to analyse the data. The analyses revealed the cross-sectional mediational model was a good fit for the data and all pathways were significant, providing support for the proposed model. Importantly, coping and the negotiation of developmental tasks were found to mediate the association between attachment and university adjustment. The longitudinal mediational model was also a good fit to the data, though not all pathways were significant, thus the model was partially supported. The longitudinal analyses revealed that coping and not the negotiation of developmental tasks partially mediated the association between attachment and university adjustment. Despite there being differences in the findings between the cross-sectional and longitudinal analyses of the proposed mediation model, consistent
patterns were found across analyses. Specifically, attachment anxiety was positively associated with reactive coping and attachment avoidance was positively associated with suppressive coping. Furthermore, attachment anxiety and avoidance were negatively associated with approaching the negotiation of developmental tasks, and positively associated with avoiding the negotiation of developmental tasks. In terms of coping, suppressive and reactive coping strategies were negatively associated with university adjustment. Avoiding developmental tasks was negatively associated with university adjustment, while approaching developmental tasks was positively associated with university adjustment. These associations found within the proposed mediation model highlight the importance of coping and the negotiation of developmental tasks within the context of university adjustment. Furthermore, the findings highlight the role of attachment as an important individual difference variable to consider during students transition to university. Finally the findings have implications for the orientation, psycho-education and support services provided by universities in helping students deal with this challenging transition.
CHAPTER 1

Much research has considered how individuals manage change and transitions across the lifespan, from starting school to settling into retirement (Dodds, Dodson, Gitsham, Nguyen & Lawrence, 2014; Hettich, 2010; Holcomb, 2010; Martinez, Aricak, Graves, Peters-Myszak & Nellis, 2011; Miller, 2010; Palmer & Panchal, 2011). Transitional periods present individuals with opportunities for growth and development, but also present a time of increased risk for maladjustment and regression (Schulenberg, Bryant & O’Malley, 2004). One transitional period that has widely been studied is the transition into higher education and the start of university life. This particular transition involves entering a new and foreign environment, separating from peers and previous friendship networks and the formation of new social ties, all the while balancing career and social priorities as well as academic demands (Gerdes & Mallinckrodt, 1994; Larose & Boivin, 1998; Tanner, 2006; Chemers, Hu & Garcia, 2001). For some students, the increasing academic demands may be challenging, while other students may find the new social environment difficult to navigate, with both the establishment of new relationships and relinquishment of existing relationships as new friendship groups emerge. So vast are the changes that occur over this transition, the first year experiences (FYE) of students have been suggested as a crucial window where stress and changes are the greatest, compared to other times in their academic journey (Harvey, Drew & Smith, 2006; Nelson, Duncan & Clarke, 2009; Tinto, 1993).
Given the challenges students experience over their first year at university, students’ ability to cope is central to a positive adjustment experience (Lopez & Gormley, 2002). Coinciding with the challenges of university, young adults also experience difficulties “negotiating” the developmental tasks of this age period (e.g., selecting a romantic partner, managing an occupation and establishing a social group; Havighurst, 1972). Negotiating, refers to how students deal with or handle the accomplishment of developmental tasks, and often involves their tendencies to either approach or avoid the attainment of these tasks. These developmental tasks share much in common with the demands associated with commencing university, and therefore those who work towards accomplishing the tasks of young adulthood are likely to experience more positive adjustment experiences over the transition to university. Although coping and the negotiation of developmental tasks present as important factors related to the transition and adjustment experience of commencing university, little research has jointly considered these factors. Furthermore, research that has examined the university transition in relation to psychological variables has often been atheoretical in nature and failed to consider the potentially complex way in which coping and the negotiation of developmental tasks may be linked to university adjustment. This thesis proposes that attachment theory (Bowlby, 1969/1982) – a theory of human bonding and distress regulation – is a useful guiding framework to consider the interplay between students’ coping, progress towards developmental tasks and their adjustment to university.

As part of attachment theory, Bowby (1969/1982) proposed that during times of stress or perceived threat, individuals seek proximity to their primary
care givers (also known as ‘attachment figures’) to provide protection, comfort and security. The pattern of responses shown towards attachment figures contributes to the developmental of an attachment style - an enduring pattern of thoughts, emotions and behaviours in relationships (Collins, 1996). Given the transition to university involves considerable stress, and disruption to familiar social or family connections and bonds, the role of attachment may be considered particularly important. Much research has shown that individuals with a secure pattern of attachment experience a more positive adjustment to university, with greater emotional regulation (Larose & Boivin, 1998), social connectedness (Schultheiss & Blustein, 1994b) and lower distress (Vivona, 2000). Research suggests that cognitions formed as a result of past attachment experiences, are likely to influence how an individual copes in stressful situations (Lopez, 2009). Furthermore, recent research has suggested that the quality of past and current close relationships (i.e., relationships fulfilling attachment needs for love, comfort and security) influenced the accomplishment of salient developmental tasks (Englund, I-Chun Kuo, Puig & Collins, 2011). Hence, attachment theory provides a theoretical foundation for understanding how students may differentially adjust to the stressful university transition.

In this thesis, a mediational model is proposed suggesting how individuals cope and the way in which they negotiate developmental tasks, are important mediators for the relationship between attachment and university adjustment. The first aim of the study was to examine the specific associations between attachment, coping, developmental tasks and university adjustment cross-sectionally. Structural Equation Modelling (SEM) was employed to examine the
direct and indirect effects between all observed variables in the mediational model. The second aim of the study was to consider the mediational model of attachment and university adjustment over time. Again, structural equation modelling SEM was used to consider the predictive utility of attachment, coping and developmental tasks to the adjustment experience of students at the end of their first year at university.

In meeting these aims, this thesis extended the work in the field of university adjustment literature in four significant ways. Firstly, by incorporating attachment theory as a guiding framework to better understand the university experience from a relationships, distress regulation and individual difference perspective, this study extends on previous literature that has often been atheoretical in nature. Secondly, introducing a mediational model to explain variations in university adjustment recognises the complex associations between attachment, coping, development tasks and university adjustment. Therefore, this thesis attempts to unpack some of the explanatory mechanisms that may underpin the associations between attachment and university adjustment. In doing so, this thesis goes above and beyond the reporting of simplistic direct effects which is common across numerous studies in the literature on university adjustment. Similarly, this is the first study known to consider the role of coping strategies and the negotiation of developmental tasks together as mediating variables. Thirdly, many studies concerning students’ first year experiences at university involve American college samples and concern the American college experience (e.g., relocation to university campuses, sororities and significant costs). As the university experience within Australia varies
greatly from the American experience with fewer students relocating (Mayseless, Danieli & Sharabany, 1996), research findings based on American samples may be difficult to generalise to the Australian context. Hence, this study clarifies the first year adjustment and transitional experiences of students at an Australian university. Lastly, the study entails a longitudinal component, and thus captures the adjustment experiences of students over their entire first year, arguably the most stressful year of students’ academic life (Harvey, Drew & Smith, 2006; Nelson, Duncan & Clarke, 2009). The longitudinal analysis of the proposed mediation model provides for a more comprehensive examination of this model, above and beyond that of purely cross-sectional designs, and begins to address longitudinal associations between factors that lead to university adjustment.

1.1 Thesis Overview

Chapter one of this thesis provides a brief introduction to the focus and aims of the study, as well as descriptions of the key theories and variables analysed in the thesis. The second chapter provides a description of the trends associated with university enrolment and attendance rates in Australia, as well as research regarding students’ reporting of university adjustment. An argument is also proposed for considering coping and the negotiation of developmental tasks within the adjustment to university. Chapter three focuses on coping and developmental tasks over the transition to university. In particular, the conceptualisation and measurement of coping is reviewed, and literature linking coping and the transition to university is presented. Literature regarding developmental tasks is also reviewed, as well as the links between the
accomplishment of developmental tasks and approach-avoidance motivations. Chapter four introduces attachment theory as a guiding framework for the study and the literature regarding the links between attachment and the university experience are reviewed. Literature exploring the links between attachment, coping and developmental tasks is also presented, and a mediational model of attachment and university adjustment proposed. This chapter concludes with a presentation of the research aims and hypotheses.

Chapter five outlines the methodology of the study, detailing the study participants, measures and procedures. A detailed description of the data analyses and techniques utilised in the study is also presented (e.g., structural equation modelling (SEM) and mediational analyses).

Chapter six presents the results from the first component of the study- the cross-sectional analyses of the mediational model of attachment and university adjustment. Chapter seven presents the results from the second component of the study- the longitudinal analysis of the mediational model. The SEM, fit, power and specific indirect effects of both models are presented across chapters six and seven.

The final chapter of the thesis, chapter eight, provides a discussion of the results in consideration of the aims, hypotheses and literature relevant to the findings. The chapter also addresses the study strengths and limitations, as well as the theoretical and practical implications of the study findings.
CHAPTER 2

Examining the Transition to University

In this chapter, research into patterns of university attendance and attrition in Australia are reviewed, with a particular focus on individual differences over the transition to university life. In particular, literature concerning the transition to university is reviewed in order to better understand the different adjustment experiences of young adults. An argument is developed for the importance of coping and developmental tasks in explaining the varied experiences of students commencing university. These factors are examined further in chapter three, and provide the basis for how the adjustment to university will be examined within this thesis.

2.1 Trends in University application and attendance rates

Following the Bradley Review of Higher Education in March 2008, the Australian government announced its commitment to increasing university participation, in order to better meet the needs of the Australian community and economy (Department of Industry, 2009). By significantly increasing the funding to universities, the government aimed to better support access to higher education and improve outcomes for students, especially those from low socio-economic backgrounds. Efforts to increase participation in tertiary studies were also reflected in a National Education Agreement (Council of Australian
Governments, 2009) deigned to retain students within secondary schooling until completion of Year 12 and encourage continued study into higher education. Such legislative endeavours were found to be effective, with higher proportions of students completing their secondary schooling, and importantly almost half of these students (46%) later enrolled in a higher education qualification (Australia Bureau of Statistics: ABS, 2011). Consequently, university application rates have steadily increased in recent years.

In 2013 universities in Australia received over 270,000 domestic applications, marking an increase of 0.5% compared to 2012, and follows an increase of 2.7% from 2011 (Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education (DIICCSRTE), 2013). In addition to increases in applications, the number of offers made by universities has also increased over recent years (DIICCSRTE, 2013). Importantly, these statistics suggest that access to tertiary education has steadily risen over recent years and currently, more students than ever are embarking on their journey into higher education.

Although greater numbers of students are commencing university, there is growing concern for the rising number of students who fail to complete their studies and leave university before gaining a qualification. Currently in Australia, almost 20% of students enrolled in higher education courses prematurely abandon their studies and do not return within a year (Department of Industry, Innovation, Science, Research and Tertiary Education, 2010). A study comparing attrition rates across 32 Australian universities found rates varied from 5.3% to 30.3% (Olsen, 2008), with the upper bound percentages suggesting significant
levels of student attrition within the first year of university. Furthermore, the review found international students were more likely to complete their studies compared to local, Australian based students. Though more students from underprivileged and marginalised populations within Australia are enrolling at universities (Department of Education Employment and Workplace Relations (DEEWR), 2011b; DIICCSRTE, 2013), more students are also dropping out (Olsen, 2008). It is clear from these studies that student attrition in Australian universities presents a growing concern and may in fact be rendering government initiatives to increase student participation futile.

Australia’s university attrition rates are also high compared to other tertiary education institutions around the world. According to the Organisation for Economic Cooperation and Development (OECD), Australia’s survival rate of university students who graduate from their enrolled programs is lower than the international average (OECD, 2007). According to the OECD, 67.3% of students enrolled in Australian universities, commenced and completed their studies. This percentage was below the international average survival rate of 71%, which compiled course completion rates from 23 international regions. Hence, with applications and university offers continuing to rise, universities within Australia face an ongoing dilemma of how to retain the growing numbers of students commencing higher education, and prevent large proportions of students failing to complete their qualifications.

Ensuring that students complete their tertiary qualification is important for students and universities alike. For students, leaving university without a qualification can mark a significant life disappointment and waste of potential
talent or opportunity for growth (Long, Ferrier & Heagney, 2006). In addition to these personal and emotional ramifications of leaving university, there are also economic implications with students forgoing possible career aspirations by not acquiring the necessary educational requirements and skills. Engaging in higher education has been linked to better job opportunities and outcomes, higher earnings and lower chances of unemployment across the lifespan; compared to those who spend fewer years in education (Karmel, Misko, Blomberg, Bednarz & Atkinson, 2014; Raffe, 2010; Ross & Gray, 2005). Furthermore, a study following students who graduated from Australian universities with bachelor degrees found wages and employment outcomes to significantly increase in the five years following graduation; suggesting the rate of employment and fiscal opportunities continue to grow following completion of a university degree (Coates & Edwards, 2009). Hence, students who prematurely abandon their studies may be less likely to reap the long-term economic and employment benefits of higher education.

Such early withdrawals also negatively impact the broader university community, as resources and opportunities provided to students are not materialised (Pitkethly & Prosser, 2001). It is estimated that the cost of college attrition for American education organisations is approximately $16.5 billion annually (Raisman, 2013), with expenditures lost in tuition, government funding, housing and bookstore purchases. In Australia, the cost of attrition has been estimated to be approximately $1.4 billion annually, or approximately $36 million per institution (Adams, Banks, Davies & Dickson, 2010). The authors found the costs associated with attrition were so great, that merely reducing the
total attrition by one per cent, would lead to million dollar savings annually. As drastic as these figures are, they fail to capture the costs associated with lost time and productivity associated with staff needing to facilitate students entering and leaving university. Certainly efforts are needed to ensure students who begin their studies remain till completion. Yet in order to inform preventative interventions, first an understanding is needed as to what factors make some students more likely to remain at university, compared to those who drop out.

2.2 Research into University Adjustment

Commencing university has long been considered a stressful life transition for young adults, marked by complex changes in social, emotional and academic adjustment (Gerdes & Mallinckrodt, 1994). However, this transition represents more than just a discrete or acute life change, but rather a series of life stressors and adjustment difficulties manifesting over the course of university life (Lu, 1994). Some of the stressors associated with this transition include establishing greater levels of independence in the midst of greater levels of social instability, as well as changes in both the quantity and quality of social relationships (Larose & Boivin, 1998; Tanner, 2006). Further stressors also experienced include; adjusting to the increasing study load, academic pressures (i.e., pressure to achieve good grades and graduate), studying in a more self-directed manner, and learning an environment that is largely unfamiliar (Chemers, Hu & Garcia, 2001; Jones & Frydenberg, 1998).
So vast are the changes and demands associated with this transition, theorists have conceptualised the transition into a series of identities: pre-enrolment identity, tertiary student identity and professional identity (Bridges, 2003). Within these identities, the first transition from pre-enrolment to student has been considered most crucial, as it reflects the first year experiences (FYE) of students where student adjustment and stress are the greatest (Harvey, Drew & Smith, 2006; Nelson, Duncan & Clarke, 2009; Tinto, 1993). For some students, commencing university represents an opportunity for personal growth and development; however for other students the FYE is overwhelming and a time of emotional maladjustment (Vaez & Laflamme, 2008). These varied experiences reflect the potential for students’ FYE to set the foundation for student success at university (Harvey, Drew & Smith, 2006; McInnis, James & Hartley, 2000) or conversely present the highest risk period for students to drop out (McMillan, 2005; Schrader & Brown, 2008).

As mentioned previously, the adjustment difficulties that some students experience as part of the transition to university are becoming an increasing problem within the higher education sector (McKenzie & Schweitzer, 2001). Nelson, Duncan and Clarke (2009) suggest that students who arrive underprepared academically, emotionally, or socially for the demands of the university milieu are at greater risk of attrition. Indeed much research has sought to clarify what specific factors make students at risk of attrition and arriving underprepared for the university transition. One study examining academic achievement in students that remain at university compared to those who leave found various psychosocial variables, such as social support and
coping strategies, were related to retention (DeBerard, Spielmans & Julka, 2004; Tinto, 1993). Similarly, Gerdes and Mallinckrodt (1994) reported how social connectivity and emotional stability predicted retention as well as, or better than, academic performance. However, as with most studies concerning university attrition, both were based on American college samples, reducing generalisability of the findings to the Australian context.

Of the studies based on Australian samples, both were largely atheoretical in their approach and lacking methodological vigour. For example, the study by Hinton (2007) incorporated a case study design, where students who did not attend specific courses over a period of time were contacted and interviewed. Though the findings importantly highlight both personal and institutional factors involved in attrition cases, the data collection method was fraught with selection and researcher biases that cloud the findings. For instance, the authors self-selected students to survey who had consecutively not attended a number of classes, yet no comparisons were made to students who remained in the university course. Non-attending students were then contacted by the researcher (rather than a trained interviewer who was blind to the study design) and questioned through open-ended questions about their reasons for attrition, increasing the risk of interviewer bias.

The second study on an Australian sample by Marks (2007) incorporated a longitudinal youth sample to trace the characteristics and outcomes of those who completed university compared to non-completers. Though the study crucially captured and compared student experiences over time, it only considered students’ background characteristics in relation to student outcomes.
More specifically, students’ gender, geographic location, indigenous status, employment status, school sector and high school academic performance were explored, which fail to capture the potential personal and emotional strengths and vulnerabilities that may impact student experiences. Thus, these aforementioned studies were limited in their scope, research designs and their ability to provide insight into why social and emotional factors may be implicated in university adjustment.

In an attempt to better understand some of the factors that shape students’ adjustment during the transition to university, research has drawn on the widely examined stress-diathesis model as a theoretical framework to explain the potential underlying processes influencing adjustment (Chang & Rand, 2000; Cohen & Wills, 1985; Solberg, Valdez & Villarreal, 1994). The stress-diathesis model postulates that individual characteristics mediate the relationship between stress and mental health outcomes; in other words, personal predisposing factors can make one more vulnerable to maladjustment in the context of life stressors or conversely minimise the negative effects of stress (Belsky & Pluess, 2009). Drawing on this model, Solberg, Valdez and Villarreal (1994) investigated whether perceived levels of social support mediated the relationship between stress and college adjustment in Hispanic students. Contrary to hypotheses, Solberg et al., (2009) found there was no moderating effect for those who perceived themselves as having low levels of social support experiencing poorer college adjustment. Therefore students’ perceived level of social support which was proposed as an individual vulnerability factor, failed to minimise the influence of stress on college adjustment, and consequently
findings failed to support the stress-diathesis model. Importantly, this study
found stress to be highly correlated with college adjustment, and accounted for
much of the variance in adjustment. The findings from this study suggest that
although the stress-diathesis model may not be the soundest theoretical basis to
understand the transitional experiences to university, stress may be an
important factor in understanding how these experiences vary.

Studies seeking to better understand students’ varying adjustment
experiences when commencing university, have often drawn on both extrinsic
(e.g., social) and intrinsic (e.g., psychological) factors (Klomegah, 2007). In
particular, research has highlighted the role of past academic performance
during secondary school as an important predictor for university performance
and adjustment (Everett & Robins, 1991; Gerdes & Mallinckrodt, 1994; McKenzie
& Schweitzer, 2001). A reliable pattern has emerged showing students with
higher secondary school grade point averages (GPA), tend to show better
academic performance and be more successful at university (Chemers, Hu &
Garcia, 2001). However, higher academic performance does not indicate whether
or not students were coping with the transition, socially or emotionally. Indeed
university adjustment involves more than high academic performance. Hence,
although prior academic performance at secondary school may be important in
predicting an aspect of university adjustment, it may also miss important
individual differences in other areas such as students’ socio-emotional
adjustment.

In reviewing literature on factors influencing the adjustment to university,
Nelson, Duncan and Clarke (2009) concluded that no single factor has been
found to explain why some students leave university before the completion of their course; but rather, multiple factors and issues in the personal, social and academic domains are interactive and influential. Indeed, the challenges faced by students when adjusting to university are varied. These include coping with the challenges of academic study and assessment, developing new social relationships while possibly relinquishing or at least changing the importance placed on some past relationships, and planning out career interests and prospects (Compas, Wagner, Slavin & Vannatta, 1986). Given these challenges, the transition has also been found to be a particularly stressful time; thus, the ability to cope with stress is argued to be of central importance for adaptive adjustment to university (Lopez & Gormley, 2002).

Coexisting with the challenges of university life, young adults are also faced with negotiating the developmental tasks of this age period (Havighurst, 1972). According to Havighurst, a developmental task is a normative challenge specific to a life period in a particular cultural context. Havighurst stipulated that the tasks of early adulthood include selecting a mate, starting a family, rearing children, managing a home and occupation, taking on civil responsibilities and establishing a congenial social group. As developmental tasks are socially, historically and culturally specific, modern theorists have reconsidered these developmental tasks of young adulthood, suggesting young adults today grapple with tasks of developing adult identities, making decisions about future careers, and peer-related stressors such as developing new friendships (Mattanah, Lopez & Govern, 2011). These developmental tasks share much in common with
challenges faced as part of the adjustment to university. Thus, the negotiation of these developmental tasks may influence students’ adjustment to university.

Despite the importance that coping and the negotiation of developmental tasks may have on adjustment to university, very little research has examined these factors. Moreover, past studies examining university adjustment have often been atheoretical in nature, thus there is little by way of a guiding framework in which to couch the study of university adjustment and the role of factors such as coping and the negotiation of developmental tasks. Clearly what is required is a theory that facilitates the integration of such factors. As discussed previously, studies that have incorporated the stress-diathesis model as a theoretical basis were unsupported and limited in only focusing on single factors involved in university adjustment, rather than considering the interplay between multiple factors. Given that the transition to university involves negotiating past and new social relationships, managing academic stress as well as personal distress, attachment theory (Bowlby, 1969/1982) may provide an important theoretical foundation from which to further explore and understand this transitional experience. During the potentially stressful transition to university, individual differences in attachment may relate to the way in which students seek comfort and security during this time (Carr, Colthurst, Coyle & Elliott, 2013). From this perspective, attachment theory, a widely studied theory of human bonding, distress regulation and personal growth (Bowlby, 1969/1982) can provide important insights into the study of university transition and the role that coping and the negotiation of developmental tasks play in students’ adjustment to university.
2.3 Chapter Summary

Following government initiatives, Australian universities have seen widespread increases in the number of applications and acceptance rates over recent years (DIICCSRTE, 2013). However, despite increased attendance rates, Australian universities have also experienced high attrition rates, with many students failing to complete their studies (Olsen, 2008). Early withdrawals from university have been linked with negative outcomes for students and universities alike. Hence, research has sought to identify what makes students more likely to remain at university, or drop out prematurely. Within this research, studies have been limited by their atheoretical approach or focus on American college samples, factors that may mitigate developing an understanding of the factors that influence the Australian university experience. Given the transition to university involves considerable stress and many varied responsibilities, the ways in which students cope with stress and manage personal distress, as well as the way in which they are working to accomplish the broader developmental tasks of young adulthood, may be important factors in understanding variations in university experiences. Attachment theory is proposed as a guiding framework to better understand both the role of coping and the negotiation of developmental tasks within the university experience. Before considering the significance of the attachment theory, chapter three will provide a detailed review of the coping and developmental task literatures.
CHAPTER 3

Coping and Developmental Tasks in the Adjustment to University

In this chapter, coping and the negotiation of developmental tasks, two of the factors proposed as possible mechanisms in explaining how students experience the transition to university, are explored in detail. Literature examining the conceptualisation and measurement of these factors, as well as their links with the adjustment to university, are reviewed. In chapter four, these factors are further explored in relation to attachment theory, and a model is introduced to explain their relationship with university adjustment.

3.1 Conceptualisations and Approaches to Coping

As the transition to university presents as a particularly stressful period for young adults, it is important to understand the different ways in which students cope with this transition. Coping refers to the thoughts and actions engaged by an individual when responding to stressful transactions or to regulate felt levels of distress (Folkman, Lazarus, Pimley & Novacek, 1987). This process of coping with external stressors and-or internal distress has many known implications for long-term wellbeing and mental health outcomes (Aldwin, 2007). Hence, coping has been one of the most widely researched domains within the psychology field (Conner-Smith & Flachsbart, 2007; Nicholls & Polman, 2007). Though a review of all literature on coping is outside the focus of this thesis, the major
conceptualisations and approaches to understanding coping are addressed and discussed.

Folkman and Lazarus (1984) proposed a transactional stress-coping model that conceptualised coping as a dynamic process, changing across time through transactions between the person and the environment. According to this model, coping responses are first triggered through the ‘cognitive appraisal’ of a situation as stressful. The appraisal process is broken down into primary and secondary levels of appraisal. Through primary appraisals, an individual decides whether an encounter is irrelevant, positive or stressful; while secondary appraisals determine whether the individual feels capable to respond to the stressor. Primary and secondary appraisals are considered to act interdependently, influencing the intensity and type of response enacted.

Following this appraisal process, individuals are thought to respond using one of two possible types of coping strategies; emotion-focused and problem-focused coping strategies. Emotion-focused coping strategies are intended to regulate emotional distress through thoughts or behaviours that minimize, distance or amplify an individual’s affective state. Emotion-focused strategies include; wishful thinking (e.g., wishing or hoping for a miracle or change), detachment (e.g., trying to forget the problem or removing oneself from the problem), seeking social support (e.g., talking to someone about the situation or asking for advice), self-blame (e.g., blaming oneself for the problem or feeling they had brought the problem on themselves) or keeping to oneself (e.g., avoiding others or withdrawing; Folkman & Lazarus, 1985). In contrast, problem-focused coping strategies are intended to manage the stress-inducing
problem, hence targeting the source of the stressor rather than the result of the stressor. Examples of problem-focused coping strategies include planned problem solving methods and conflict resolution approaches to an issue.

The emotion-focused/problem-focused distinction in coping strategies has become the most widely used conceptual approach in the coping literature, with this conceptualisation used to explore how people deal with a great variety of stressors from missile attacks to divorce (Aldwin, & Revenson, 1987; Birnbaum et al., 1997; McCrae, 1984; Mikulincer et al., 1993). Both theory and empirical evidence suggest that these strategies are not mutually exclusive, and instead may occur simultaneously. For example, emotion-focused coping that is geared toward minimising the experience of distress, may facilitate problem-focused coping by eliminating the distress that may have hindered problem solving strategies (Folkman, 1984). Folkman and Lazarus (1984) suggest that if the individual feels they are able to do something about the stressful situation, they are more likely to engage in problem-focused coping strategies where efforts are directed towards analysing and solving the problem in a given situation. Conversely, if the individual feels that nothing can be done about the stressful situation, they are more likely to engage in emotion-focused coping strategies where efforts are directed to manage the emotional distress associated with the stressor.

Despite the widespread use of the transactional stress-coping model, there are a number of conceptual inconsistencies and shortcomings (Skinner et al., 2003). More specifically, there is great discrepancy between studies that have categorised coping according to the emotion-focused and problem-focused
distinction. In particular, studies have varied in the number, type and specificity of strategies grouped under each coping category (Karantzas & Hoyle, 2010). This disparity is exemplified in a comparison between two separate empirical studies. One study by Folkman and Lazarus (1984) conceptualised problem-focused coping as a single factor, identified six emotion-focused factors (wishful thinking, distancing, emphasising the positive, self-blame, tension-reduction and self-isolation) and one mixed problem/emotion focused factor (seeking social support). Contrastingly, a different study published around the same time by Aldwin and Reverson (1987) derived three problem-solving factors (exercised caution, instrumental action and negotiation), four emotion-focused factors (escapism, minimisation, self-blame and seeking meaning), and also one combined problem/emotion focused factor (support mobilisation). Despite using the same theoretical conceptualisation, these two studies only align on one emotion-focused factor (self-blame), and in recognising a socially oriented mixed factor, which is differentially labelled. Because of this inconsistency in factor classification, it is difficult to draw any comparisons or conclusions between studies.

Furthermore, emotion-focused coping has been argued to conflate two highly distinct forms of regulating distress; strategies that suppress distress and strategies that intensify distress (Karantzas et al., 2012; Wei et al., 2005). These different forms of emotion-focused coping may also have different implications for an individual’s success or failure in dealing with the stressful encounter (Scheier, Weintraub, & Carver, 1986). Emotion-focused strategies that suppress distress may enable the person to continue everyday life as normal; compared to
strategies that intensify distress, which may intrude on an individual’s capacity to continue everyday functions (Scheier et al., 1986). Essentially, the differing functions and consequences of the strategies within the emotion-focused category mean researchers must delineate the two sub-categories (Steed, 1998).

Another problem stemming from the lack of consensus across what constitutes as an emotion-focused versus a problem-focused strategy, is that some strategies do not easily fit into either category (Coleman, 1992; Skinner et al., 2003). For example, seeking social support which involves establishing proximity to people who can assist in alleviating distress, is a strategy to gain help from others and therefore not necessarily emotion or problem focused in nature. This lack of clarity is reflected in the Folkman and Lazarus (1984) study discussed earlier, classifying this strategy as a mixture between emotion and problem focused coping; and as discussed previously, has led to further inconsistencies in later research (Adlwin & Revenson, 1987; Vitaliano, Russo, Carr, Maiuro, & Becker, 1985). Therefore, the distinction between emotion-focused and problem-focused coping does not appear to adequately capture the range of coping strategies people employ in times of stress.

Whilst the large majority of research has conceptualised coping according to the Folkman and Lazarus (1984) transactional stress-coping model (Carver & Scheier, 1994), many alternative coping models have been proposed. A comprehensive review by Skinner et al. (2003) estimates that the differing coping conceptualisation have resulted in the emergence of over 400 different coping styles within the literature. Despite the diversity in coping conceptualisations and coping styles, one conceptual model that has gained
considerable uptake is the approach-avoidance model of coping (Heppner, Cook, Wright, & Johnson, 1995), in which coping styles are divided into approach and avoidance responses to a situation (Roth & Cohen, 1986). Approach strategies are considered to be any coping efforts oriented towards the distressing situation (e.g., information seeking, acquiring knowledge or direct efforts to maintain control), while avoidance strategies involve responses oriented away from the distressing situation (e.g., evading the problem, engaging in unrelated activities or denying the problem; Stanton, Parsa & Austenfeld, 2001).

The approach/avoidance conceptualisation has guided the development of various coping measures (Krohne, 1989), with the Problem-Focused Styles of Coping (PF-SOC; Heppner, Cook, Wright & Johnson, 1995) the most prominent of these. In developing this scale, the authors sought to simplify and condense the various conceptualisations of coping. Although, problem-focused coping is prominently featured in the name of the scale (and assessed within a particular subscale termed ‘reflective coping’), affect regulation strategies that have a strong avoidance and approach orientation are assessed as part of the measure.

In total, three subscales were found to capture the different coping approaches used by individuals, these were termed reflective, suppressive and reactive coping. The reflective coping style was designed to emphasize the approach oriented activities taken towards addressing stressors and is characterized by a tendency to examine the underlying issues and causes that give rise to a stressor, and develop a systematic course of action to cope with the issue. Conversely, the suppressive style is characterised by a tendency to avoid tasks directed towards addressing or resolving the source of stress or distress.
and deny problems. Suppressive coping strategies include denying the presence of a problem (e.g., problem minimisation) or taking efforts to escape the problem and stress (e.g., leaving or removing oneself from the situation or stressor), or any psychological or physical efforts taken to disengage from the problem or stress (e.g., distracting oneself or engaging in unrelated activities). Lastly, the reactive style reflects strong emotional or cognitive responses that psychologically drain the individual and direct attention away from the problem. Reactive coping strategies may include strong emotive expressions, impulsivity, and creating cognitive distortions or confusion (e.g., overthinking the problem and overemphasizing aspects; Heppner et al., 2004). Both suppressive and reactive coping styles reflect avoidant activities, directing cognitions and behaviours away from resolving the source of stress.

Studies incorporating this coping conceptualisation have reported the PF-SOC survey as a valid measure of coping strategies or styles (Heppner et al., 1995; Wei, Heppner & Mallinckrodt, 2003). However the links between reflective, reactive and suppressive styles of coping and various psychological outcomes have been less clear. Although it may be expected that the different types of avoidant coping strategies people employ (reactive or suppressive) would have differential effects on psychological outcomes and adjustment experiences, very little research has investigated this. Literature that has considered the effects of reactive and suppressive coping styles have tended to show no differential outcomes or effects between the avoidance coping strategies. More specifically, reactive and suppressive coping have been similarly associated with depression and anxiety (Lopez et al., 2001; Wei et al., 2003),
psychological distress (Lopez et al., 2002) and lower levels of life satisfaction (Chang, Sanna, Riley Thornburg, Zumberg & Edwards, 2007; Liu, 2008). Hence, further research is needed to clarify the potentially differential effects of suppressive and reactive coping on individual differences in adjustment experiences.

The current literature base has also been limited in largely focusing on the avoidant orientated strategies within the PF-SOC measure (e.g., suppressive and reactive styles), with many studies failing to include the reflective subscale within their studies (e.g., Lopez et al., 2001; Wei et al., 2003). Therefore, less is known regarding the potential associations between approach oriented coping (reflective style) and psychological wellbeing or adjustment outcomes (Folkman & Moskowitz, 2000). Although the PF-SOC measurement of coping strategies reflects a more meaningful conceptualisation of coping and in particular, individual differences in coping, additional research is needed to support the links between these coping styles and various psychological outcomes.

Despite the aforementioned limitations in the application of the PF-SOC measure, the scale has also been used in recent literature to expand understandings regarding the stable, rather than situational nature of coping (Wei et al., 2003). Early evidence into variations in the way individuals coped with stress considered these variations to be dependent on the situation, and therefore studies incorporated situational measures to capture this (e.g., Ways of Coping; Folkman & Lazarus, 1988; Kotler et al., 1994). For example, the Ways of Coping measure assesses individuals’ use of various coping strategies, though also requires individuals to recall a recent stressful situation and rate the extent
to which they used various coping strategies in relation to the recalled situation (Folkman & Lazarus, 1985). In doing so, this measure assumes that individuals engage in different coping strategies depending on the type of stressor or problematic situation. However, more recent literature, incorporating measures of coping including the PF-SOC have shown stability in the way in which individuals cope regardless of the stressor or time-lag, suggesting the use of coping strategies may be more invariant and more dispositional in nature than originally thought (Moos & Holman, 2003; Powers, Gallagher-Thompson, & Kraemer, 2003; Karantzas & Bale, 2009; Wei et al., 2003).

Two main issues concerning the coping literature have been discussed in section 3.1, namely, the conceptualisation and measurement of coping. The following section will now consider the links between coping and the transition to university.

### 3.2 Coping and the Transition to University

As discussed previously, commencing university is associated with a plethora of stressors related to the environmental, social and emotional changes that take place over the transition (Friedlander, Reid, Shupak & Cribbie, 2007; Gall, Evans & Bellerose, 2000). It is therefore not surprising that how students cope with these stressors has implications for their adjustment to university. In an attempt to better understand the coping mechanisms utilised in college samples, a study by Hamaideh (2011) first sought to understand the types of stressors students experienced during university. Five categories of stressors were measured; frustrations (e.g., delay, hassles or failures in accomplishing
goals), conflicts (e.g., conflicting goals leading to desirable or undesirable outcomes), pressures (e.g., overloaded by responsibilities or deadlines), changes (e.g., too many changes, or disruption to life goals), and self-imposed stressors (e.g., procrastination, worry, competitiveness). Students rated ‘self-imposed stressors’ as the most common type of stress experienced, which involved stressors related to self-induced pressure to win, succeed or be noticed while at university. How students responded to the range of stressors experienced was also measured, and students were found to respond in either cognitive or emotional ways. Cognitive responses to stress were most prevalent and tended to involve thinking about or analysing the situation or stress, compared to emotional responses involving increased negative affectivity (e.g., feeling more anxious, worried or angry). While the study highlighted the types of stressors and reactions that students have to stressors experienced during university, the study only analysed student coping strategies in relation to academic data (e.g., year level, GPA), health variables (e.g., smoking status, average hours sleep) and socio-demographics (e.g., age, gender, parental education level). Hence, it is unclear from this study the potential implications of various coping responses for the actual adjustment to university.

One study that has explored the association between coping styles and adjustment to the first year of college, found that students who engaged in ‘active’ oriented coping strategies experienced higher levels of adjustment (Leong, Bonz & Zachar, 1997). Active oriented coping strategies were defined as actions or planned activities to directly address the source of stress; and can therefore be considered conceptually parallel to approach oriented coping styles.
In particular, active coping was linked to more positive academic and personal-emotional adjustment experiences. In contrast, students who did not engage in active oriented coping strategies and instead engaged in emotion oriented coping strategies experienced more negative personal-emotional adjustment (higher self-reported experiences of anxiety and depression). Emotion oriented coping strategies were described as venting emotions, or focusing on emotional distress rather than dealing with the source of the stress, and can be considered conceptually parallel to avoidant coping strategies.

These above findings were consistent with a study based on an Australian university sample, that asked students to identify whether they were “thriving” or “just surviving” the transition to university (Richardson, King, Garrett & Wrench, 2012). Students who identified themselves as ‘thriving’ described using coping strategies that were focused on taking action towards the source of their stressors (e.g., approach oriented coping styles), and subsequently reported more positive psychological outcomes (e.g., feeling more relaxed). Contrastingly, students who identified themselves as ‘just surviving’ reported the use of more passive or avoidant strategies to manage their stress (e.g., avoidant oriented coping styles) and consequently reported negative emotional responses (e.g., feeling worse). Hence, the negative implications of emotion oriented or avoidant coping strategies during the transition to university are consistent with research conducted in other stressful contexts (Folkman & Lazarus, 1985; Heppner et al., 1995).

In building on the Leong and colleagues (Leong, Bonz & Zachar, 1997) study, Shields (2001) compared the coping styles of first year college students
who remained at college for the entire year, to students who left after a semester. Students who remained at college, who the author labelled as ‘persisters’ were found to be more likely to engage in active coping strategies compared to those who left college (non-persisters). Active coping strategies were strongly linked to retention of students, suggesting that the type of coping strategies students employ may have implications not only for their adjustment experiences at university, but also whether or not they remain at university. This finding is consistent with studies suggesting students who engage in reactive or suppressive coping styles were at risk for early drop-out (Lopez & Gormley, 2002).

Furthermore, a study investigating the longitudinal effects of coping strategies on first year college adjustment found emotion-focused coping strategies at the beginning of the university year were related to negative psychological outcomes at the end of the first semester (e.g., negative mood; Pritchard, Wilson & Yamnitz, 2007). Emotion-focused coping strategies included, criticising oneself and learning to live with it (the stressor), and increased the likelihood of negative mood, and poorer health at the second time point. Indeed, research has consistently reported a range of negative outcomes through engagement in emotion-focused or avoidant coping strategies; including increased alcohol consumption (Walker & Stephens, 2014), increased depressive symptomology (Dyson & Renk, 2006; Lee, Dickson, Canley & Holmbeck, 2014), as well as increased anxiety (Wodka & Barakat, 2007). Hence, how students cope over the transition to university has implications for their retention at
university, future adjustment over the course of university, and their overall psychological wellbeing.

Though these aforementioned studies importantly highlighted the associations between various coping styles and adjustment difficulties for students, no study has proposed any clear explanations as why some students are more likely than others to adopt emotion-focused coping strategies in times of stress. Given the known positive outcomes associated with engaging in problem-focused or approach oriented coping styles, it remains unclear as to what factors are associated with some students failing to engage in such constructive strategies. Hence greater understanding is needed in relation to the underlying factors leading to variations and individual differences in students’ engagement with coping strategies, over the transition to university.

3.3 The negotiation of Developmental Tasks

The transition to university requires young adults to adjust across multiple domains of the university context. The conceptualisation of university adjustment is such that it involves adapting to university life across facets such as one’s social relations with peers and staff, the pressures of academic study, as well as planning and working towards one’s future career (Arnett, 2000; Nelson & Barry, 2005). Interestingly, the domains across which young adults must adjust to university life correspond with key developmental tasks associated with young adulthood. According to Havighurst’s developmental task theory (1972), a developmental task is a normative challenge specific to a life period in a particular context. This theory of developmental tasks recognises how the
individual and their social environment interact in a particular life period. Developmental tasks are therefore socially, historically and culturally specific (Sugarman, 2001). Within the context of young adulthood, key developmental tasks involve the development of adult social relationships outside the family home, becoming an independent adult (which includes developing self-directed ways of learning and making decisions), and formulating goals and aspirations regarding one’s future career (Havighurst, 1972).

The conceptual correspondence between Havighurst’s theory of developmental tasks (1972) with the definition of university adjustment may suggest a strong empirical association between these concepts. Moreover, given that developmental tasks represent normative challenges that young adults must negotiate, it may be argued that successful negotiation of these tasks is an important predictor of university adjustment. While this assumption seems tenable, it is yet to be tested empirically. However, if the association between developmental tasks and university adjustment is validated through empirical means, this may have important implications for understanding the role of development task negotiation in students’ transition and adjustment to university. While not explicitly examining the adjustment to university, a study by Schulenberg, Bryant and O’Malley (2004) focusing on the transition to adulthood, found that those who successfully were working towards accomplishing developmental tasks associated with work, romantic involvement and citizenship were more likely to maintain or experience an increase in their wellbeing (e.g., high self-esteem, self-efficacy and social support) over time. Person, Rosenbaum, and Deli-Amen, (2005) contend that the negotiation of
developmental tasks during university is necessary as many of the domains of university life ensure that educational and social competencies are attained, to ensure a smooth pathway into one’s future career. Thus, it appears the negotiation of developmental tasks is important within the university context.

Despite the importance of successfully negotiating development tasks in young adulthood, not all young people demonstrate the capacity to approach and negotiate these tasks (Schulenberg et al., 2004). For instance, research suggests that for some young adults, including university students, concerns regarding a lack of social support and issues pertaining to self-competency or the fear of failure seem to not only mitigate against pursuing development tasks, but may actively avoid negotiating these tasks (Seiffge-Krenke & Gelhar, 2008; Seiffge-Krenke, Kiuru & Nurmi, 2010). In focusing on successfully transitioning to university, young adults may also postpone other developmental tasks in order to secure the achievement of their primary focus (Levinson, Darrow, Klein, Levinson & McKee, 1978). Young adults are therefore required to adjust their accomplishment of developmental tasks in line with their particular goals and priorities (Lawrence & Dodds, 2003), and in this way there may be very little change in students’ accomplishment of tasks at certain stressful points in time.

A longitudinal study examined the ways in which adolescents worked towards accomplishing the developmental tasks of adolescence, by considering whether youth were working towards their desired state of developmental task accomplishment, or were more focused on worrying about the discrepancies between their actual and desired state of developmental tasks accomplishment (Pinquart, Silbereisen & Wiesner, 2004). The authors reported that participants
who were working towards achieving their developmental tasks expressed higher self-esteem than those who focused on worrying regarding the discrepancy between their actual and desired states. However, the authors did not actually measure how participants were working towards the achievement of developmental tasks. Instead, participants were asked to rate the importance of developmental tasks to their current life situation at different time points, and this measure was used to gauge adolescents’ level of developmental task progression.

Similarly, Seiffge-Krenke, Kiuru and Nurmi (2010) investigated the importance and attainment of key developmental tasks over time, finding consistently high ratings of the importance placed on development tasks, yet varying levels of task attainment. Thus, while this research suggests that developmental tasks are important in the lives of young adults, it remains unclear as to what factors contribute to the young people’s progress in negotiating developmental tasks. Furthermore, this study did not suggest whether or not students were actively working towards task attainment, or actively avoiding task attainment. Hence, it is largely unknown how students negotiate the competing and demanding tasks of young adulthood and it remains unclear how best to conceptualise and measure the actual negotiation of such tasks.

Furthermore, previous studies measuring students’ rated importance of various developmental tasks have failed to provide information as to whether students were in the process of pursuing the accomplishment of these tasks, or instead evading developmental task accomplishment (Pinquart et al., 2004;
The accomplishment of developmental tasks specific to young adulthood, contribute to the accomplishment of future developmental tasks and successful progression across the life-span (Roisman, Masten, Coatsworth & Tellegen, 2004). One such task that takes an enormous amount of time and energy is the formation, then attainment, of a career. In working to achieve this task, young adults may postpone other tasks in order to secure the achievement of their primary focus (Levinson, Darrow, Klein, Levinson & McKee, 1978). For example, students with higher education and career focused tasks may avoid or postpone tasks focused on general social and family relationships. This tendency to postpone tasks outside of educational or career focuses may reflect how many students are engaged in higher education, and completing their courses for much longer than expected (Person, Rosenbaum & Deli-Amen, 2005).

Hence within the transition to university, some students may be focused on approaching certain developmental tasks, while others may be avoiding certain developmental tasks. The measurement of developmental tasks therefore needs to capture the various ways in which young adults may be negotiating task accomplishment. Within this study, an approach/avoidance of motivations conceptualisation is proposed as a lens through which to better understand the process of managing developmental tasks within young adulthood.

### 3.4 Approach and Avoidance Motivations and Developmental Tasks

The distinction between approach and avoidance motivations has a long history in the psychological sciences and has been used to understand a range of empirical areas, from psychodynamic, humanistic, biological to cognitive
behavioural fields (Elliot, 2013). Approach motivations have been defined as
directing behaviours towards stimuli (events/possibilities/objects etc.), and
contrasts avoidance motivations where behaviours are directed away from
stimuli (Lewin, 1935). These dichotomous motivations are said to reflect two
basic psychological needs; growth needs that impel one towards other objects
and strive to attain a more positive life situation and deficit needs that impel one
away from other objects and strive to eliminate negative life situations (Maslow,
1955). Approach and avoidance motivations play a central role in human
functioning and promote successful adaptation to contextual demands (Elliot,
2013). Successful adaptation within varying environments, requires first
interpreting whether or not stimuli in the environment are relevant to one’s
survival (e.g., determining whether threats are present), and subsequently
determining the most appropriate response to survive (Berntson, Boysen &
Cacioppo, 1993). In humans, many of these processes occur subconsciously, as
seen in the pain withdrawal reflex which functions to ensure an individual avoids further pain (Graham, 1973). Often, these automatic evaluations evoke
avoidance or approach motivations (Elliot, 2013). Avoidance motivations may
act to facilitate survival within potentially harmful environments through
averting potentially negative stimuli, whereas approach motivations may
facilitate thriving within the same environment through directing behaviours
and energies towards positive stimuli (Elliot, 2006). Hence, how individuals
adaptively negotiate life stressors and demands may relate to internal approach
or avoidance responses.
In order for individuals to respond to the environment in an approach or avoidant manner, individuals must first interpret whether or not the environmental stimuli poses any threats. Yet this interpretation may not occur consciously. Research indicates that individuals evaluate encountered stimuli as either ‘good’ or ‘bad’ immediately and often without conscious awareness (Zajonc, 1998). Following this automatic evaluation process, subsequent behavioural responses toward or away from the stimuli are mobilised (Bargh & Chartrand, 1999). Given humans are complex organisms and may experience a vast number of environmental stimuli at any given moment, multiple levels of approach-avoidance evaluative and behavioural responses may occur simultaneously (Cacioppo & Berntson, 1994). Zajonc (1998) asserts that individuals are hardwired to make relatively immediate approach-avoidance responses to stimuli, and these initial responses are the basis for all subsequent responses. It is therefore reasonable to assume that the approach-avoidance distinction may underlie many if not all motivational concepts and processes (Elliot, 2013).

Though no empirical studies have interpreted the negotiation of developmental tasks from an approach-avoidance motivation perspective, these dichotomous motivations may serve to explain individual differences in developmental task accomplishment. It is reasonable to assume that young adults entering a foreign and stressful environment such as university would immediately evaluate the environment and respond in many varied ways. More specifically, some young adults may perceive the university environment as threatening and feel emotionally or socially unprepared for the demands
associated with this environment, and subsequently avoid working towards accomplishing developmental tasks of young adulthood in order to survive the current context. Contrastingly, young adults who may interpret the university context as threatening, though feel competent and prepared to manage associated stressors, may approach the developmental tasks of young adulthood and thrive within this same environment. Hence, understanding approach-avoidance motivations provides insight into how young adults may negotiate developmental tasks within the university environment.

Conceptualising the negotiation of developmental tasks according to approach-avoidance motivations aligns with the conceptualisation of coping according to approach (reflective) and avoidance (suppressive and reactive) oriented strategies presented in section 3.1 of this thesis. Both developmental tasks and coping reflect aspects of peoples’ lived experience in which people may negotiate in varied ways. Whether an individual chooses to approach developmental tasks or employ approach oriented coping strategies, reflects the underlying capacity to elicit agency within environmental pressures. Yet despite these similarities, coping and developmental tasks are theoretically different. Whilst approaching developmental tasks may occur in any given context at any given point across the lifespan, coping strategies are only enacted in times of stress. Developmental tasks and coping therefore reflect important areas of individual difference, to be explored within the stressful university transition.
3.5 Chapter Summary

This chapter explored two of the factors that have been proposed to explain the individual differences observed over the transition to university, namely; how students cope with university, and how students negotiate the developmental tasks of this age period. Despite the varied ways in which coping has been conceptualised and approached within the literature, coping has emerged as a key factor involved in students adjustment to university. Yet it remains unclear why some students engage in maladaptive coping strategies, and others engage in more adaptive coping strategies in dealing with the transition. The developmental tasks of young adulthood were introduced in this chapter, and it was argued that these developmental tasks share much in common with the challenges faced within the transition to university. Yet no studies to date have considered the role of developmental tasks in university adjustment, and furthermore, there has been great variability in how developmental tasks are conceptualised and measured. Approach-avoidance motivational theory was proposed as a way to conceptualise the negotiation of developmental tasks by young adults during this developmental stage in life. Despite the significant role coping and the negotiation of developmental tasks may play in university adjustment, no studies have jointly considered these factors. The following chapter will discuss attachment theory, and introduce a model for linking attachment, coping and developmental tasks to better explain the adjustment to university.
CHAPTER 4

Attachment Theory and a Proposed Mediational Model of University Adjustment

In this chapter, attachment theory is introduced as a guiding framework for contextualising the transition to university. Literature examining the origins of attachment theory is explored, as well as its links with coping, developmental tasks and the university adjustment literature. The chapter concludes with a presentation of the proposed mediational model, research aims and hypotheses for this thesis.

4.1 The Attachment Behavioural System

Bowlby’s (1969/1982, 1973, 1980) seminal theory of attachment proposes that individuals respond to threat or stressors by seeking proximity to and comfort from caring others, known as attachment figures. According to Bowlby, seeking proximity and comfort is considered an innate, biological behavioural response to increase an individual’s chance of survival during infancy and when vulnerable. Thus, Bowlby posited that individuals harbour an attachment behavioural system- a repertoire of behavioural responses designed to ensure the safety and protection of a person. The primary goals of this attachment system are to experience a sense of psychological and physical security and protection, known as ‘felt security’ (Sroufe & Waters, 1977b). Felt security allows for individuals to devote attention away from themselves, and more confidently
explore the environment. The theory was originally conceived to describe and understand the parent-child bond, though subsequent theorists have extended the application of attachment theory to adult romantic and peer relationships (e.g., Fraley & Davis, 1997; Hazan & Shaver, 1987; Hazan & Zeifman, 1999; Karantzas, Feeney, Goncalves, & McCabe, 2014; Mikulincer & Shaver, 2007; Simpson, Rholes & Nelligan, 1992).

Bowlby (1969/1982, 1973, 1980), considered an attachment bond to be defined by three functions; (1) ‘proximity maintenance’: the need to establish proximity to a protective attachment figure and resist separation, (2) ‘safe haven’: the provision of protection and support by the attachment figure in times of need, (3) ‘secure base’: the attachment figure provides a base from which to explore the environment, take on life challenges and pursue goals (Mikulincer & Shaver, 2007). Of these three functions, proximity maintenance is considered the primary strategy of the attachment behavioural system, as it consists of a variety of behaviours that serve to protect individuals from danger, grievance or demoralisation (Bowlby, 1969/1982).

According to Bowlby (1969/1982), experiences with attachment figures, whether positive or negative, contribute to the development of internal models of the self and others (attachment mental representations). Within these internal working models are stored representations of person-environment interactions and more specifically, attachment-related memories and/or cognitive affective mental depictions that are unique to each individual. Once the attachment system has been repeatedly engaged within relational contexts (such as the parent-child relationship), mental representations of the attachment figures’
responses develop (working models of others), and exist alongside mental representations of one’s sense of self value or worth (working models of the self; Bowlby, 1969). These dual mental representations are considered ‘working’ models as they allow for predictions of outcomes to various attachment behaviours, estimate how attachment figures are likely to respond, and are adjustable and dynamic, changing with ongoing interactions (Young, 1964). Over time, Bowlby (1973) contended that individuals are likely to find partners who fit within their internal working model of others, and consequentially act to reinforce this working model. However, Bowlby (1969/1982) also acknowledged that internal working models are not impermeable to change, and should any attachment-related experiences not fit within current working models, self and other schemas would be challenged and adapted.

Individual mental representations of the self and others have been linked to the type of attachment encounters experienced by an individual over time. For example, a lack of parental availability, sensitivity or responsiveness has been found to contribute to a disordered mental representation of the self, characterised by a lack of self-cohesion, as well as a more vulnerable and unstable self-esteem (Kohut & Wolf, 1978). Furthermore, a history of negative interactions with unreliable attachment figures has also been linked to negative mental representations of others, whereby friends and family members are described in negative terms, with a more negative view of humanity in general (Collins & Read, 1990). In contrast, when attachment figures are consistently available and responsive, individuals are likely to develop mental representations of the self as worthy of love and view others as reliable and
supportive (Bartholomew, 1990). These positive mental representations of others can then be projected onto new partners and relied on when forming new relationships with others (Collins & Allard, 2003; Brumbaugh & Fraley, 2006). Individuals therefore carry an array of internal working models relevant to themselves and others, and this set of views, beliefs and memories guide future relationships and interpersonal responses.

One concept that helps to explain the positive personal and relational effects of consistent and available attachment figures is the broaden-and-build cycle proposed by Mikulincer and Shaver (2007). According to the broaden-and-build cycle, when attachment figures are appraised to be both available and responsive, a cascade of mental and behavioural processes is triggered. Some of these cascading processes include the experience of positive emotional states (e.g., relief, love, pride), positive self-perceptions, positive and confident engagement in relationships of an intimate nature, as well as engagement in activities associated with self-growth (e.g., education, exploration). Individuals, who perceive their attachment figures as available are more likely to experience positive psychological benefits, manage stress more effectively and have the ability to restore emotional equanimity (Feeney & Van Vleet, 2010). Hence, the broaden-and-build cycle helps to explain some of the profound and enduring benefits of positive interactions with attachment figures.

Contrastingly, when attachment figures are inconsistent or unavailable, individuals are likely to develop working models of the self as unworthy of love and view others as unreliable or rejecting (Bartholomew, 1990). Bowlby (1969) argued that variations in an attachment figure’s responsiveness produce
longstanding changes in the attachment system functioning over time. Consequently, if the attached individual does not experience comfort, security and support from an attachment figure when seeking proximity, they are likely to engage in secondary attachment strategies in an attempt to resolve the activation of the attachment system. These secondary strategies are termed hyperactivation and deactivation (Main, 1990).

Secondary attachment strategies can be assimilated to the fight-flight distinction (McNaughton & Corr, 2008), whereby hyperactivation strategies are defined ‘fight’ responses to frustrated attachment needs (Mikulincer & Shaver, 2007). Accordingly, hyperactivation represents an array of strategies in which distress is intensified, as are attempts to gain the attention and/or closeness to an attachment figure. Bowlby (1969/1982) described this exaggerated proximity-seeking response as ‘protest’ and considered it especially likely when an attachment figure is inconsistently responsive. In such cases, a reinforcing cycle is established encouraging hyperactivation strategies, as persistent and energetic proximity-seeking behaviours are occasionally successful, which intensifies the attached individual’s efforts to demand attention, love and support from their attachment figure. Often, this pattern becomes engrained and consequentially leads to negative relationship experiences in the future, marked by emotional distress and conflict over attachment figure receptiveness (Mikulincer & Shaver, 2007).

The opposing secondary strategy, deactivating strategies, can be equated to the ‘flight’ response to the unavailability of attachment figures. Deactivation represents a series of strategies in which distress is suppressed, as are attempts
to seek proximity to the attachment figure. This response strategy is more likely to develop in relationships with emotionally detached figures, who punish or disapprove of closeness or expressions of vulnerability (Cassidy & Kobak, 1988). Deactivation therefore involves the inhibition of proximity-seeking behaviours and suppressing signs of need or vulnerability. No sense of felt-security results from this response pattern, yet the attached individual still attempts to deal with threats or stressors alone. Bowlby (1969/1982) referred to this strategy as ‘compulsive self-reliance’, as a means to avoid frustration or distress caused by attachment figure unavailability (Mikulincer & Shaver, 2007).

Research has examined the stability of attachment orientations and has often found that by adulthood these attachment patterns tend to be trait-like in nature and remain stable over time and across different life stressors or relationship fluctuations (Fraley, 2002; Fraley & Brumbaugh, 2004; Lopez & Gormley, 2002; Mikulincer & Shaver, 2007). In summarising more than 30 studies testing the stability of attachment patterns, Mikulincer and Shaver (2007) reported moderate to high levels of stability in adult attachment patterns over a range of time frames spanning from 1 week to 25 years. Moreover, a meta-analysis by Fraley and Brumbaugh (2004) confirmed that stability in adult attachment patterns was higher than that observed in children.

Ultimately, these automated response patterns towards attachment figures contribute to the development of an individual’s attachment style, their most enduring and accessible thoughts, emotions and behaviours in relationships (Collins, 1996). Attachment styles are described in section 4.2.
4.2 Attachment Styles

Ainsworth, Blehar, Waters and Wall (1978) were the first to empirically test Bowlby’s (1969/1982) conceptualisation of attachment, finding support for the concept in a series of studies examining infant-mother attachment patterns in a Strange Situation assessment procedure. In this assessment, infants were classified into three categories (secure, anxious or avoidant) based on their responses to separation from, and reunions with, their mother. Infants classified as ‘secure’ showed successful proximity-seeking attempts and subsequently achieved a sense of security; they therefore tended to exhibit distress when separated from their attachment figure, but would respond positively when reunited. In these cases the mother provided attachment security and reinforced the primary attachment strategy of proximity seeking (Mikulincer & Shaver, 2007). In contrast, anxious infants exhibited extreme distress when separated, and conflicted or angered responses when reunited with their mothers. On observation, this pattern of behaviour has been empirically linked with caregivers who provide inconsistent levels of responsiveness to their infant’s proximity-seeking attempts (Ainsworth et al., 1978). Lastly, infants who were classified as avoidant, displayed subdued reactions to separation and very little distress, and tended to avoid the mothers upon reunion. This pattern of infant behaviour was linked to emotionally dismissive mothers, who tended to reject infants’ efforts to gain proximity (Ainsworth et al., 1978). Mothers of both anxious and avoidant infants prevent the attainment of a secure attachment in their child and consequently reinforce the infant’s adoption of secondary attachment strategies (i.e., the use of hyperactivation and deactivation strategies, Hazan & Shaver, 1994).
Since the early work of Ainsworth et al. (1978), contemporary research into the assessment of attachment (largely from a social psychological perspective) has identified that attachment style is underpinned by two dimensions: attachment anxiety and attachment avoidance (Brennan, Clark & Shaver, 1998). The attachment anxiety dimension is concerned with extreme desires for closeness in relationships, fear of rejection and constant worry for partner availability. Individuals that experience heightened attachment anxiety are more likely to rely on hyperactivating strategies to cope with emotional distress and attachment insecurities (Mikulincer & Shaver, 2007). The second dimension, attachment avoidance is concerned with a preference for emotional distance and extreme self-reliance, consequently dismissing the importance of social supports (Rom & Mikulincer, 2003). Individuals high on this dimension are more likely to engage in deactivating strategies to manage emotional distress (Mikulincer & Shaver, 2007).

Individuals who score low on both attachment anxiety and avoidance dimensions are considered to have a secure attachment style, characterised by a trust in partners, and a comfort with closeness and intimacy (Brennan et al., 1998). These individuals have a positive model of themselves and others (Griffin & Bartholomew, 1994) and are not likely to engage in hyperactivating or deactivating attachment strategies to deal with stress, but instead cope with distress in more constructive ways by using the primary attachment strategy, and rely on others for support (Mikulincer & Shaver, 2007). Hence, the attachment responses are activated through times of stress or perceived threat, and efforts are taken to elicit a sense of felt security. Once the psychological state
of felt security is achieved, the attachment system is deactivated and the individual can return to functioning (Sroufe & Waters, 1977b).

In this way, the attachment system is a theory of distress regulation, where different strategies are taken to cope with stress and bring both a sense of security and protection. Given the attachment system is activated in times of stress and involves a regulatory function, it has been applied to the study of many various stressful contexts, including the transition to university. The literature pertaining to this stressful context is presented in the following section.

4.3 Attachment and the Transition to University

As previously mentioned, commencing university encompasses many changes in the lives of young adults including, disruptions to social networks, exposure to an unfamiliar academic environment, and for many international students, relocation from the parental home (Shaver, Furman & Buhrmester, 1985). As the attachment system is activated in times of stress (Ainsworth et al., 1978) and the transition to university is considered a stressful time for young adults (Parage, Leerkes & Blankson, 2010), the role of attachment in university adjustment is particularly important. In fact, some argue that the transition to university may represent a naturally occurring analogue of the ‘strange situation’ (Kenny, 1987). The university reflects a strange situation in that it involves separation from loved ones or attachment figures, in an unfamiliar and foreign environment, with unknown social experiences. Simultaneously, this situation presents students with novel environmental experiences to explore and master.
According to this analogy, students with a history of secure attachment with their parents and significant others will feel comfortable in turning to them for support, encouragement, and comfort as they negotiate the challenges of university life (Mattanah, Hancock & Brand, 2004).

Many positive outcomes have been associated with securely attached students’ experiences of university, reporting better emotional adjustment (Larose & Boivin, 1998), greater social connectedness (Schultheiss & Blustein, 1994b), more positive views of the self (Horppu & Ikonen-Varila, 2001) and fewer symptoms of psychological distress or the experience of negative emotions (Mattanah et al., 2004; Vivona, 2000). The effects of parental attachment on student adjustment were found to be enduring in a longitudinal study that revealed high school attachment security measures were predictive of better college adjustment, two years later (Rice, FitzGerald, Whaley & Gibbs, 1995). The findings were consistent with a more recent longitudinal study which found securely attached students were more likely to employ more adaptive coping strategies, and fewer suppressive or reactive coping strategies (Lopez & Gormley, 2002). Overall, students with a secure attachment style seem to be equipped with the emotional, behavioural and cognitive resources to adjust to university life, and the capacities to explore this new and challenging environment (Ames et al., 2011). Yet how does the transitional experience differ for students with an insecure attachment style?

Carr, Colthurst, Coyle and Elliott (2013) recently explored the predictive relationship between attachment security and insecurity and indicators of psychological wellbeing across the transition to university. Students were
assessed before the beginning of their first semester, and again during the concluding weeks of semester one. The results of this study found students who were high on attachment insecurity were more likely to experience loneliness, report depressive symptoms and perceive themselves as less integrated with peers and the university faculty. Students with insecure attachment have also been found to report greater escape-avoidance coping strategies than securely attached students, reflecting less developed coping skills (McNally, Palfai, Levine & Moore, 2003). Together, these findings suggest students with insecure attachment are more vulnerable to experiencing negative psychosocial adjustment and mental health issues during the transition to university.

However, the study by Carr and colleagues (2013) failed to make the distinction between avoidant and anxious attachment dimensions, making it difficult to disentangle the associations found between insecure attachment and maladjustment.

One longitudinal study exploring the impact of anxious and avoidant attachment, as well as ego resiliency on university adjustment over an entire college degree, found low levels of anxious attachment were associated with low maladjustment (Galatzer-Levy & Bonanno, 2012). However, those with high levels of attachment anxiety were found to be positively associated with dysfunctional coping strategies, and poorer management of exam-related distress (Berry & Kingswell, 2012). Similarly, high levels of attachment anxiety were linked to higher ‘hook up’ motives—that is—a motivation to engage in sexual relations with university peers (Snapp, Lento, Ryu & Rosen, 2014); consistent with past research suggesting anxiously attached individuals may
engage in sexual intimacy in order to elicit validating and loving responses from others (Schachner & Shaver, 2004). Hence, the literature on attachment anxiety within the university context is consistent in suggesting low levels may be associated with fewer negative outcomes, compared to high levels of attachment anxiety.

Less consistent findings have been found concerning the relationship between attachment avoidance and university adjustment. In one longitudinal study, attachment avoidance was not found to be related to university adjustment, distress or students’ level of resiliency over their college years (Galatzer-Levy & Bonanno, 2012). In contrast, a study examining students’ attachment preferences, coping strategies and ability to manage stress associated with university examinations, found students high on avoidant attachment were significantly less likely to engage in problem-focused coping strategies and therefore tended to cope poorly with exam stresses (Berry & Kingswell, 2012). Though different aspects of university stress were examined in the two aforementioned studies, varying patterns of association between avoidant attachment and university adjustment were found. Specifically, one study has shown attachment avoidance to be unrelated to poorer university adjustment outcomes (Galatzer-Levy & Bonanno, 2012), whilst another has found avoidant attachment to be related to poorer academic adjustment at university (Berry & Kingswell, 2012). This apparent inconsistency therefore makes it difficult to clarify the extent to which avoidant attachment influences university adjustment outcomes.
A recent meta-analysis of 156 studies examining the link between attachment and adjustment outcomes, which included university adjustment, confirmed a small to moderate positive effect-size between parental attachment quality and adjustment outcomes (Mattanah, Lopez & Govern, 2011). Specifically, secure attachment was found to be important in enhancing adjustment outcomes across a range of adjustment domains including a sense of greater self-worth and sense of academic competency. Mattanah et al. (2011) suggest that the small to moderate association between attachment and adjustment was in line with previous reviews (Rice, 1990), suggesting a modest but robust association between attachment and adjustment outcomes. In review, Mattanah et al. (2011) noted that the moderate nature of this association highlighted that other factors not investigated as part of these studies were likely to contribute to adjustment outcomes. However, these authors failed to suggest exactly what these ‘other’ factors may be, only emphasising that future research was needed to investigate more complex associations between attachment and adjustment. One ‘other’ factor that is proposed as part of the current thesis as an important variable in understanding the adjustment to university is how students cope with stress. The research linking attachment to coping is reviewed in the following section.

4.4 Attachment and its Links to Coping

As the transition to university presents as a particularly stressful period for young adults who are required to navigate competing challenges and tasks, it is important to understand the different ways in which students cope with this
transition. Mikulincer and Shaver (2007) argue that the attachment system is an innate distress regulation and emotion regulation mechanism, whereby the perception of threat activates the system, and subsequently motivates the individual to seek safety and comfort. The process of distress/emotional regulation allows individuals to consciously or sub-consciously deal with distressing emotions according to their personal goals and coping abilities (Gross & Thompson, 2007). Hence, the attachment system is argued by attachment theorists such as Mikulincer and Shaver (2007) and Lopez (2009) to be influential in how individuals cope in stressful situations by underpinning the coping strategies that are enacted in order to deal with distress. How students adjust to university may therefore be at least partially explained by the association between individual differences in attachment and coping strategies.

To date, there exists much research suggesting a robust empirical association between attachment style and coping. This research has been conducted across diverse contexts including interpersonal relationships, wartime stressors, body image and the university experience. Consistent findings from these studies suggests that individuals who are securely attached (i.e., low attachment anxiety and avoidance) have been found to develop coping strategies to positively deal with stress in a manner that yields resolution to the problem through taking an analytic and task-focused approach (referred as problem-focused coping, Folkman & Lazarus, 1984). Moreover, this problem-focused coping approach has been found to alleviate distress and promote positive emotions (e.g., relief or gratitude, Alexander, Feeney, Hohaus & Noller, 2001).
For instance, a study by Ognibene and Collins (1998) asked participants to rate the coping strategies they would most likely use in response to a series of hypothetical vignettes describing social and achievement-related stressors, and found that participants who reported a secure attachment style were more likely to seek social support as a coping strategy and were less likely to distance themselves from the stressful context. Although seeking emotional support may be considered a mixture of problem-focused and emotion-focused coping, within this study, the authors describe how secure individuals were seeking social support as an attempt to work towards resolving the source of their stress. In this example, social support may then be argued as reflecting problem-focused coping, given the active efforts towards addressing the stressor. Similarly, Li (2008) found that students with secure attachment styles supported ‘active’ coping strategies, such as changing environments, seeking social support or planning activities, to manage stressful situations. Active coping strategies in this study can be considered the same as problem-focused coping strategies as both approaches aid an individual to effectively deal with the source of their stress, in order to cope. Li (2008) also argued that students who utilise such active coping strategies are likely to adapt better to stress and reduce their psychological distress. Indeed, a number of other studies have also supported the positive association between secure attachment, problem-focused coping and a range of positive outcomes, including lower levels of loneliness and greater social support (Bernardon, Babb, Hakim-Larson & Marcia, 2011), adaptive college adjustment (Silver, 1995), and lower levels of stress (Moller, McCarthy & Fouladi, 2002).
In contrast, attachment insecurity has been found to be consistently associated with emotional dysregulation and the use of coping skills that do not yield constructive resolutions to problems or stressors (Cassidy, 1994; Greenberger & McLaughlin, 1998; Kotler, Buzwell, Romeo & Bowland, 1994). Rather, it is suggested that insecurely attached individuals use emotion-focused coping strategies that are aimed at dealing with the negative affect associated with the stressor or distress, rather than strategies aimed at dealing with the actual problem (Kotler et al., 1994). According to early coping theorists (Folkman & Lazarus, 1984), these emotion-focused strategies encompass a diverse array of strategies including wishful thinking, rumination, venting of anger, denial of problems, avoiding or escaping stressful situations or engaging in cognitive or behavioural distractions to minimise attention on the stressor.

In exploring the links between attachment style and coping, Mikulincer, Florian, and Weller (1993) found that participants with insecure attachment predominantly relied on emotion-focused strategies, when dealing with imminent missile attacks during the Gulf War, whereas participants with a secure attachment style sought more constructive coping strategies, such as seeking social support in times of distress. Similarly, studies examining the relationship between spouses’ attachment styles, coping strategies and marital satisfaction found that secure individuals were more likely than insecure participants to engage in task-focused coping strategies, when reporting low satisfaction (Lussier, Sabourin & Turgeon, 1997), while insecurely attached individuals have been found to use more emotion-focused strategies such as wishful thinking, rumination, and anger in contexts of marital dissolution.
Within the context of chronic illness, insecurely attached individuals have been found to again use more emotion-focused coping than problem-focused coping in dealing with illness such as arthritis, diabetes and cancer (e.g., Karantzas, McCabe, & Cole, 2012; Turan, Osar, Turan, Ilkova & Damci, 2003).

More recently, research has revealed more distinct patterns in the coping strategies used by insecurely attached individuals. Specifically, Karantzas (2009) and Wei et al. (2005) have noted that attachment anxiety is more commonly associated with emotion-focused strategies related to the intensification of distress, while attachment avoidance is more so associated with the suppression of distress. Both Karantzas (2009) and Wei et al. (2005) explain this emerging pattern in the research by asserting that coping strategies such as wishful thinking, venting, rumination and anger, represent coping manifestations of anxious individuals tendencies to engage in hyperactivating strategies to deal with distress and stressors. These authors also suggest that coping strategies such as denial, escape-avoidance, and cognitive or behavioural disengagement, represent coping manifestations of avoidant individuals tendencies to engage in deactivating strategies to regulate distress and stressors. Research by Karantzas and colleagues (2009) and Wei and colleagues (2005) provides empirical support for these contentions. Across a series of studies, Wei and colleagues (Wei, Heppner & Mallinckrodt, 2003; Wei et al., 2005; Wei, Heppner, Russell & Young, 2006) found that that attachment anxiety was associated with heightened distress and negative affect through the escalation of negative emotions using strategies such as excessive rumination or emotional reactivity. In contrast,
attachment avoidance contributed to the experience of distress and negative affect through the minimisation of negative emotions through coping strategies such as emotional suppression or disengagement.

Research by Karantzas and colleagues (Adnams & Karantzas, 2006; Karantzas, 2009; Karantzas & Bale, 2009; Karantzas & Cole, 2011; Karantzas & Hoyle, 2010; Karantzas, McCabe, & Cole, 2012) has consistently found attachment anxiety to be positively associated with emotion-focused coping strategies associated with the intensification of distress (e.g., wishful thinking, venting) and attachment avoidance is positively associated with emotion-focused strategies associated with the suppression of distress (e.g., escape-avoidance, denial). Moreover, both attachment dimensions have been found to be negatively associated with constructive coping strategies such as the seeking of social support and engaging in problem-focused coping. These associations have been found using correlational and experimental research designs and across diverse contexts including, relationship stressors, work stressors, academic stressors and chronic illness. In particular, across a number of these studies, Karantzas and colleagues have found coping strategies partially mediate the association between attachment and outcomes such as psychological adjustment, relationship satisfaction and the experience of positive and negative affect (Adnams & Karantzas, 2006; Karantzas & Bale, 2009; Karantzas et al, 2012). Thus, it appears that coping may have an important role in explaining the association between attachment and various affective and adjustment outcomes.

Despite the diverse contexts in which the associations between attachment, coping and adjustment outcomes have been examined, very few studies have...
investigated these links in the contexts of university students. However, studies by Lopez and colleagues in particular, have examined this issue. Lopez and Brennan (2000) suggested that students with attachment insecurity experienced greater use of strategies such as distancing and excessive self-reliance to help manage emotions associated with distress and psychological maladjustment compared to secure students. Furthermore, Lopez and Gormley (2002) found that attachment style was related to the different ways individuals cope with the transition to college. Specifically, students with insecure attachment orientations, both anxious and avoidant attachment styles exhibited a greater degree of reactive or suppressive forms of coping, when compared to securely attached students (Lopez et al., 2001). Such findings align with the attachment and coping patterns identified in the work of Wei and colleagues (2003, 2005, 2006) and Karantzas and colleagues (2006, 2009, 2010, 2012). However, while this research suggests that the associations between attachment and coping found in other contexts hold in the context of university adjustment, research is still very much in its infancy and replication is required. Moreover, the assumption that coping may in part mediate the association between attachment style and university adjustment remains unverified, but if found to exist, may have important implications for how university counsellors and services tailor their programs to work with students with different attachment styles to foster more effective coping during the transition to university.
4.5 Attachment and the Accomplishment of Developmental Tasks

Recent research that has attempted to uncover aspects of individual difference regarding the negotiation of developmental tasks has highlighted attachment style as a potential factor. Englund et al. (2011) found that the accomplishment of salient developmental tasks hinged on the quality of past and current close interpersonal relationships (many of which were classed as attachment relationships). More specifically, this longitudinal study found that the quality of infant attachment relationships was linked to the accomplishment of young adult developmental tasks concerning friendship, engagement in romantic relationships and connectedness with peers. Compared to participants that reported insecure attachment styles, participants who reported secure attachment with their early caregivers reported higher quality relationships in adulthood and a higher level of overall well-being. Hence, the findings highlight the significance of attachment across the life-course, whilst also supporting significant links between attachment and the negotiation of developmental tasks.

Similarly, Scharf, Maseless, and Kivenson-Baron (2004) suggested that attachment style may be an important individual difference variable in predicting young adults’ negotiation of developmental tasks. Scharf et al. (2004) hypothesised that young adults were more likely to negotiate developmental tasks, and cope with the stressors associated with achieving these tasks, if they harboured a secure attachment style as opposed to an insecure attachment style. These authors contended that securely attached individuals’ sense of self competence, ability to regulate their distress, and capacity to turn to attachment figures for support would provide the foundation for these individuals to
negotiate developmental tasks. In contrast, Scharf et al. suggested that insecurely attached individuals’ difficulties in regulating their emotions, fear of failure and difficulties in relying on others for support would mitigate against their progress in achieving developmental tasks. In line with their hypotheses, Scharf et al. found that securely attached individuals perceived their parents as more responsive and reported more adaptive coping compared to young adults who reported either an anxious or avoidant attachment style. The study by Scharf et al. highlighted that secure attachment may be related to coping and the achievement of developmental tasks through the transition to adulthood.

While not specifically investigating developmental tasks, related work on the pursuit of personal goals provides more insight into how attachment insecurity may be associated with the negotiation of developmental tasks. Research by Locke (2008) found that both attachment anxiety and avoidance were negatively associated with young adults’ pursuit of personal goals. Specifically, avoidant attachment was associated with the avoidance of goals regarding closeness (e.g., not opening up or not caring too much with others) and submission (e.g., losing, being inferior or appearing weak or incompetent), whereas anxious attachment was inconsistently associated with goal pursuit within relationships, such as avoiding relational distance, but not approaching relational closeness. In a theoretical paper by Feeney and Van Vleet (2010), the authors contend that attachment security and positive attachment relationships facilitate exploration and growth, similar to the broaden-and build cycle discussed previously in section 4.1. The authors contend that early life relationship security is vital in understanding later life exploration tendencies.
the desire to go out into the world boldly, and to discover, grow, learn or accomplish set goals. This notion of exploration can be seen as parallel to approaching developmental tasks, which requires a level of exploration and seeking personal growth. Thus, it appears that emerging research in the areas of development tasks and goal pursuit suggests that individual differences in attachment are likely to impact on the negotiation of important life tasks. Moreover, the conceptual overlap between developmental tasks and university adjustment provides a case to explore whether the negotiation of such tasks has outcomes for the way students adjust to university. No research to date has examined the extent to which young adults actively avoid or pursue the accomplishment of certain developmental tasks in the context of university. Clearly this is an important area for future research in the field.

4.6 Limitations of Past Research

In addition to the fact that few studies have examined the role of variables such as coping and the negotiation of developmental tasks within the context of attachment and university adjustment, there exist two major methodological limitations with past research. Firstly, the large majority of studies examining attachment styles, coping, developmental task accomplishment and university adjustment are designed and based in the United States. Thus the samples are limited in terms of generalizability to an Australian student population (Mattanah et al., 2004). This is particularly problematic for Australian research concerning university adjustment, as large cultural differences exist in relation to the higher education experience of Australian and United States students. For
example, fewer Australian students relocate to attend higher education, and fewer students are required to move out of the parental home to pursue tertiary studies compared to the United States (Mayseless, Danieli & Sharabany, 1996). The theoretical analogy that college represents a ‘strange situation’ for students (Kenny, 1987) may not be true for students outside of America, who experience fewer changes regarding connections to family and peers when commencing university. Hence, research is needed from an Australian cohort to examine whether many of the associations between attachment, university adjustment, developmental tasks and coping exist for this specific population and specific university context.

Secondly, much of the research is cross-sectional and correlational in nature. Therefore, research to date precludes the ability to make firm, causal conclusions between attachment, coping, developmental processes and university adjustment (Mattanah et al., 2011). As a result, there is a great need for longitudinal research that assesses attachment, coping, the negotiation of developmental tasks and university adjustment over time, in order to capture how these variables are related in the university context.

4.7 Research Aims and Hypotheses

As discussed throughout this chapter, attachment theory provides a highly useful framework for considering coping responses to stressful life situations, and is likely to provide important insight into the manner in which young adults adjust to the university transition. A series of studies by Wei and colleagues (Wei, Heppner & Mallinckrodt, 2003; Wei et al., 2005; Wei, Heppner, Russell &
Young, 2006), as well as Karantzas and colleagues (Adnams & Karantzas, 2006; Karantzas, 2009; Karantzas & Bale, 2009; Karantzas & Cole, 2011; Karantzas & Hoyle, 2010; Karantzas, McCabe, & Cole, 2010), have consistently shown the ways in which individuals regulate their distress through the use of coping strategies mediates the relationship between attachment styles and various psychological outcomes. In particular, individuals with an anxious attachment style employ coping strategies that intensify distress (reactive style), and individuals with an avoidant attachment style employ coping strategies that suppress distress (suppressive style). This body of evidence suggests that variations in attachment styles have complex associations with psychological outcomes, and not necessarily as direct effects. Given coping has been found to play an important role in the relationship between attachment and university adjustment, the negotiation of developmental tasks may too act as an intervening variable.

According to the broaden-and-build cycle by Mikulincer and Shaver (2007), individuals with secure attachment engage in self-growth activities, and one way to ensure growth is through the accomplishment of developmental tasks. Conversely, attachment insecurity may mitigate against the accomplishment of developmental tasks, yet no study to date has investigated the extent to which the negotiation of developmental tasks may also mediate the attachment style and university adjustment link, alongside coping. Similarly, no research has examined the relationship between attachment and university adjustment and the role that coping strategies play in mediating this association in an Australian context. Due to this paucity of research in the university context, the exact
relationship between these variables remains unclear. However, based on the associations between variables reviewed across related contexts, a mediation model is proposed, which is presented in Figure 1. This model proposes that the association between attachment and university adjustment will be partially mediated by coping strategies and the negotiation of developmental tasks.

**Figure 1.** A mediational model for the proposed associations between attachment, coping, university adjustment and the negotiation of developmental tasks.

Drawing on the literature reviewed across chapters 2 to 4, it is assumed that the direct association between attachment and university adjustment is partially mediated through two key variables - coping and the negotiation of developmental tasks. Specifically it is proposed that students’ attachment orientations will be differentially associated with reflective, reactive and suppressive coping strategies and in turn these coping strategies will be differentially associated with students’ adjustment over the transition to university. Likewise, attachment style is proposed to be directly associated with the approach or avoidance of developmental tasks, and in turn the approach and avoidance of developmental tasks is proposed to be directly associated with the
adjustment to university. This proposed mediational model assumes that coping strategies and the negotiation of developmental tasks may be key explanatory mechanisms regarding the previously established direct association between attachment style and university adjustment.

It is expected that the proposed mediational model will hold both cross-sectionally and longitudinally. Cross-sectionally, it is anticipated that at any given point in time, the link between attachment and university adjustment will be mediated in part by contemporaneous use of coping strategies and preferences regarding the approach and avoidance of developmental tasks. Moreover, these types of contemporaneous patterns of associations largely reflect past cross-sectional research that has found relationships between attachment, coping and adjustment outcomes in particular (Adnams & Karantzas, 2006; Goncalves & Karantzas, 2006; Lopez et al., 2002; Wei et al., 2003). However, this mediational model is also proposed to hold longitudinally, in the form of an autoregressive-type model in which attachment at a particular time point is likely to influence coping strategies and the approach and avoidance of developmental tasks at a subsequent time point, and in turn, coping and the negotiation of developmental tasks may influence university adjustment at a later point in time. This type of a longitudinal model makes particular sense given that fluctuations in attachment style and coping are unlikely to be such that there are dramatic differences over time (Fraley, 2002; Fraley & Brumbaugh, 2004; Lopez & Gormley, 2002; Mikulincer & Shaver, 2007; Wei et al., 2003). The literature on these two concepts for example, suggests that attachment and coping may be more stable aspects of individual difference, and
thus are well suited in testing such a model. To this end, a series of specific research aims and hypotheses are proposed.

The study consisted of two broad aims: (1) To determine the extent to which approach and avoidant oriented coping strategies and the approach and avoidance of developmental tasks *cross-sectionally* mediate the association between attachment and university adjustment; (2) to determine the extent to which the approach and avoidant oriented coping strategies and the approach and avoidance of developmental tasks *longitudinally* mediate the association between attachment and university adjustment. Importantly, the longitudinal aspect of the study and associated research aims, provides a more comprehensive and appropriate means of testing whether the hypothesised associations in the mediation model proposed, remain associated over time (i.e., attachment at an earlier point in time is associated with coping and the negotiation of developmental tasks at a later point in time, which in turn are associated with university adjustment at a subsequent time point).

It is hypothesised cross-sectionally as well as longitudinally that:

1. Attachment avoidance and anxiety will be negatively associated with approach oriented coping (i.e., reflective coping strategies) and positively associated with avoidant-oriented coping (i.e., reactive and suppressive coping) strategies.

2. Approach oriented coping (reflective coping) will be positively associated with university adjustment while both forms of avoidant oriented coping (suppressive and reactive coping) will be negatively related to university adjustment.
3. Attachment anxiety and avoidance will be negatively associated with approaching the accomplishment of developmental tasks. Conversely, attachment avoidance and anxiety will be positively associated with actively avoiding the negotiation of developmental tasks.

4. Approaching the accomplishment of developmental tasks will be positively associated with university adjustment, while actively avoiding the negotiation of developmental tasks will be negatively associated with university adjustment.

4.8 Chapter Summary

This chapter proposed an argument to consider the adjustment to university within the context of an attachment theory framework. Research regarding the association between attachment and university adjustment outcomes was reviewed, and detailed the intricate ways in which early life attachment bonds continue to influence young adult emotional regulation and functioning. The theoretical and empirical links between attachment and coping, and attachment and the negotiation of developmental tasks were also discussed as important variables related to the individual differences that may influence the transition to university. Lastly, a mediation model was proposed, suggesting that the association between attachment and university adjustment is mediated by coping and the negotiation of developmental tasks. This mediation model formed the basis of research aims and hypotheses presented at the end of the chapter that form the basis of this thesis.
CHAPTER 5

Method

5.1 Participants

All new undergraduate students (N= 7,341) commencing study at Deakin University, Melbourne, Australia, were invited to participate in the study. Five hundred and twenty-two students ($M= 20.45$ years old, $SD= 5.5$) from the university agreed to participate in the study (7% response rate). In total 135 men and 383 women (4 omitted) participated and the majority of participants were currently residing with their parents (59.3%), with the remaining living in shared accommodation (34.4%), on university residence (6.3%) or living alone (3.8%). Fifty-one percent of participants were not currently in romantic relationships, with a proportion dating steadily (29.1%), engaged (2.5%) or married (3.1%). A large proportion of the participants were unemployed (33.3%), with others in casual employment (38.9%), working part time (23.3%) or full time (4.6%). The sample characteristics of participants across the three time points that were surveyed (i.e., the week prior to students’ commencing university, during the first examination period at the conclusion of semester one, and at the conclusion of the end of semester two), are shown in Table 1.

As shown in Table 1, there was a high attrition rate over the three time points during which students were assessed. The sample size included in the analyses at time point 2 and 3 reduced to 119 and 89 respectively. The final sample at time point 3 consisted of approximately 17% of the initial time one sample. This attrition rate, while not desirable, was a product of the self-volunteering nature of the study, thus equivalent participant numbers across all
three time points could not be achieved. This was despite efforts to encourage continued participation (e.g., reminder emails and remuneration of participants – for details see section 5.3). This high attrition rate is largely thought to reflect the stressful times during which students were sampled, and the increased demands and time pressures on students with the progression of the academic year.

Based on students’ postcodes, the majority of participants (51.9%) at time point 1 fell in the medium highest socio-economic quartile with a mean weekly household income of $1214 to $2148. The remaining 38.9% of participants fell within the medium lowest socio-economic quartile with a mean weekly household income of $652 to $1213, and 1% of students fell within the highest socio-economic quartile (mean weekly incomes over $2148). These socio-economic quartiles were based on Census Data (2011) from the Australian Bureau of Statistics.

Table 1

Sample Characteristics for participants over three time points.

<table>
<thead>
<tr>
<th></th>
<th>Time 1 (n = 522)</th>
<th>Time 2 (n = 119)</th>
<th>Time 3 (n = 89)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>25.9</td>
<td>21.6</td>
<td>19.1</td>
</tr>
<tr>
<td>Female</td>
<td>73.4</td>
<td>76.7</td>
<td>79.8</td>
</tr>
<tr>
<td><strong>Living Arrangements</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Live with Parents</td>
<td>59.3</td>
<td>60.5</td>
<td>58.4</td>
</tr>
<tr>
<td>University Residence</td>
<td>6.3</td>
<td>6.7</td>
<td>7.9</td>
</tr>
<tr>
<td>Shared Accommodation (housemates, partner, friends)</td>
<td>34.4</td>
<td>25.2</td>
<td>28.9</td>
</tr>
<tr>
<td>Live Alone</td>
<td>3.8</td>
<td>9.2</td>
<td>7.9</td>
</tr>
</tbody>
</table>

Relationship Status
The demographic characteristics of the sample of participants who remained part of the study through to the final time point (n= 89) were similar in demographic characteristics to the sample at the earlier time points. Across all time points there was a large majority of women participants compared to men participants. As with time points one and two, most participants were residing with their parents (58.4%) at the final time point. Almost half the participants were single (59.6%), with the remaining participants dating or in serious relationships (e.g., cohabiting, engaged or married). Few participants at this final time point were employed in full time work (4.5%), with most employed casually (39.3%).

5.2 Materials

Materials were administered in the form of an online self-report questionnaire that assessed attachment orientations, coping responses, negotiation of developmental tasks and adjustment to university. The five sections comprising the online questionnaire are described below in the order presented within the questionnaire and shown in Appendices A1-A5.
5.2.1 Background Information

Details regarding participants’ gender, age, living arrangements, employment and relationship status were recorded using a brief demographic questionnaire developed for the study (Appendix A1).

5.2.2 Experiences in Close Relationships

Participants’ attachment orientation was measured using the Experiences in Close Relationships (ECR) scale (Brennan, Clark & Shaver, 1998; Appendix A2). The ECR consists of 36 items measuring two subscales of attachment: anxiety (18 items) and avoidance (18 items). Participants were asked to rate these items according to a seven point Likert scale ranging from 0 (disagree strongly) to 7 (agree strongly). The attachment anxiety and avoidance subscales have demonstrated excellent reliability and internal consistency with alphas above .90 (α = .91 and α = .94 respectively; Brennen et al., 1998).

5.2.3 Problem-Focused Style of Coping

Participants’ dispositional coping style was measured using the Problem-Focused Style of Coping (PF-SOC) scale (Heppner, Cook, Wright & Johnson, 1995; Appendix A3). The PF-SOC consists of 18 items divided into three subscales; Reflective, Reactive and Suppressive Styles of coping. Reflective Styles emphasize cognitive activities such as planning, reflection and/or causal analyses, when approaching problems and engaging in coping. Reactive Styles emphasize emotional and cognitive activities that deplete the individual or interfere with problem solving activities; activities include wishful thinking and/or self criticism. Finally the Suppressive Style emphasizes avoidance and denial of problem solving activities, through problem avoidance and/or social withdrawal (Heppner et al., 1995).
Participants are instructed to respond to coping items in a way that most accurately reflects how they think, feel and act when solving personal problems, rather than responding according to how they think they should respond. Participants were asked to rate how frequently they engaged in problem-focused coping strategies, according to a five point Likert scale ranging from 1 (almost never) to 5 (almost all of the time). The PF-SOC was developed and validated with college student samples and demonstrates construct validity, correlating significantly in expected directions with alternative coping inventories (e.g., Coping Inventory for Stressful Situations; Heppner et al., 1995). All PF-SOC subscales have demonstrated good reliability (i.e., Reflective $\alpha = .77$, Reactive $\alpha = .73$ and Suppressive $\alpha = .76$, Heppner et al., 1995).

5.2.4 Negotiation of Developmental Tasks

Participants’ approach or avoidance of the developmental tasks of young adulthood was measured using the Negotiation of Developmental Tasks (NDT) scale, a questionnaire purposely developed for use within this study (See Appendix A4). Following a vast literature review of developmental tasks associated with young adulthood, a list of 27 development tasks was established. These tasks were piloted in a study exploring whether young adults in a challenging university course were accomplishing developmental tasks and the demands associated with young adulthood (Lawrence, Dodds & Gitsham, 2011). Exploratory factor analyses revealed three factors of developmental tasks, Friendship, Balance and Future, all with high reliability ($\alpha = .89$, $\alpha = .88$ and $\alpha = .82$ respectively). The Friendship factor included items related to developing social relationships as well as providing and relying on peer relations for support. Items in the Balance factor concerned prioritizing life commitments,
balancing responsibilities and establishing personal independence. The Future-planning factor involved items related to planning for a future career and romantic relationships, as well as making important life decisions. Given the high internal consistency of each of these factors and that the items neatly fell into three factors as part of the EFA, the items with the highest three factor loadings for each of the three subscales (i.e., Friendship, Balance and Future) were used in the development of the NDT. Thus, a total of nine items were extracted for use in the NDT. Building on the previous measure of developmental tasks that was designed and piloted by Lawrence et al. (2011), with minor alterations of scale instructions and items wording. Specifically, instead of asking about participants’ accomplishment of developmental tasks, participants were asked to rate the nine items twice – once in relation to the extent that they were approaching the developmental tasks (i.e., “to what extent do you actively do this?”), and again in reference to the extent that they were avoiding these tasks (i.e., “to what extent do you refrain from doing this?”). Items were rated on a seven-point scale, ranging from 1 (None of the time) to 7 (All the time).

The psychometric properties of the NDT approach and avoidance subscales were analysed using Confirmatory Factor Analysis (CFA) and reliability analyses. The CFA for the approach subscale demonstrated good fit to the data $X^2(24, N=522) = 126.75, p = .00; \text{CFI} = .94, \text{TLI} = .96, \text{RMSEA} = .09$, resulting in a higher order three factor model constituting Friendship, Balance and Future factors with each factor consisting of the three items hypothesized to load on each factor. Further, each factor was found to have good internal consistency with the Friendship, Balance and Future resulting in alphas of $\alpha = .80$, $\alpha = .74$ and $\alpha = .81$ respectively. Likewise, the CFA for the avoidance subscale demonstrated good to
excellent fit to the data $X^2 (24, N= 522) = 62.61, p = .00; CFI= .97, TLI= .96, RMSEA= .056$, resulting in a higher order, three factor model again constituting Friendship, Balance and Future factors – each comprising the same three items as is the approach subscale. Further, each factor was again found to have good internal consistency with the Friendship, Balance and Future resulting in alphas of $\alpha=.77, \alpha=.76$ and $\alpha=.79$ respectively. The factor loadings from the CFA for the approach and avoidance subscales are presented in Appendix A.5.

5.2.5 Student Adaptation to College Questionnaire Australian Version

Participants’ adjustment to university was measured using a modified version of the Student Adaptation to College Questionnaire (SACQ, Baker & Siryk, 1984; Appendix A6) with adjustments made to the original version (an American-based questionnaire) to better represent and capture an Australian university experience. For example, words such as ‘college’ were changed to ‘university’ and items pertaining to sororities were changed to social clubs. The questionnaire consists of 67 items regarding various aspects of the experience of adjusting to university life, divided into four subscales (Academic, Social, Personal-Emotional and Belongingness). The final subscale- Belongingness has previously been referred to as an ‘Attachment’ subscale; however, on further inspection the items that comprise this subscale appear to reflect a sense of belonging to the university rather than attachment per say. In order to avoid confusion with the assessment of attachment in this thesis, this subscale will be referred to as ‘Belongingness’.

The Academic Adjustment subscale measures students’ attitudes towards academic goals, how students apply themselves to academic tasks, the
effectiveness or sufficiency of academic efforts and satisfaction of the learning environment. The Social Adjustment subscale measures how well students cope with the interpersonal and social demands associated with university life (e.g., “Is meeting people and making friends”). The Personal-Emotional Adjustment subscale measures students’ psychological state during the adjustment to university as well as the level of general psychological distress and somatic complaints (e.g., “Feels blue and moody”). The Belongingness subscale measures how students relate to or are committed to their particular academic institution, and their sense of belonging to this institution (e.g., “I feel I fit in well as part of the... environment”). Items across all four subscales can be summed to yield an overall measure of adjustment to university, with higher scores indicating greater university adjustment. The overall adjustment subscale was used within the hypothesized SEM, for model parsimony and power.

Participants are instructed to rate items according to a nine-point scale ranging from 1 (applies very closely to me) to 9 (doesn’t apply to me at all). For the first time point of the study adjustments were made to the items to allow students to rate how they anticipated they would adjust. For example, “I expect I will” was added to the beginning of the items. The adjustments to the scale were not found to impact reliability.

The subscales have demonstrated high reliability across multiple samples, with alphas ranging between .84 and .88 for the academic subscale, between .83 and .91 for the social subscale, between .77 and .86 for the personal-emotional subscale, between .90 and .91 for the belongingness subscale, and between .93 and .95 for the full scale (Baker & Siryk, 1986). The revised SACQ used in this study also showed acceptable reliability, with $\alpha = .85$ for Academic Adjustment,
\( \alpha = .80 \) for Social adjustment, \( \alpha = .74 \) for Personal Adjustment and \( \alpha = .77 \) for Belongingness.

### 5.3 Procedure

Following ethics approval (project number HEAG_H_100_08), an email was sent to all new first year university students, inviting them to participate in the study (Appendix A7). The Division of Student Life (DSL) at Deakin University provided the list of all new students and their university email addresses to be contacted electronically by way of a formal invitation to participate in the study. The invitation email also directed students to a hyperlink connecting students to the Plain Language Statement (PLS) for the study (Appendix A8) and an online consent form (Appendix A9). As the study was completely online, students were not able to provide signed consent, but instead ticked a box signifying their informed consent to be a part of the study. As the study was longitudinal in nature, participants were asked to complete the study on three occasions.

Once students had consented to participate in the study, they were directed to an online survey on a secure server. Students were able to complete the survey in their own time and on their own computer or mobile device within approximately two weeks following their initial invitation to the study. This time-limited window ensured that all participant responses were roughly within the same time period during the semester. The online questionnaire took participants between 20-40 minutes to complete. Once participants had completed the survey at the first time point, their responses were automatically stored on a secure server, on which the data could only be accessed via password.
by the study researcher. All participants who completed the survey at the first
time point were sent a follow-up invitation to continue their participation in the
study at the second time point for the survey. A copy of this email is presented in
Appendix A10. This process of participant recruitment was replicated for time
point three. Participants were invited to complete the survey at three time points
over their first academic year; their orientation week, the end of semester one
during exam period (the first time they would experience university exams), and
the end of semester two—again during the exam period, but this time at the
conclusion of their first year at university. These time points in the academic
calendar were chosen in order to measure students’ adjustment to university
during the most stressful points over their first year of university transition. All
students were reimbursed $20 in the form of credit on their university debit card
for their participation in the study. This reimbursement was provided to
participants once they had completed all assessment periods. This incentive was
considered reasonable and appropriate given the significant time commitment
involved with the survey and the longitudinal nature of the study.

5.4 Data Analysis

The data were screened and analysed using IBM SPSS Statistics version 22
and SPSS AMOS version 22. The mediational model proposed in Figure 2 was
analysed in two stages. Stage 1, reported in chapter 6, evaluated the proposed
mediation model cross-sectionally, using the data collected at time-point 1. Stage
2 of the data analysis involved the evaluation of the proposed mediation model
over time, using the data collected across time-points 1 to 3. For both the stage 1 and stage 2 analyses, the mediation model was evaluated using path analysis.

5.4.1 Path Analyses and Fit Indices

Path analysis is a type of structural equation modelling (SEM) technique in which the researcher specifies direct and indirect relationships among a series of observed variables. In computing path analytic models, a series of parameters are estimated (regression paths, covariances and error variances), allowing the hypothesised model to be compared to the observed data. The goal of this process is for the covariance matrix between the observed data and the implied model of relationships predicted by the researchers to be as close as possible (Everitt, 1996).

The fit of the implied model was assessed via interpretation of the chi-square statistic, with a small, non-significant chi-square value indicating a good fitting model (Byrne, 2001). However, interpreting the chi-square statistic alone is limited in evaluating the fit of a model as it is largely influenced by the effect of sample size (Byrne, 2001). To overcome this limitation, two types of fit indices have been developed; absolute and incremental fit indices. Absolute fit indices measure how well the hypothesised model reflects the relationship found in the sample data (Hu & Bentler, 1999). In contrast, incremental fit indices compare the implied model as hypothesised by the researchers to a ‘null model’ that assumes all variables are uncorrelated (Kline, 1998). Given these fit indices measure different aspects of the model fit, multiple indices are used to assess model fit; these fit indices are in line with Hu and Bentler’s (1999) combination approach to assessing model fit. In particular, the Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR),
Tucker Lewis Index (TLI) and Comparative fit index (CFI) will be used to assess the model fit, along with the chi-square.

The RMSEA attempts to overcome the limitations of the chi-square statistic and the effect of sample size, by measuring the amount of error or the 'badness of fit' in the implied model compared to the population (Byrne, 2001). Should the implied model perfectly fit the population, the amount of error would equal zero. Conversely, should the model not perfectly fit the population, the greater the level of misspecification, the higher the error between the implied model and assumed population. RMSEA values .05 and less are indicative of a good fitting model and suggest a minimal 5% error in approximation, compared to values over .10, which are indicative of poor model fit (Hu & Bentler, 1999). Similar to the RMSEA, the SRMR assesses the average error in the implied model and compares this to the observed matrix, rather than the assumed population matrix. Smaller values are again desirable and reflect better fitting models. Values equal to or less than .06 in sample sizes greater than 500 and .09 to .11 in samples less than 250 are indicative of a good fit model (Hu & Bentler, 1999).

Two incremental fit indices are used to interpret the model fit, the TLI and the CFI. The TLI compares the fit of the hypothesised, implied model to the null model, and makes adjustments for the degrees of freedom to improve the estimation of fit (Ullman, 2000). Similarly, the CFI also compares the fit of the implied model to the null model; however the fit is compared to the centrality of the chi-square distribution. Greater non-centrality indicates greater model misspecification of the implied model to the null model. By basing the fit estimate on the chi-square distribution, it provides an accurate fit estimate for smaller sample sizes, compared to the other fit indices. Both the TLI and CFI
values range from 0-1, with values above .90 indicating a good fit, while values greater than .95 indicative of a very good fit. As such a model with a TLI or CFI of .90 would be interpreted as suggesting the implied model is 90% better in its fit of the data than that of the null model (Kline, 1998).

5.4.2 Mediation, Bootstrapping and Phantom Variable Modelling

The mediational model proposed in this study is concerned with the mechanisms through which the causal variables affect the outcome. More specifically, the affects of attachment on university adjustment are hypothesised as mediated by coping strategies and the negotiation of developmental tasks. In order to understand the extent that the mediating variables influence the direct association, known as the estimation of specific indirect effects, bootstrapping was used. Bootstrapping is a procedure whereby the original data are sampled repeatedly, with random cases selected to generate different samples of the data (Efron & Tibishirani, 1985; Kline, 1998). There are no limitations on how many times a given case of data may be sampled, and any given case may be sampled multiple times, or not at all (Tabachnick & Fidell, 2000). Through repeatedly sampling of the data, this technique empirically derives a distribution from the population or original data set (Kline, 2005). The procedure generates parameter estimates with confidence intervals (95%) calculated across the empirical samples (Hair, Anderson, Tatham & Black; 1998).

The specific indirect effects estimated via bootstrapping are reported as lower and upper bound confidence intervals. If the confidence intervals do not contain zero, this indicates the specific indirect effect is different from zero. A p-value can also be determined to estimate how significantly different the indirect
effect is from zero. Two methods of bootstrapping the indirect effects exist; the percentile method and the bias corrected method. The type of method used, depends on the type of model being hypothesised. If there are Type 1 error rate concerns, the percentile bootstrapping method is considered most appropriate. Comparatively, if there are power concerns, the bias corrected method is advised (Hayes & Scharkow, 2013). Given the complexity of the mediation model proposed and implications for power, the bias corrected method was employed in line with current recommendations (Hayes & Scharkow, 2013).

In order to estimate the specific indirect effects of mediational pathways in the proposed model, Phantom Variable Modelling was used. Phantom Variable Modelling was recently devised by Macho and Ledermann (2011) and involves constructing a replicated and adapted version of the full path model or SEM being examined, and making changes to one pathway at a time to allow estimations of specific indirect effects. More specifically, the Phantom model is made up entirely of latent variables, all parameters are constrained, or fixed to a specific value or function and the independent variable involved in the indirect effects is connected to the mediator while all other direct effects are not included in the model. A pictorial representation of the Phantom model used in this study is provided in Figure 2.
Figure 2. Specific Indirect Effects of Avoidant Attachment on University Adjustment via Reflective Coping.
As shown in Figure 2, the specific indirect effect of avoidant attachment on university adjustment via reflective coping (path P1) is illustrated; hence all other effects associated with avoidant attachment are removed from the phantom model, yet all other pathways remain unchanged. This modelling allows for the computation of the specific indirect effect of attachment avoidance on university adjustment through reflective coping. The path coefficients of all paths in the phantom model are restricted to the value of the corresponding coefficient in the main path model or SEM. A dummy variable is also created and attached to the independent variable in the phantom model, in order to allow the analyses to run in programs such as AMOS, otherwise the independent variable is treated as a latent variable that is missing indicators and will result in an inadmissible solution. The variance associated with the independent variable within the phantom model and main SEM is then restricted to one. Once the model is run, an estimate of the indirect effects is provided in the form of a point estimate, as well as the bootstrapping confidence intervals. Importantly, the point estimate and confidence interval for the specific indirect effect constitute unstandardized estimates. This process of phantom variable modelling is repeatedly undertaken until all specific indirect effects are tested as part of mediational model proposed.

5.4.3 Power Estimations

In relation to path analysis and SEM, estimating power based on sample sizes alone is considered inadequate as such estimation tends only to generate what sample size is needed to produce an identified model, without quantifying the actual power of the identified model (e.g., Jackson, 2001, 2003). Therefore, in
terms of power, there are two broad methods using SEM to identify the power of a model. One method estimates the power of the entire model, and the other estimates the power of any given pathway within the model. The latter of these methods is used within this study, as it is a highly specific method for estimating the power of complex models with numerous pathways and facilitates detecting the magnitude of an effect with a certain degree of accuracy (Kline, 2010). This is achieved in AMOS by comparing the freely estimated model, with a model in which the pathway of interest is constrained to zero, and conducting a chi-square difference test to estimate the non-centrality parameter estimate. The non-centrality parameter estimate is then used along with the sample size and degrees of freedom to calculate the power of a given pathway. The power can be estimated using various power modelling programs such G-power (Faul, Erdfelder, Lang & Buchner, 2007). This process to determine power is repeated for all pathways within the model.

The analyses for this study are divided into two components and presented across chapters six and seven. In chapter six, the cross-sectional evaluation of the mediational model of university adjustment is presented. The chapter begins with a description of how the data were prepared for analyses, while the remaining section of the chapter presents the fit, power and specific indirect effects of the mediational model proposed. Chapter seven considers the predictive utility of variables in the model over time, by examining the mediation model in the form of a longitudinal path analysis.
CHAPTER 6

Results

Development and Evaluation of the Mediational model of University

Adjustment

6.1 Overview of Analyses

In this chapter, the analyses conducted for the cross-sectional analysis of the proposed mediational model are reported. The chapter is divided into two main sections. The first section describes how the data were prepared and screened for analyses. The second section summarises all major findings of the path analyses, including the goodness of fit of the hypothesised model, power and specific indirect effects.

6.2 Data Screening and Treatment

The data related to the first time point (N=549) was examined for missing values, multicollinearity and singularity, linearity, univariate and multivariate normality, univariate and multivariate outliers and homeoscedasticity. All data entries were also checked to be within scale ranges, with no values outside the scale minimums and maximums. A large proportion of missing data were detected in 27 cases within the time one sample with the proportion of missing values for any given variable greater than 15%. Thus, prior to conducting any formal missing value analysis (MVA), cases with excessive missing data were
removed from the sample, as their percentage of missing values was too high for
the accurate imputation of missing values (whether this involves expectation
maximisation or mean substitution methods for replacing missing values,
Tabachnick & Fiddell, 2010). With the removal of these 27 cases, a MVA on the
final sample (N=522) was conducted and revealed that missing values were at
random for all variables, except for two items within the SACQ where non-
responses were expected (e.g., Item 26 “I expect I will enjoy living at the
university residences”. Please don’t answer if you don’t live on campus). MVA
was also validated via close inspection of the primary data for any participants
with extensive missing values. For all remaining participants with less than 15%
missing data, missing values were replaced with the series mean, as mean values
were near to the modal response for the rest of the sample. Comparison of the
means and standard deviations prior and after series mean replacement resulted
in minor shifts in the mean and standard deviations ($t < 1, ps > .05$).

Assumptions of multicolinearity, singularity and linearity were assessed by
examining the scatterplots and correlations amongst the variables used in the
path analyses. All assumptions were met with bivariate relationships falling
below $r=.80$. These correlations are presented in Table 2. Reliability analyses
were conducted on all scales within the mediational model and these along with
scale ranges, mean and standard deviations are also presented in Table 2.
As shown in Table 2, attachment anxiety and avoidance showed a small positive correlation \((r = .21)\). There was a strong negative correlation between approaching and avoiding developmental tasks \((r = -.57)\). Suppressive and reactive coping styles were also strongly correlated \((r = .66)\), and university adjustment was most strongly negatively correlated with suppressive coping \((r = -.55)\). Student ratings of attachment anxiety were higher \((M = 3.45, SD = 1.1)\) than attachment avoidance \((M = 2.84, SD = 1.1)\). Student ratings were also higher for approaching developmental tasks \((M = 4.82, SD = .97)\), compared to avoiding developmental tasks \((M = 3.07, SD = 1.0)\). Students most strongly endorsed reflective coping \((M = 3.23, SD = .76)\), compared to reactive and suppressive coping styles \((M = 2.8, SD = .86\) and \(M = 2.45, SD = .79\) respectively).
Univariate normality was examined across all observed variables used in the path analyses, and all independent variables (IVs) and dependant variables (DVs) fell within acceptable absolute values (i.e., absolute skewness ≤ 2 and kurtosis ≤ 7; West, Finch & Curran, 1995). The skewness and kurtosis values for the variables included in the model are shown in Table 3.

Table 3.

*Absolute skewness and Kurtosis Values at Time point One.*

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachment Anxiety</td>
<td>.089</td>
<td>-.460</td>
</tr>
<tr>
<td>Attachment Avoidance</td>
<td>.374</td>
<td>-.431</td>
</tr>
<tr>
<td>DT Approach total</td>
<td>-.230</td>
<td>.258</td>
</tr>
<tr>
<td>DT Avoidance total</td>
<td>.279</td>
<td>.201</td>
</tr>
<tr>
<td>Reactive Coping</td>
<td>.130</td>
<td>-.452</td>
</tr>
<tr>
<td>Suppressive Coping</td>
<td>.332</td>
<td>-.248</td>
</tr>
<tr>
<td>Reflective Coping</td>
<td>-.345</td>
<td>.247</td>
</tr>
<tr>
<td>University Adjustment</td>
<td>-.323</td>
<td>.368</td>
</tr>
</tbody>
</table>

Note: DT= Developmental task

Multivariate normality for the sample was assessed using Mardia’s multivariate coefficient for kurtosis and the data were found to be multivariate normal (Mardia’s MK = 15.10 , p > .05)

6.3 Evaluating the Proposed Mediational Model of University Adjustment

Path Analysis was used to assess the proposed mediational model. The path model was analysed using SPSS AMOS version 22-computer software and
estimated using Maximum Likelihood Chi Square Estimation ($X^2_{ML}$). The Comparative Fit Index (CFI), Tucker Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA) and Standardised Root Mean Square Residual (SRMR) fit indices were used to evaluate the fit of the model, following recommendations by Hu and Bentler (1999).

Preliminary analyses were conducted in which age and living status were included as control variables in the proposed path model. These preliminary analyses revealed that age and living status did demonstrate significant associations with model variables and thus did not significantly contribute to the hypothesised model. Therefore, these variables were excluded from further analyses.

### 6.3.1 Hypothesised Model of Attachment and University Adjustment

The hypothesised model demonstrated very good to excellent fit to the data $X^2 (2, N=522) = 5.91. p = .052$; CFI$= .99$, TLI$= .96$, RMSEA$= .06$, SRMR$= .01$ and is presented in Figure 3.
Figure 3. Final Model of Adult Attachment and University Adjustment

Note. Error items and covariances are not shown for ease of interpretation. Only significant pathways are shown ($p < .05$).
As shown in Figure 3, 43% of the variance in university adjustment was explained by the mediational model. Attachment anxiety and avoidance were found to be associated with problem-focused coping styles. In particular, attachment anxiety (β = .50) and avoidance (β = .11) contributed 29% of the variance in reactive coping, 25% of the variance in suppressive coping (β = .39 and β = .25 respectively) and 7% of the variance in reflective coping styles (β = -.15 and β = -.20 respectively). As illustrated in Figure 3, the path coefficients for attachment anxiety suggest that it was more strongly associated with reactive and suppressive coping styles, than reflective coping. Attachment avoidance was more strongly and positively associated with suppressive coping and inversely associated with reflective coping. In turn, reflective coping showed a positive association with university adjustment (β = .12), while suppressive and reactive coping styles demonstrated negative associations with university adjustment (β = -.23 and β = -.21, respectively).

Attachment anxiety and avoidance were also found to be associated with the approach and avoidance of developmental tasks. More specifically, attachment avoidance (β = .25) and anxiety (β = .21) contributed 13% of the variance in developmental task avoidance. Attachment avoidance (β = -.36) and anxiety (β = -.13) contributed 17% of the variance in developmental task approach. Approaching developmental tasks was positively associated with university adjustment (β = .23), while avoiding developmental tasks was negatively associated with university adjustment (β = -.13).

### 6.3.2 Estimation of Power for Model Pathways

All pathways within the model were subjected to a power analysis in order to determine their level of power. In total 15 pathways were evaluated in terms of their
power using the method outlined in section 5.4.3, which involved the estimation of the non-centrality parameter (NCP), change in degrees of freedom and sample size. The power for each pathway in the model is presented in Table 4. As shown in Table 4, all pathways demonstrated power that was well above .80.

### Table 4.
Power estimates for all pathways in the proposed model.

<table>
<thead>
<tr>
<th>Path</th>
<th>Description</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Avo → Reflect</td>
<td>0.99</td>
</tr>
<tr>
<td>2</td>
<td>Avo → Suppress</td>
<td>0.99</td>
</tr>
<tr>
<td>3</td>
<td>Avo → React</td>
<td>0.79</td>
</tr>
<tr>
<td>4</td>
<td>Avo → DTAvo</td>
<td>0.99</td>
</tr>
<tr>
<td>5</td>
<td>Avo → DTApp</td>
<td>1.00</td>
</tr>
<tr>
<td>6</td>
<td>Anx → Reflect</td>
<td>0.93</td>
</tr>
<tr>
<td>7</td>
<td>Anx → Suppress</td>
<td>1.00</td>
</tr>
<tr>
<td>8</td>
<td>Anx → React</td>
<td>1.00</td>
</tr>
<tr>
<td>9</td>
<td>Anx → DTAvo</td>
<td>0.99</td>
</tr>
<tr>
<td>10</td>
<td>Anx → DTApp</td>
<td>0.88</td>
</tr>
<tr>
<td>11</td>
<td>Reflect → UA</td>
<td>0.90</td>
</tr>
<tr>
<td>12</td>
<td>Supress → UA</td>
<td>0.99</td>
</tr>
<tr>
<td>13</td>
<td>React → UA</td>
<td>0.99</td>
</tr>
<tr>
<td>14</td>
<td>DTAvo → UA</td>
<td>0.86</td>
</tr>
<tr>
<td>15</td>
<td>DTApp → UA</td>
<td>0.99</td>
</tr>
</tbody>
</table>

Note: Avo= Avoidant Attachment, Anx= Anxious Attachment, TAvo= Developmental Task Avoidance, DTApp= Developmental task approach, UA= University Adjustment.

### 6.3.3 Specific Indirect Effects

To estimate the specific indirect effects, phantom variable modelling was implemented on the time 1 sample (N=522). Specifically, phantom models were created
for 10 pathways that were being examined for specific indirect effects. Each path involved in a proposed mediational effect was constrained within the phantom model to allow an estimate of the specific indirect effect of interest. Furthermore, for every phantom model estimated, the sample was bootstrapped to 5000 replications, and 95% Confidence Intervals (CI) for the specific indirect effect were estimated using Maximum Likelihood method. As shown in Table 5, the 95% confidence intervals for all specific indirect effects did not contain zero, thus all mediational tests were found be significant. Specifically, reflective, suppressive and reactive coping, as well as the approach and avoidance of developmental tasks significantly mediated the relationship between avoidant and anxious attachment and university adjustment.

Table 5.

Unstandardised Specific Indirect Effects with 95% Confidence Intervals Estimates

<table>
<thead>
<tr>
<th>Specific Indirect Effect</th>
<th>Point Estimate</th>
<th>SE</th>
<th>LB 95% CI</th>
<th>UB 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avo → Reflect → UA</td>
<td>-0.025***</td>
<td>.029</td>
<td>-0.05</td>
<td>-0.01</td>
</tr>
<tr>
<td>Avo→Suppress→UA</td>
<td>-0.062***</td>
<td>.028</td>
<td>-0.11</td>
<td>-0.03</td>
</tr>
<tr>
<td>Avo→React→UA</td>
<td>-0.023**</td>
<td>.029</td>
<td>-0.05</td>
<td>-0.01</td>
</tr>
<tr>
<td>Avo→DTAvo→UA</td>
<td>-0.034**</td>
<td>.039</td>
<td>-0.06</td>
<td>-0.01</td>
</tr>
<tr>
<td>Avo→DTApp→UA</td>
<td>-0.089***</td>
<td>.036</td>
<td>-0.14</td>
<td>-0.05</td>
</tr>
<tr>
<td>Anx→Reflect→UA</td>
<td>-0.018***</td>
<td>.028</td>
<td>-0.04</td>
<td>-0.01</td>
</tr>
<tr>
<td>Anx→Suppress→UA</td>
<td>-0.091***</td>
<td>.027</td>
<td>-0.15</td>
<td>-0.05</td>
</tr>
<tr>
<td>Anx→React→UA</td>
<td>-0.108***</td>
<td>.028</td>
<td>-0.17</td>
<td>-0.06</td>
</tr>
<tr>
<td>Anx→DTAvo→UA</td>
<td>-0.028***</td>
<td>.037</td>
<td>-0.05</td>
<td>-0.01</td>
</tr>
<tr>
<td>Anx→DTApp→UA</td>
<td>-0.030***</td>
<td>.034</td>
<td>-0.06</td>
<td>-0.01</td>
</tr>
</tbody>
</table>

Note: Avo= Avoidant Attachment, Anx= Anxious Attachment, DTAvo= Developmental Task Avoidance, DTApp= Developmental task approach, UA= University Adjustment, LB/UB 95% CI= Lower bound 95% Confidence Intervals, Upper bound 95% Confidence Intervals, *** = p <.001, ** = p <.01
6.4 Chapter Summary

The proposed mediational model of attachment and university adjustment was evaluated and found to be of very good to excellent fit to the data. Almost half of the variance in university adjustment was explained by the variables in the model and all pathways were significant. Attachment avoidance was most strongly positively associated with suppressive coping and negatively associated with reflective coping. Attachment anxiety was most strongly positively associated with reactive coping and also negatively associated with reflective coping. Reflective coping was positively associated with university adjustment, whereas suppressive and reactive coping styles were negatively associated with university adjustment. Attachment avoidance and anxiety were both negatively associated with approaching developmental tasks and positively associated with avoiding developmental tasks. Avoiding the developmental tasks of young adulthood was negatively related to university adjustment, as opposed to approaching the accomplishment of developmental tasks, which was positively related to university adjustment. Finally, all three coping strategies as well as the approach and avoidance of developmental tasks were found to be significant mediators in the relationship between attachment and university adjustment.
CHAPTER 7

Results

Longitudinal Analysis of the Mediational Model of University Adjustment

7.1 Overview of Analyses

In this chapter, the analyses conducted for the second component of the study – longitudinal evaluation of the hypothesised mediational model over three time points – are reported. In order to test the predictive utility of the hypothesised mediational model in a longitudinal sense, attachment dimensions assessed at the first time point (i.e., during orientation week at university) were used as the independent variables in the model. The mediational variables within the model included data from the second time point in the study (i.e., during the examination period at the end of semester 1) and included the three coping strategies (reflective, suppressive and reactive coping) as well as measures of the approach and avoidance of developmental tasks. The dependent variable (university adjustment) included data from the third and final time point (i.e., during the examination period at the close of the academic year – the end of semester 2).

The chapter is divided into two main parts. Firstly, how the data were prepared and screened for analyses is discussed, this includes the reporting of longitudinal preliminary analyses. The final section summarises all major findings of the path analyses, including the goodness of fit of the hypothesised model, power and specific indirect effects.
7.2 Data Screening and Treatment

The final sample of students who completed surveys at all three time points included 89 participants. While this final sample was small and reflected an 83\% attrition rate, attempts to maintain a higher sample through the estimation of missing data points over time for more cases was deemed inappropriate. Oftentimes, methods such as multiple imputation or data stitching are used to estimate missing data across time points of incomplete data (McKnight, McKnight, Sidani, & Figueredo, 2007). However, these methods are largely deemed effective up to 30\% of missing data for any given case (McKnight et al., 2007). For 433 of the original 522 cases, the missing data was in excess of 40\%, thus the application of such imputation methods would have resulted in biased estimations of missing data. To this end, the sample that was retained across all three time points (N = 89) reflected cases in which data may have been missing, but the missingness fell well under 30\%, in fact, MVA revealed the missingness to fall below 15\%. MVA also revealed that missing values were at random for all variables, except for two items within the SACQ where non-responses were expected. Any remaining missing values were replaced with the series mean. As was the case with the cross-sectional data at time 1, comparison of the means and standard deviations prior and after series mean replacement resulted in minor shifts in the mean and standard deviations ($t_s < 1, p_s > .05$). All data entries were also checked to be within scale ranges, with no outlier values.
Table 6

Sample Correlations, Descriptive Analyses and Reliability for Observed Variables in the Longitudinal SEM for University Adjustment.

<table>
<thead>
<tr>
<th>Observed Variables</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
<th>8.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. T1 Attachment Anxiety</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. T1 Attachment Avoidance</td>
<td>.33</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. T2 DT Approach</td>
<td>-.14</td>
<td>-.19</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. T2 DT Avoidance</td>
<td>.28</td>
<td>.36</td>
<td>-.45</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. T2 Reactive Coping</td>
<td>.40</td>
<td>.14</td>
<td>-.18</td>
<td>.25</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. T2 Suppressive Coping</td>
<td>.29</td>
<td>.24</td>
<td>-.46</td>
<td>.42</td>
<td>.61</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. T2 Reflective Coping</td>
<td>-.23</td>
<td>-.36</td>
<td>.40</td>
<td>-.28</td>
<td>.05</td>
<td>-.20</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>8. T3 University Adjustment</td>
<td>-.13</td>
<td>-.11</td>
<td>.39</td>
<td>-.30</td>
<td>-.14</td>
<td>-.46</td>
<td>.20</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Scale Ranges

<table>
<thead>
<tr>
<th>Mean</th>
<th>1.7</th>
<th>1.7</th>
<th>1.7</th>
<th>1.7</th>
<th>1.5</th>
<th>1.5</th>
<th>1.5</th>
<th>1.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard deviation</td>
<td>.98</td>
<td>1.1</td>
<td>.97</td>
<td>1.2</td>
<td>.77</td>
<td>.86</td>
<td>.70</td>
<td>.87</td>
</tr>
<tr>
<td>Reliability α</td>
<td>.89</td>
<td>.95</td>
<td>.84</td>
<td>.90</td>
<td>.75</td>
<td>.83</td>
<td>.81</td>
<td>.72</td>
</tr>
</tbody>
</table>

As shown in Table 6, attachment anxiety and avoidance showed a small positive correlation ($r = .33$). There was a moderate negative correlation between approaching and avoiding developmental tasks ($r = -.45$). Suppressive and reactive coping styles were also strongly correlated ($r = .61$), and consistent with the cross-sectional correlation findings, university adjustment was most strongly negatively correlated with suppressive coping ($r = -.46$). Mean ratings for the longitudinal model variables were very similar to those from the first time point. Student ratings of attachment anxiety were higher ($M = 3.47, SD = .98$) than attachment avoidance ($M = 2.89, SD = 1.1$). Student ratings were also higher for approaching developmental tasks ($M = 4.70, SD = .97$), compared to avoiding developmental tasks ($M = 3.05, SD = 1.2$). Consistent with the first time point, students most strongly endorsed reflective coping ($M = 3.19, SD = .70$), compared to reactive and suppressive coping styles ($M = 2.74, SD = .77$ and $M = 2.59, SD = .86$ respectively).
7.2.1 Preliminary Analyses on Longitudinal Model Variables

Given that data for all the variables in the proposed mediational model were collected across all three time points, the means across these assessment periods were examined and a series of repeated measure Analyses of Variances (ANOVA) were conducted. The assumption in much of the attachment and coping literature in particular, is that individual differences in attachment and coping are largely stable over time (e.g., Mikulincer & Shaver, 2007; Lopez & Gormley, 2002; Fraley, 2002; Fraley & Brumbaugh, 2004; Wei et al., 2003). Therefore, the repeated measures ANOVA were conducted to empirically examine this assumption, and to determine if there were any significant changes in the negotiation of developmental tasks and university adjustment over time. Significant changes in relation to any variables would require that changes across time be controlled for in the model by adding the multiple assessment points of a model variable. However, if no significant changes are found, the need to control for scores in a model variable across the three time points is not required for the type of autoregressive model proposed and assessed longitudinally. As shown in Table 7, there were very little variations in mean values for model variables over time. Following bonferoni adjustments for repeated measure ANOVA (α = .05 / 8), no changes in model variables reached significance (α ≤ .006 – bonferoni adjusted). These repeated measure analyses provided further support for the longitudinal analyses undertaken in the mediational model, whereby attachment styles at time one were used to predict coping strategies and the approach or avoidance of developmental tasks at time two, and in turn, these coping strategies and the negotiation of developmental tasks were used to predict university adjustment at time three.
Table 7.

Repeated Measures ANOVA mean, standard deviations and significance.

<table>
<thead>
<tr>
<th>Model Variable</th>
<th>Time 1 M</th>
<th>Time 1 SD</th>
<th>Time 2 M</th>
<th>Time 2 SD</th>
<th>Time 3 M</th>
<th>Time 3 SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachment Anxiety</td>
<td>3.47</td>
<td>.98</td>
<td>3.40</td>
<td>1.06</td>
<td>3.40</td>
<td>1.10</td>
</tr>
<tr>
<td>Attachment Avoidance</td>
<td>2.89</td>
<td>1.09</td>
<td>2.82</td>
<td>1.12</td>
<td>2.82</td>
<td>1.20</td>
</tr>
<tr>
<td>Suppressive Coping</td>
<td>2.34</td>
<td>.74</td>
<td>2.59</td>
<td>.86</td>
<td>2.58</td>
<td>.88</td>
</tr>
<tr>
<td>Reactive Coping</td>
<td>2.65</td>
<td>.75</td>
<td>2.74</td>
<td>.77</td>
<td>2.70</td>
<td>.78</td>
</tr>
<tr>
<td>Reflective Coping</td>
<td>3.15</td>
<td>.77</td>
<td>3.19</td>
<td>.70</td>
<td>3.17</td>
<td>.68</td>
</tr>
<tr>
<td>DT Approach</td>
<td>4.81</td>
<td>.88</td>
<td>4.70</td>
<td>.97</td>
<td>4.84</td>
<td>.92</td>
</tr>
<tr>
<td>DT Avoidance</td>
<td>3.04</td>
<td>.98</td>
<td>3.05</td>
<td>1.17</td>
<td>3.07</td>
<td>1.03</td>
</tr>
<tr>
<td>University Adjustment</td>
<td>6.01</td>
<td>1.12</td>
<td>5.47</td>
<td>.87</td>
<td>5.60</td>
<td>.87</td>
</tr>
</tbody>
</table>

Note: M= Mean, SD= Standard Deviation

7.2.2 Longitudinal Model Variables

Assumptions of multicolinearity, singularity and linearity were again assessed by examining the scatterplots and correlations amongst the variables used in the path analyses. All assumptions were met with bivariate relationships falling below $r=.80$. These correlations are presented in Table 6. Reliability analyses were conducted on all scales within the longitudinal model and these along with scale ranges, mean and standard deviations are presented at the bottom of Table 6.

Univariate normality was examined across all observed variables used in the longitudinal path model, and all independent variables (IVs) and dependent variables (DV) fell within acceptable ranges for absolute values of skewness and kurtosis (i.e., absolute skewness $\leq 2$ and kurtosis $\leq 7$; West et al., 1995), as shown in Table 8.
Table 8.

*Absolute skewness and Kurtosis Values of the Observed Variables in the Longitudinal Mediation Model*

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachment Anxiety T1</td>
<td>.000</td>
<td>-.286</td>
</tr>
<tr>
<td>Attachment Avoidance T1</td>
<td>.219</td>
<td>-.479</td>
</tr>
<tr>
<td>DT Approach total T2</td>
<td>.192</td>
<td>-.454</td>
</tr>
<tr>
<td>DT Avoidance total T2</td>
<td>.335</td>
<td>.187</td>
</tr>
<tr>
<td>Reactive Coping T2</td>
<td>-.194</td>
<td>-.524</td>
</tr>
<tr>
<td>Suppressive Coping T2</td>
<td>.114</td>
<td>-.694</td>
</tr>
<tr>
<td>Reflective Coping T2</td>
<td>-.077</td>
<td>-.140</td>
</tr>
<tr>
<td>University Adjustment T3</td>
<td>-.233</td>
<td>-.354</td>
</tr>
</tbody>
</table>

Note: DT= Developmental task, T1 = Time 1, T2 = Time 2, T3 = Time 3.

Multivariate normality for the sample was assessed using Mardia’s multivariate coefficient for kurtosis and the data were found to be multivariate normal (Mardia’s MK = 3.22, *p* > .05).

### 7.3 Evaluating the Longitudinal Model of Attachment and University Adjustment

Path Analysis was again used to assess the hypothesised model of attachment and university adjustment. The path analysis was conducted using SPSS AMOS version 22-computer software and estimations were made with Maximum Likelihood Chi Square Estimation (*X*_2ML). As with the cross-sectional model, the Comparative Fit Index (CFI), Tucker Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA) and Standardised Root Mean Square Residual (SRMR) fit indices were used to evaluate the fit of the model, following recommendations by Hu and Bentler (1999).
7.3.1 Longitudinal Model of Attachment and University Adjustment

The hypothesised model demonstrated excellent fit to the data $X^2(2, N = 89) = .397, p = .82; \text{CFI} = 1.00, \text{TLI} = 1.14, \text{RMSEA} = .00, \text{SRMR} = .01$. The final longitudinal mediational model of attachment and university adjustment is presented in Figure 4.
Figure 4. Final Longitudinal Model of Attachment and University Adjustment

Note. Error items and correlational pathways between mediating variables are not shown for ease of interpretation.

*p ≤ .05, **p ≤ .01, ***p ≤ .00.
As shown in Figure 4, 28% of the variance in university adjustment was explained by the mediational model. In particular, attachment anxiety ($\beta = .39$) and avoidance ($\beta = .01$) at time 1, contributed 16% of the variance in reactive coping, 11% of the variance in suppressive coping ($\beta = -.16$ and $\beta = .16$) and 14% of the variance in reflective coping styles ($\beta = -.12$ and $\beta = -.32$) at time 2. Attachment anxiety at time 1 was more strongly associated with reactive and suppressive coping styles, than reflective coping. Attachment avoidance was strongly and positively associated with suppressive coping and inversely associated with reflective coping at time 2. Reflective coping at time 2 showed a positive, small association with university adjustment ($\beta = .01$) at time 3, compared to suppressive and reactive coping styles that showed stronger, negative associations with university adjustment ($\beta = -.48$ and $\beta = -.20$ respectively) at time 3.

Furthermore, attachment avoidance ($\beta = .30$) and anxiety ($\beta = .18$) at time 1 contributed 16% of the variance in developmental task avoidance at time 2. Attachment avoidance ($\beta = -.16$) and anxiety ($\beta = -.09$) contributed at time 1 to only 4% of the variance in developmental task approach at time 2. Approaching developmental tasks at time 2 was positively associated with university adjustment at time 3, compared to avoiding developmental tasks at time 2, which was negatively associated with university adjustment at time 3.

7.3.2 Estimations of Model Power for Model Pathways

All pathways within the model were subjected to a power analysis in order to determine their level of power. In total 15 pathways were evaluated in terms of their power using the method outlined in section 5.4.3 which involved the estimation of the non-centrality parameter (NCP), change in degrees of freedom and sample size. The power for each pathway in the model is presented in Table 9.
Table 9.

Power estimates for all Pathways in the Longitudinal Model

<table>
<thead>
<tr>
<th>Path</th>
<th>Description</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Avo → Reflect</td>
<td>0.84</td>
</tr>
<tr>
<td>2</td>
<td>Avo → Suppress</td>
<td>0.31</td>
</tr>
<tr>
<td>3</td>
<td>Avo → React</td>
<td>0.05</td>
</tr>
<tr>
<td>4</td>
<td>Avo → DTAvo</td>
<td>0.82</td>
</tr>
<tr>
<td>5</td>
<td>Avo → DTApp</td>
<td>0.30</td>
</tr>
<tr>
<td>6</td>
<td>Anx → Reflect</td>
<td>0.22</td>
</tr>
<tr>
<td>7</td>
<td>Anx → Suppress</td>
<td>0.60</td>
</tr>
<tr>
<td>8</td>
<td>Anx → React</td>
<td>0.95</td>
</tr>
<tr>
<td>9</td>
<td>Anx → DTAvo</td>
<td>0.39</td>
</tr>
<tr>
<td>10</td>
<td>Anx → DTApp</td>
<td>0.12</td>
</tr>
<tr>
<td>11</td>
<td>Reflect → UA</td>
<td>0.05</td>
</tr>
<tr>
<td>12</td>
<td>Supress → UA</td>
<td>0.94</td>
</tr>
<tr>
<td>13</td>
<td>React → UA</td>
<td>0.40</td>
</tr>
<tr>
<td>14</td>
<td>DTAvo → UA</td>
<td>0.10</td>
</tr>
<tr>
<td>15</td>
<td>DTApp → UA</td>
<td>0.33</td>
</tr>
</tbody>
</table>

*Note: Avo= Avoidant Attachment, Anx= Anxious Attachment, DTAvo= Developmental Task Avoidance, DTApp= Developmental task approach, UA= University Adjustment.

As shown in Table 9, most pathways that were significant in the model, demonstrated acceptable power (i.e., above .8). The pathway from anxious attachment at time 1 to reactive coping at time 2 showed the greatest power (.95), along with the pathway between suppressive coping at time 2 and university adjustment at time 3 (.94). However, it is important to note that given the sample size, the model pathways with weak path coefficients reflected low power estimates. Thus, these pathways should be interpreted with caution.
7.3.3 Specific Indirect Effects

To estimate the specific indirect effects, phantom variable modelling was implemented on the longitudinal model (N=89) in the same manner that is was implemented within the cross-sectional version of the model presented in chapter 6. To recap, phantom models were created for 10 pathways that were being examined for specific indirect effects. For each path involved, a proposed mediational effect was constrained within the phantom model to allow an estimate of the specific indirect effect of interest. Furthermore, for every phantom model estimated, the sample was bootstrapped to 5000 replications, and 95% Confidence Intervals (CI) for the specific indirect effect were estimated using Maximum Likelihood method. As shown in Table 10, the 95% confidence intervals for all but two specific indirect effects contained zero, thus only two mediational tests were found be significant. Specifically, suppressive and reactive coping styles at time 2, significantly mediated the relationship between anxious attachment at time 1 and university adjustment at time 3.

Table 10.

Unstandardised Specific Indirect Effects with 95% Confidence Intervals Estimates

<table>
<thead>
<tr>
<th>Specific Indirect Effect</th>
<th>Point Estimate</th>
<th>SE</th>
<th>LB 95% CI</th>
<th>UB 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avo→ Reflect→UA</td>
<td>-0.00</td>
<td>.067</td>
<td>-0.08</td>
<td>0.07</td>
</tr>
<tr>
<td>Avo→ Suppress→UA</td>
<td>-0.06</td>
<td>.084</td>
<td>-0.17</td>
<td>0.01</td>
</tr>
<tr>
<td>Avo→ React→UA</td>
<td>0.00</td>
<td>.073</td>
<td>-0.03</td>
<td>0.05</td>
</tr>
<tr>
<td>Avo→ D TAvo→ UA</td>
<td>-0.02</td>
<td>.111</td>
<td>-0.08</td>
<td>0.04</td>
</tr>
<tr>
<td>Avo→ DTApp→UA</td>
<td>-0.02</td>
<td>.099</td>
<td>-0.11</td>
<td>0.01</td>
</tr>
<tr>
<td>Anx→ Reflect→UA</td>
<td>-0.00</td>
<td>.074</td>
<td>-0.04</td>
<td>0.03</td>
</tr>
<tr>
<td>Anx→ Suppress→UA</td>
<td>-0.10**</td>
<td>.094</td>
<td>-0.23</td>
<td>-0.02</td>
</tr>
<tr>
<td>Anx→ React→UA</td>
<td>0.07**</td>
<td>.081</td>
<td>0.01</td>
<td>0.16</td>
</tr>
</tbody>
</table>
7.4 Chapter Summary

The longitudinal mediational model of attachment and university adjustment was evaluated and found to be of excellent fit to the data. The model explained close to a third of the variance in university adjustment at the completion of the first year of university. Specifically, five pathways were significant within the model. Attachment avoidance at time 1 was most strongly and positively associated with suppressive coping and negatively associated with reflective coping at time 2. Attachment anxiety at time 1 was most strongly positively associated with reactive coping and also negatively associated with reflective coping at time 2. Suppressive and reactive coping styles at time 2 were negatively associated with university adjustment at time 3, and reflective coping at time 2 as marginally statistically positively associated with university adjustment at time 3. Attachment avoidance and anxiety at time 1 were both negatively associated with approaching developmental tasks and positively associated with avoiding developmental tasks at time 2. Avoiding the developmental tasks of young adulthood at time 2 was negatively related to university adjustment at time 3, compared to approaching developmental tasks at time 2, which was positively related to university adjustment at time 3. In terms of specific indirect effects, reflective and suppressive coping styles at time 2 were the only two mediators found to mediate the relationship between anxious attachment at time 1 and university adjustment at time 3.
CHAPTER 8

Discussion

In this thesis, attachment theory has been argued as a useful framework to understand the transition to university. The direct association between attachment and university adjustment was argued to be partially mediated by two factors, students’ coping strategies, and their negotiation of developmental tasks. More specifically, attachment orientations or styles (i.e., dimensions of attachment anxiety and avoidance) were hypothesised to be differentially associated with reflective, reactive and suppressive coping strategies, and that these coping strategies would be differentially associated with students’ adjustment during the transition to university. Attachment styles were also hypothesised to be associated with whether students approach or avoid the accomplishment of developmental tasks, and in turn the approach and avoidance of developmental tasks would be associated with the adjustment to university. Given the proposed associations between attachment, coping, developmental task negotiation and university adjustment, the aims of the thesis were to test a mediational model of university adjustment using cross-sectional and longitudinal data from students undertaking their first year of university.

This chapter will discuss the findings of and the cross-sectional and longitudinal analyses of the mediation model in line with the derived hypotheses for this thesis. The cross-sectional results will be considered first, followed by a discussion of the longitudinal results. Limitations of the study and directions for future research are also presented, as well as the implications of findings for both research and clinical work. The chapter concludes with a final summary of the major findings.
8.1 The Mediational Model of Attachment and University Adjustment

The first aim of the thesis was to examine and test the cross-sectional associations of the proposed mediational model of university adjustment. It was assumed that coping strategies and the negotiation of developmental tasks may be key explanatory mechanisms regarding the previously established direct association between attachment style and university adjustment (Horppu & Ikonen-Varila, 2001; Kotler et al., 1994; Lopez & Gormley, 2002). Specifically, it was hypothesised that (1) attachment avoidance and anxiety would be negatively associated with reflective coping strategies and positively associated with reactive and suppressive coping strategies; (2) reflective coping would be positively associated with university adjustment, and reactive and suppressive coping would be negatively associated with university adjustment; (3) attachment anxiety and avoidance would be negatively associated with approaching the accomplishment of developmental tasks and positively associated with avoiding the accomplishment of developmental tasks; and lastly, (4) approaching developmental tasks would be positively associated with university adjustment and avoiding developmental tasks would be negatively associated with university adjustment.

The findings provided support for all hypotheses. Specifically, all model pathways were significant and in the expected directions, and coping strategies as well as the approach and avoidance of developmental tasks were found to significantly mediate the association between attachment avoidance and anxiety and university adjustment. Specifically, attachment avoidance was positively associated with suppressive coping and negatively associated with reflective coping, while attachment anxiety was positively associated with reactive coping and negatively associated with reflective coping, supporting the first hypothesis. Consistent with hypothesis two, reflective
coping was positively associated with university adjustment and suppressive and reactive coping styles were negatively associated with university adjustment. Attachment avoidance and attachment anxiety were both negatively associated with approaching developmental tasks and positively associated with avoiding developmental tasks, consistent with hypothesis three. Consistent with hypothesis four, avoiding the developmental tasks of young adulthood was negatively associated with university adjustment, and approaching these tasks was positively associated with university adjustment. These findings are discussed in more detail and in light of previous research findings in sections 7.1.1 and 7.1.2.

8.1.1 Attachment, Coping and University Adjustment

As expected, differences in attachment styles influenced the way in which individuals coped with the challenge of university adjustment. This is consistent with findings from attachment theorists who have linked attachment system distress regulation to the management of various stressful and challenging situations (Lopez, 2009; Mikulincer & Shaver, 2007). Students higher on attachment anxiety or avoidance were more likely to employ suppressive or reactive coping mechanisms, consistent with much literature suggesting those with insecure attachment orientations were more likely to engage in coping methods that do not yield a resolution to the source of the problem or stressor (Cassidy, 1994; Greenberger & McLaughlin, 1998; Kotler, Buzwell, Romeo & Bowland, 2011). As a case in point, the findings from the present study are consistent with a study by Kotler and colleagues (1994) who found individuals with insecure attachment tended to engage in coping strategies that addressed the negative affect connected to the stress or distress, as opposed to using strategies to cope that addressed the actual source of the stress or distress. However, in the present study, it
appeared that the attachment dimensions were differentially associated with coping strategies such that attachment anxiety was positively associated with reactive coping and attachment avoidance was positively associated with suppressive coping strategies, respectively. These results support findings by Karantzas (2009) and Wei et al. (2005), who also differentiated insecure attachment according to anxious and avoidant dimensions and found consistent but distinct patterns between these attachment dimensions and the strategies used to cope with stressful events. In particular, attachment anxiety has been associated with coping strategies that intensify distress or negative affectivity, compared to attachment avoidance, which was associated with the suppression and minimisation of distress and emotions (Karantzas, 2009; Wei et al., 2005). These differences in coping strategies have been found to reflect the hyperactivation or deactivation strategies used to manage stress and distress following activation of the attachment system (Wei et al., 2003; Wei et al., 2005; Wei et al., 2006).

Hyperactivation strategies include emotion-focused coping strategies that lead to an escalation of negative emotions and stress (e.g., excessive rumination or venting), and contrast deactivation strategies that include emotion-focused coping strategies that seek to minimise negative emotions or distress (e.g., escape or denial). An interesting finding within this study was the strong association between anxious attachment and both reactive and suppressive coping strategies. The association between anxious attachment and two contrasting strategies of managing distress may reflect the diverse coping efforts that are at times engaged in by anxiously attached individuals to deal with distress. That is, while attachment anxiety is often associated with coping strategies such as reactive coping, which intensify distress, in situations of great challenge or stress, some studies have found anxious individuals to enact other forms of
coping if their default coping is only partially successful (Cassidy, 1994; Lopez & Gormley, 2002; Mikulincer & Shaver, 2007).

Consistent with research by Karantzas and colleagues, (Adnams & Karantzas, 2006; Karantzas, 2009; Karantzas & Bale, 2009; Karantzas & Cole, 2011; Karantzas & Hoyle, 2010; Karantzas, et al., 2010), both attachment dimensions were also found to be negatively associated with constructive coping strategies such as seeking closeness or support from others (e.g., reflective coping strategies). Various researchers have suggested that individuals with insecure attachment orientations may lack the cognitive and affective skills to enact constructive or approach oriented coping strategies, largely because: (1) they do not have good models on which to base how best to constructively work through stressors, and (2) their behavioural strategies that result in either intensifying or suppressing the distress, may short-circuit any attempt to engage in approach coping or render such strategies as redundant (e.g., Gillath & Karantzas, in press; Karantzas et al., 2012; Mikulincer & Shaver, 2007).

The associations found between anxious and avoidant attachment and various patterns of coping are consistent with findings in other contexts, from the gulf war (Mikulincer et al., 1993) to marital stress (Lussier et al., 1997) and coping with chronic illnesses (Karantzas et al., 2012). Although fewer studies that have considered the association between attachment and coping within the university context, the cross-sectional findings from the present study are consistent with these studies (Lopez, 2001; Lopez et al., 2001, Lopez & Gormley, 2002). More specifically, Lopez and colleagues (2001) found suppressive and reactive coping styles mediated the relationship between insecure attachment orientations (both anxious and avoidant attachment) and distress experienced by students. The findings of this thesis confirm
the strong associations between attachment orientations and coping, and also point to the important mediating role of coping. However, this thesis extends on findings from Lopez et al. (2001) by suggesting that the attachment-coping link appears to have implications for the adjustment outcomes of students experiencing the transition to university. Rather than identifying students’ level of distress as a result of what coping strategies were employed, this study identified the impact of coping strategies on how students were adapting to the new and foreign university environment, in which the adjustment occurs across multiple related domains of the university experience including personal, academic, social and university belongingness.

In terms of coping specifically, the cross-sectional analysis of the mediation model at time 1 suggested that the type of coping strategies employed by students had implications for their adjustment to university at the beginning of their academic journey. For example, the use of reflective coping by students was found to be positively associated with university adjustment. This finding is consistent with Leong, Bonz and Zachar (1997) who found students engaging in more ‘active’ coping strategies that were planned and directed towards addressing the source of stress, were more likely to experience higher levels of adjustment, particularly in the personal and social-emotional domains. Similarly, an Australian study found that university students who were taking action towards dealing with the source of their stress (e.g., approach oriented coping), reported more positive psychological outcomes compared to those engaging in avoidant coping (Richardson et al., 2012).

According to the cross-sectional analysis of the mediation model in this study, students engaging in reactive or suppressive coping strategies were likely to experience a negative adjustment to university. This finding builds upon the well-established
negative outcomes associated with emotion-focused coping or avoidant coping
strategies and poor outcomes experienced during the university (Dyson & Renk, 2006;
Lee et al., 2014; Walker & Stephens, 2014; Wodka & Barakat, 2007). Specifically,
students who engaged in emotion-focused coping strategies have been found to
experience negative personal-emotional adjustment at college (Li, 2008; Lopez et al.,
2001; Lopez et al., 2002). Similarly, students ‘just surviving’ the transition to university
have been found to report more passive or avoidant strategies to manage their stress
and consequently also reported greater negative affectivity (Richardson, 2012). Hence,
all types of avoidant oriented coping strategies, whether suppressive or reactive have
been consistently associated with poorer adjustment outcomes, which specific to this
study, include the university context. The findings from this thesis build upon the
existing literature in not only highlighting the connection between coping and
university adjustment, but by suggesting that coping may be a mechanism to help
explain the association between attachment and university adjustment.

8.1.2 Attachment, Developmental Tasks and University Adjustment

As hypothesised, the negotiation of developmental tasks cross-sectionally
mediated the relationship between individuals’ attachment styles and their adjustment
to university. This is the first study to date to propose this mediational association and
to find support for this proposal. While this finding is novel, these findings build on
previous research examining the association between attachment orientations and
developmental task accomplishment (Englund et al., 2011; Scharf et al., 2004), as well as
the limited research connecting developmental tasks to experiences over the transition
to university (Person et al., 2005).
According to the findings of this thesis, both attachment avoidance and anxiety were negatively associated with approaching the accomplishment of developmental tasks, and positively associated with avoiding the accomplishment of tasks. This finding builds on previous research that has shown connections between insecure attachment and reduced progress in working towards the developmental tasks of young adulthood (Scharf et al., 2004). Scharf et al. reported that an insecure attachment orientation, whether anxious or avoidant, led individuals to experience greater difficulty in managing their age graded developmental tasks compared to individuals who were securely attached.

The findings of the present study suggest that both anxious and avoidant attachment may be aspects of individual difference that mitigate young adults’ progress in negotiating developmental tasks. Moreover, the findings of the present study extend the work of Scharf et al. by suggesting that it is not only that insecurely attached young adults experience “difficulties” in achieving developmental tasks, but rather that attachment insecurity is associated with active attempts to avoid developmental task accomplishment and minimal attempts to pursue such tasks. This unpacking of the links between attachment and the negotiation of developmental tasks also extends the research by Locke (2008) who found insecurely (anxious or avoidant) attached individuals did not pursue their personal goals, especially those related to relational closeness. Although Locke (2008) focused on personal goals rather than developmental tasks per se, the Locke findings are consistent with this thesis that suggests insecurely attached not only fail to pursue or approach developmental tasks, they actively avoid developmental task accomplishment.
In relation to the links between the negotiation of developmental tasks and university adjustment, the findings of this thesis suggest that actively avoiding the developmental tasks of young adulthood is associated with poorer university adjustment experiences. Contrastingly, actively approaching developmental tasks is associated with positive adjustment experiences, especially during the commencement of university (the time point on which the cross-sectional analyses were conducted). Hence, the way in which students prioritise and negotiate the tasks and challenges of young adulthood has clear implications for their adjustment experience at university. Though little research has previously considered developmental tasks in the context of university adjustment, the associations found in this thesis are consistent with research highlighting the parallels between the developmental tasks of young adulthood and the challenges and demands that students face when transitioning to university (Person et al., 2005). Specifically, successful adjustment to university relies on attaining certain educational and social skills to adequately prepare students for their future pathways. These skills correspond with many of the developmental tasks of young adulthood, including forming new friendships and the broadening of one’s social network, as well as forming an adult identity and forging a future career (Havighurst, 1972; Mattanah et al., 2011). Hence it is not surprising that working towards accomplishing these tasks corresponds with a more positive university experience for students commencing university.

8.2 Longitudinal Mediational Model of Attachment and University Adjustment

The second aim of the thesis was to test the proposed mediational model of university adjustment *longitudinally*, over student’s first year experiences at university. It was expected that the same associations found in the cross-sectional model would
hold longitudinally and provide a more comprehensive understanding of how the mediational variables act as explanatory mechanisms regarding the link between attachment and university adjustment.

In contrast to the cross-sectional analysis of this model, while all the paths were in the hypothesised directions, not all pathways were significant. Attachment avoidance at time 1 was significantly negatively associated with reflective coping at time 2, and attachment anxiety at time 1 was significantly positively associated with both reactive and suppressive coping at time 2. Suppressive coping at time 2 was the only coping strategy significantly (negatively) associated with university adjustment at time 3. Furthermore, attachment avoidance at time 1 was significantly positively associated with the avoidance of developmental tasks at time 2 and negatively associated with approaching developmental tasks at time 2. However developmental tasks were not significantly associated with university adjustment at time 3. A detailed discussion of these longitudinal results is provided in sections 7.2.1 and 7.2.2.

8.2.1 Attachment, coping and university adjustment over time

Unlike the cross-sectional model, attachment avoidance was not significantly associated with suppressive coping in the middle of students first year at university. This contrasts with previous research findings suggesting that those with avoidant attachment are more likely to engage in coping activities that led to the suppression or avoidance of distress (Cassidy, 1994; Greenberger & McLaughlin, 1998; Kotler, Buzwell, Romeo & Bowlan, 2011) and thus engage in efforts to deactivate the attachment system (Karantzás, 2009; Wei et al., 2003; Wei et al., 2005; Wei et al., 2006). Given the association between avoidant attachment and suppressive coping was found during the first measurement point in the study, it is possible that the association was not
significant during the middle of the year as students were facing less stress or personal distress during this time despite the challenge of examinations, compared to the initial transition to university at the beginning of the academic year. Indeed much research has found the initial transition from pre-enrolment to student life presents the greatest risk period for student attrition and crucial for successful adaptation to the new university environment and lifestyle (Bridges, 2003; Harvey et al., 2006; Nelson et al., 2009). It may be that during the very early stages of the transition to university, students with avoidant attachment rely more heavily on suppressive coping strategies than during other times of the transition.

In contrast, a significant negative association was found between avoidant attachment and reflective coping, suggesting these students high in attachment avoidance did not engage in adaptive approach-orientated strategies to deal with the transition. Given the many well established positive outcomes associated with reflective or problem-focused coping strategies (Bernardon et al., 2011; Moller et al., 2002; Silver, 1995), students that do not use such strategies (as in the case of avoidantly attached students) would assumedly experience greater difficulties in managing their psychological distress or adapting to stress associated with university life. Having said this, surprisingly there were no significant associations between reflective coping and university adjustment, suggesting that this adaptive style of coping did not significantly influence students’ adjustment by the end of the first year of university. While this finding is unexpected, it may be that the use of avoidant oriented coping, moreso than approach coping has an impact on student’s university adjustment by the end of the first year.
In relation to avoidant oriented coping strategies, significant associations were found between anxious attachment and both suppressive and reactive coping styles. These findings are consistent with associations found in the cross-sectional model reported in chapter six, as well as many previous research studies (Birbaum et al., 1997; Karantzas et al., 2012; Lopez & Gormley, 2002; Mikulincer et al., 1993; Turan et al., 2003). Students with an anxious attachment appear to not only engage in avoidant oriented coping strategies at the beginning of the year, but also throughout the academic year. The tendency for anxiously attached students to engage in coping strategies that intensify distress as in the case of reactive coping, and theoretically hyperactivate the attachment system, appear to compromise student's adjustment by the end of the first year of university. Furthermore, anxiously attached students' engagement in suppressive coping strategies was also negatively associated with university adjustment by the end of students' first year experience. As mentioned previously, the unexpected association between attachment anxiety and suppressive coping may reflect the paradoxical strategies engaged by anxiously attached individuals in particularly challenging situations that lead to ineffective courses of action (Mikulincer & Shaver, 2007).

The links between suppressive and reactive coping and university adjustment is consistent with previous longitudinal research demonstrating the long term negative effects of emotion-focused coping strategies to university outcomes over time (Pritchard et al., 2007). The negative association between suppressive coping, reactive coping and adjustment may in part help to explain research by Lopez and Gormley (2002) in which students engaging in emotion-focused coping strategies were at greater risk for early attrition (Lopez & Gormley, 2002). That is, coping strategies that both
intensify and suppress distress appear to yield similar outcomes for first year students –
difficulties in adjusting to the transition to university.

The findings from the longitudinal analysis of the proposed mediational model
show the pathway through which attachment orientations impact university adjustment
over time, is largely through suppressive coping rather than reactive or reflective
coping. These findings may have implications for university prevention and
intervention possibilities regarding how suppressive coping strategies may need to be
particularly attended to by counsellors working with students harbouring attachment
insecurity.

8.2.2 Attachment, developmental tasks and university adjustment over time

The hypotheses regarding the associations between attachment styles and the
negotiation of developmental tasks over time were partially supported. Only
attachment avoidance at time 1 was positively associated with the avoidance of
developmental tasks at time 2, and negatively associated with approaching
developmental tasks at time 2, as expected. According to Elliot and Reis (2003),
attachment insecurity is associated with the avoidance of personal goals, and in
particular, for avoidantly attached individuals, a fear of failure is an especially strong
motivator. Given that avoidant individuals have a need for achievement and are
excessively self-reliant, the active avoidance and lack of approach towards the
negotiation of developmental tasks may act as a safeguard against feelings of
inadequacy that may ensue if one was to attempt to negotiate these tasks, but fail to
achieve them.

Furthermore, the associations between attachment avoidance at time 1 and the
avoidance of developmental tasks at time 2, builds upon findings by Englund et al.,
(2011) who found longitudinal associations between early life attachment security and insecurity and the accomplishment of the developmental tasks of young adulthood. Those with attachment insecurity were found to report lower relationship quality and lower levels of personal wellbeing reflecting lower levels of developmental task accomplishment, compared to securely attached individuals.

In terms of attachment anxiety, while this variable was associated with the avoidance or approach of developmental tasks in the anticipated directions, these associations were not significant in the longitudinal model. This finding is unexpected and in contrast with the cross-sectional analysis of the hypothesised mediation model. One possible explanation for this lack of significant associations may be that the links between attachment anxiety and the negotiation of developmental tasks is particularly salient in the early phase of the transition to university – a period that is suggested by various studies to be the most stressful of the first year university experience (Harvey et al., 2006; Nelson et al., 2009; Tinto, 1993). Under such conditions of high stress, the hyperactivating strategies of anxiously attached individuals may be particularly influential in mitigating against developmental task accomplishment. However, by midway through the academic year, the stress of the first year experience may have reduced to the extent that the attachment anxiety-developmental task association is short-circuited. That is, there may be a stress tipping-point that moderates this association. While, this explanation is plausible, it is speculative, and would require further research in which the stress level of students is collected over time and examined as a moderator of the association between attachment anxiety and the negotiation of developmental tasks.
Finally, approaching and avoiding developmental tasks at time 2 did not significantly influence students’ adjustment experiences by the end of their first university year (i.e., time 3). Again, this finding was unexpected and in contrast to the cross-sectional analysis of the hypothesised model. This lack of predictive utility may be related to research suggesting that while young adults are focused on specific goals (e.g., completing their qualification), they may need to reprioritise and postpone accomplishing certain other developmentally relevant tasks (Lawrence & Dodds, 2003). By postponing the developmental tasks of young adulthood, these students may not be actively approaching nor avoiding tasks in a way that leads to negative outcomes by the end of their first academic year. It may be that the negative consequences of this postponement are not realised until further into the academic journey. As little research has considered the role of the negotiation of developmental tasks within the university context, further research is needed to clarify these associations.

8.3 Research Limitations, Strengths and Future Directions

This study has provided numerous insights into the role of attachment, coping and the negotiation of developmental tasks in relation to university adjustment, and as a result, has a number of strengths. However, there are a number of limitations within the present study that also need to be acknowledged before drawing broad conclusions or making generalisations to wider university contexts. These limitations, along with study strengths and suggestions for future research are discussed within this section.

Firstly, despite efforts to ensure participation over the entire longitudinal course of the study, there was a substantial level of attrition from the first time point to the final time point (time 3) of the study. The high level of attrition led to a considerably
smaller sample size by the final time point, compared to the first cross-sectional data set. Given many students only completed the first time point, the final sample may not have been the most representative sample of the university population measured. The final sample size also reduced the power of a number of the pathways in the longitudinal analyses of the mediation model. Issues regarding sample size and power provide another important and highly plausible explanation for the various non-significant findings associated with the longitudinal analysis of the mediation model. The effects identified in the longitudinal model were in the expected directions and consistent with the cross-sectional analysis of the model. Had the sample size been somewhat higher for the longitudinal analysis, there may have been a much higher probability to detecting significant effects that would mirror those found in the cross-sectional analysis of the model.

Further, the small sample size prevented more involved longitudinal analyses such as Latent Growth Curve Modelling (LCGM) and Cross-Lagged Panel Modelling (CPLM). While the longitudinal analyses were structured such to reflect the testing of the mediation model over time, these alternative types of models, could have provided the opportunity to test alternative predictions to the primary hypotheses, thereby providing an even stricter test of the proposed model. Thus, future research should attempt to recruit larger samples of students to enhance the power and robustness of the longitudinal associations for mediation models such as the one proposed as part of this thesis. Furthermore, future studies may benefit from testing alternative structural equation models incorporating variables presented in this thesis, to further explain and explore the transition to university experience for students.
Despite this limitation, the longitudinal approach developed within this thesis is nonetheless a strength of the study, extending previous literature that has largely been cross-sectional and lacked causal understanding. Furthermore, mediational models that are tested longitudinally, as in the case of this thesis, may be useful in identifying and understanding why particular students drop out from university prematurely, and whether the mediating variables proposed are indeed explanatory factors regarding cases of university attrition.

Although all students commencing university were invited to participate and efforts were taken to ensure even sample distributions, there was a gender skew apparent within both the cross-sectional and longitudinal samples. Substantially more women participated in the study than men, and although gender differences have not been consistently found across attachment literature (Mikulincer & Shaver, 2009; Schmitt et al., 2003), replication is needed with more gender-balanced samples to validate findings and extend generalisability to both student genders.

Despite the limitations associated with sample size and gender imbalances, an important strength of the study was that it focused on Australian university students. To date, many studies within the field of university adjustment (Chemers et al., 2001; Solberg, Valdez & Villarreal, 1994; Solberg et al., 2009), university attrition (DeBerard et al., 2004; Gerdes and Mallinckrodt, 1994; Raisman, 2013) and studies on student variations in coping (Hamaideh, 2011; Leong, Bonz & Zachar 1997; Friedlander et al., 2007) have relied on American or international university student samples. In doing so, these studies lack generalisability to the Australian university experience which differs in considerable ways from international colleges. For example, students attending Australian universities are far less likely to relocate or leave their family home to study,
experience fewer financial pressures in attending universities and are less likely to engage in structured social groups (e.g., sororities; McInnis, James & Hartley, 2000). Yet despite these considerable sociocultural differences, the findings of this study were largely in line with prior international studies of university experiences. This is a noteworthy finding and suggests that regardless of cultural variations, university experiences and specifically the transition to university may be very similar internationally. Future research may therefore benefit from comparing the mediational model proposed in this thesis cross-culturally or cross-nationally to determine its generalisability and confirm noted similarities in university/college experiences cross-culturally (e.g., Australian, Asian, and American cultural variations).

Future studies may also benefit from measuring participants’ subjective experience of stress and distress. While it is widely understood that the transition to university is a time of increased stress (Friedlander, Reid, Shupak & Cribbie, 2007; Gall, Evans & Bellerose, 2000; Hamaideh, 2011; Lu, 1994), including an assessment of stress would allow for the explicit estimation of the impact of perceived stress over the university transition above and beyond other variables within the model (e.g., coping and adjustment outcomes).

8.4 Implications

The transition to university marks an increased risk period for a range of negative outcomes, including a rise in depressive symptomology (Lee et al., 2014) and increased alcohol and illicit drug use (Walker & Stephens, 2014). Similarly, students commencing university whom are unprepared emotionally, socially or academically are at great risk of prematurely dropping out and forgoing the long-term benefits of participation in
higher education (Long et al., 2006; McKenzie & Schweitzer, 2001; Nelson et al., 2009). Hence, there is a great need to understand what factors are related to students’ positive adjustment to university and preventative measures to reduce attrition or the onset of psychopathology. This thesis has proposed various factors (attachment, coping, and the negotiation of developmental tasks) as influential in how students adjust to university at both the beginning of their academic experience, and by the end of their first year university experience. Understanding how these different factors relate to university adjustment has important implications for student welfare co-ordination, orientation programs and the development of psycho-education tailored at promoting university adjustment and student mental health.

More specifically, students are known to seek university assistance services when dealing with life stressors, or experiencing adjustment difficulties (Stallman & Shochet, 2009), to which more adaptive coping strategies are often proposed. Yet if attachment issues underlie students’ use of coping strategies and negotiation of developmental tasks, it may be important for student services to ensure that attachment issues are explored along with the university specific issues troubling students. Tailoring university services to deal with coping strategies around attachment issues may aid students to foster more healthy relationships, feel more connected and not view the university experience as too challenging or threatening. This may practically be achieved by student services first assessing students’ attachment orientations and identifying the degree of attachment security or insecurity of a student. In turn this knowledge can be use to tailor how issues of coping and developmental task negotiation are dealt with. For instance, students who are more avoidantly attached, appear likely to use more suppressive coping. To this end, counsellors mindful of the attachment
avoidance-suppressive coping link, can work towards dealing with both the attachment insecurity and the suppressive coping tendencies. This counselling work may involve the need to ensure that the therapeutic environment fosters a sense of security, doesn’t challenge avoidantly attached students self-reliance or suppression of issues in a way that increases their defensiveness, and works on altering negative relationship schemas and directing behaviour towards more constructive approach-oriented coping strategies. Furthermore, assessing attachment may also aid in the identification of at risk students when commencing university, thereby providing the opportunity for student intervention and psycho-education that prevents the onset of adjustment issues. This preventative approach may have more drastic implications in averting students from early departure from university.

Furthermore, psycho-education and orientation programs could be established in order to promote more positive adjustment to university, by educating students around coping strategies and the importance of approaching the normative tasks of young adulthood. For example, providing understanding and education regarding the importance of approaching the developmental tasks and challenges of young adulthood, rather than avoiding such tasks may encourage students to develop greater balance during their stressful first year university experiences. Similarly, students may benefit from being informed regarding the detrimental outcomes of engaging in avoidant-orientated or emotion focused coping strategies compared to approach orientated or problem focused coping strategies. Such programs may also reduce the incidents of students’ distress as well as university attrition in the early stages of university life.

The proposed mediational model also has important implications for extending the clinical evidence base and research regarding attachment, coping, developmental task
accomplishment and student adjustment experiences. In particular, the development of the Negotiation of Developmental tasks (NDT) scale to measure students’ approach or avoidance of the tasks and challenges of young adulthood provides important advances in the self-report measurement and research of young adult development. Developing a new self-report measure for developmental tasks builds on previous studies by increasing understanding regarding how young adults are working towards the accomplishment of developmental tasks, rather than their attitudes towards or rated importance of these tasks (Seiffge-Krenke et al., 2010). The NDT measure now provides a basis for future research into this key area of individual difference within development.

8.5 Conclusions

In this thesis, a hypothesised mediational model of university adjustment was proposed. The model was couched within an attachment theory (Bowlby, 1969/1982) framework – a widely studied theory of relationships and distress regulation. The way in which individuals cope with stress, and their approach or avoidance of the developmental tasks of young adulthood, were hypothesised as mediating variables in the relationship between anxious and avoidant attachment and variations in the university adjustment experience of students. The study aimed to test this mediational model cross-sectionally, as students’ enter university and longitudinally across students’ first year at university. Structural equation modelling was used to examine the direct and indirect paths between all observed variables in the model, across three time points (time 1 – orientation week, time 2 – end of semester 1, and time 3 – end of semester 2 [the conclusion of the academic year]). Within the cross-sectional model the
association between attachment and university adjustment whether individuals approached or avoided the accomplishment of age-graded tasks was investigated. To date, few studies have considered the roles of coping and developmental tasks as key explanatory mechanisms in the association between attachment and university adjustment. This thesis extends the current literature base on university adjustment experiences by considering these areas of individual difference within the transition to university, following recommendations for research to focus on intrapersonal/intrapsychic factors rather than purely examining contextual or background factors such as socio-economic status, culture, high school attendance (Klomegah, 2007).

The longitudinal analysis of the mediational model added further strength to the cross-sectional findings by highlighting the predictive role of attachment styles as influencing patterns of student coping and accomplishment of developmental tasks over their time at university, and subsequent adjustment to university by the end of students’ first year at university. Within the model, students’ engagement in suppressive coping strategies yielded the strongest negative outcomes for student adjustment over time, compared to engagement in other coping strategies or their negotiation of developmental tasks. This finding highlights the long-term negative implications of minimising distress and emotions related to stress, in the context of university adjustment and provide further support for previous research highlighting the associations between attachment, coping and university outcomes. Though the approach and avoidance of developmental tasks was not found to predict university adjustment by the end of students’ first year at university, further research is needed to
validate the NDT measure and consider how individuals’ negotiations of tasks may influences other aspect of young adult development.

In conclusion, the testing of the proposed mediation model provides important insight into the role of coping and the negotiation of developmental tasks, in the context of university adjustment. Furthermore, the findings from this study have important applied implications in that student services may benefit from incorporating an attachment focus, as well as tackling issues of coping and developmental tasks in intervention and preventative strategies to assist and support students as they transition to university.
APPENDIX A1

Background Questionnaire

**DEMOGRAPHICS**

Could you please take the time to answer the following background questions.

1. **Age:** [ ] Years [ ] Months

2. **Gender:**
   - [ ] Male
   - [ ] Female

3. **Father/Male Guardian’s Occupation:**

4. **Mother/Female Guardian’s Occupation:**

5. **Postcode Of Parent/Guardian’s Home:**

6. **Do you still live with your parent(s)/guardian(s) in the family home?**
   - [ ] Yes, I live with my parent(s) *(GO TO QUESTION 11)*
   - [ ] Yes, I live with my guardian(s) *(GO TO QUESTION 11)*
   - [ ] No

7. **How long have you been living away from your parent/guardian’s home?**
   - [ ] Years
   - [ ] Months

8. **Do you live on university residences?**
   - [ ] Yes
   - [ ] No

8a. **If yes, which campus?**
   - [ ] Burwood
   - [ ] Geelong
   - [ ] Warrnambool

9. **If you don’t live on university residence, give postcode of your current place of residence:**

10. **If you don’t live on university residences, please tick one of the following living arrangements that applies to you:**
   - [ ] I share with housemates
   - [ ] I share with my romantic partner
   - [ ] I share with friends
11. What secondary school did you attend? 

12. What was your ENTER score? 

13. What course are you enrolled in? 

14. Is the course you are enrolled in your first preference?
   - Yes
   - No

14a. If no, what preference did you give this course on your list of courses? 

15. Work Status:
   - Full-time
   - Part-time
   - Casual
   - Not employed

16. Are you currently involved in a romantic relationship?
   - Yes
   - No

17. How would you describe your relationship status?
   - Single
   - Casually Dating More Than One Person
   - Casually Dating One Person
   - Steady Dating
   - Cohabiting
   - Engaged
   - Married

18. If you are involved in a romantic relationship, what is the duration of your current relationship? [ ] Years [ ] Months
APPENDIX A2

Experiences in Close Relationships (ECR) Questionnaire

Instructions:

The following statements concern how you feel in romantic relationships. We are interested in how you generally experience relationships, not just in what is happening in a current relationship. Respond to each statement by indicating how much you agree or disagree with it. There are no right or wrong answers. We are just interested in your opinions. Write the number in the space provided, using the following rating scale:

<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I prefer not to show a partner how I feel deep down</td>
</tr>
<tr>
<td>2</td>
<td>I worry about being abandoned.</td>
</tr>
<tr>
<td>3</td>
<td>I am very comfortable being close to romantic partners.</td>
</tr>
<tr>
<td>4</td>
<td>I worry a lot about my relationships.</td>
</tr>
<tr>
<td>5</td>
<td>Just when my partner starts to get close to me I find myself pulling away.</td>
</tr>
<tr>
<td>6</td>
<td>I worry that romantic partners won’t care about me as much as I care about them.</td>
</tr>
<tr>
<td>7</td>
<td>I get uncomfortable when a romantic partner wants to be very close.</td>
</tr>
<tr>
<td>8</td>
<td>I worry a fair amount about losing my partner.</td>
</tr>
<tr>
<td>9</td>
<td>I don’t feel comfortable opening up to romantic partners.</td>
</tr>
<tr>
<td>10</td>
<td>I often wish that my partner’s feelings for me were as strong as my feelings for him/her.</td>
</tr>
<tr>
<td>11</td>
<td>I want to get close to my partner, but I keep pulling back.</td>
</tr>
<tr>
<td>12</td>
<td>I often want to merge completely with romantic partners, and this sometimes scares them away.</td>
</tr>
<tr>
<td>13</td>
<td>I am nervous when partners get too close to me</td>
</tr>
<tr>
<td>14</td>
<td>I worry about being alone.</td>
</tr>
<tr>
<td>15</td>
<td>I feel comfortable sharing my private thoughts and feelings with my partner.</td>
</tr>
<tr>
<td>16</td>
<td>My desire to be very close sometimes scares people away.</td>
</tr>
<tr>
<td>17</td>
<td>I try to avoid getting too close to my partner.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>18</td>
<td>I need a lot of reassurance that I am loved by my partner.</td>
</tr>
<tr>
<td>19</td>
<td>I find it relatively easy to get close to my partner.</td>
</tr>
<tr>
<td>20</td>
<td>Sometimes I feel that I force my partners to show more feeling, more commitment.</td>
</tr>
<tr>
<td>21</td>
<td>I find it difficult to allow myself to depend on romantic partners</td>
</tr>
<tr>
<td>22</td>
<td>I do not often worry about being abandoned.</td>
</tr>
<tr>
<td>23</td>
<td>I prefer not to be too close to romantic partners.</td>
</tr>
<tr>
<td>24</td>
<td>If I can’t get my partner to show interest in me, I get upset or angry.</td>
</tr>
<tr>
<td>25</td>
<td>I tell my partner just about everything.</td>
</tr>
<tr>
<td>26</td>
<td>I find that my partner(s) don’t want to get as close as I would like.</td>
</tr>
<tr>
<td>27</td>
<td>I usually discuss my problems and concerns with my partner.</td>
</tr>
<tr>
<td>28</td>
<td>When I’m not involved in a relationship, I feel somewhat anxious and insecure.</td>
</tr>
<tr>
<td>29</td>
<td>I feel comfortable depending on romantic partners.</td>
</tr>
<tr>
<td>30</td>
<td>I get frustrated when my partner is not around as much as I would like.</td>
</tr>
<tr>
<td>31</td>
<td>I don’t mind asking romantic partners for comfort, advice, or help.</td>
</tr>
<tr>
<td>32</td>
<td>I get frustrated if romantic partners are not available when I need them.</td>
</tr>
<tr>
<td>33</td>
<td>It helps to turn to my romantic partner in times of need.</td>
</tr>
<tr>
<td>34</td>
<td>When romantic partners disapprove of me, I feel really bad about myself.</td>
</tr>
<tr>
<td>35</td>
<td>I turn to my partner for many things, including comfort and reassurance.</td>
</tr>
<tr>
<td>36</td>
<td>I resent it when my partner spends time away from me.</td>
</tr>
</tbody>
</table>
APPENDIX A3

Problem-Focused Style of Coping (PF-SOC) Questionnaire

In thinking about relationship issues or concerns with your romantic partner, how frequently do you do what is described in each item below. Please circle your response.

<table>
<thead>
<tr>
<th></th>
<th>Almost never</th>
<th>Occasionally</th>
<th>About half the time</th>
<th>Often</th>
<th>Almost all of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am not really sure what I think or believe about my problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. I don't sustain my actions long enough to really solve my problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. I think about ways that I solved similar problems in the past.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. I identify the causes of my emotions, which helps me identify and solve my problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. I feel so frustrated that I just give up doing any work on my problems at all.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. I consider the short-term and long-term consequences of each possible solution to my problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. I get preoccupied thinking about my problems and overemphasize some parts of them.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. I continue to feel uneasy about my problems, which tells me I need to do some more work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. My old feelings get in the way of solving current problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. I spend my time doing unrelated chores and activities instead of acting on my problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. I think ahead, which enables me to anticipate and prepare for problems before they rise.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>12.</td>
<td>I think my problems through in a systematic way.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13.</td>
<td>I misread another person's motives and feelings without checking with the person to see if my conclusions are correct.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14.</td>
<td>I get in touch with my feelings to identify and work on problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15.</td>
<td>I act too quickly, which makes my problems worse.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16.</td>
<td>I have a difficult time concentrating on my problems (i.e., my mind wanders).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17.</td>
<td>I have alternate plans for solving my problems in case my first attempt does not work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18.</td>
<td>I avoid even thinking about my problems</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
**APPENDIX A4**

**Negotiation of Developmental Tasks (NDT) Questionnaire**

**Instructions:** During our lives we encounter many challenges and opportunities. Some are unique to our situation while others are common to young adults. We call these challenges and opportunities life tasks. Below we list a series of life tasks that we would like you to rate along three domains – (1) their importance to you, (2) the extent to which you actively engage in these tasks, and (3) the extent to which you refrain from engaging in these tasks.

<table>
<thead>
<tr>
<th><strong>Ask your friends for emotional support</strong></th>
<th><strong>To what extent do you actively do this?</strong></th>
<th><strong>To what extent do you refrain from doing this?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None of the time</td>
<td>All the time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Plan for your future</strong></th>
<th><strong>To what extent do you actively do this?</strong></th>
<th><strong>To what extent do you refrain from doing this?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None of the time</td>
<td>All the time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Discuss problems with people who are close to you</strong></th>
<th><strong>To what extent do you actively do this?</strong></th>
<th><strong>To what extent do you refrain from doing this?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None of the time</td>
<td>All the time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Balance commitments with study</strong></th>
<th><strong>To what extent do you actively do this?</strong></th>
<th><strong>To what extent do you refrain from doing this?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None of the time</td>
<td>All the time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Know where you want to be in five years</strong></th>
<th><strong>To what extent do you actively do this?</strong></th>
<th><strong>To what extent do you refrain from doing this?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None of the time</td>
<td>All the time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Receive support from your friends</strong></th>
<th><strong>To what extent do you actively do this?</strong></th>
<th><strong>To what extent do you refrain from doing this?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None of the time</td>
<td>All the time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Balance social life with study</strong></th>
<th><strong>To what extent do you actively do this?</strong></th>
<th><strong>To what extent do you refrain from doing this?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None of the time</td>
<td>All the time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Have a clear career plan</strong></th>
<th><strong>To what extent do you actively do this?</strong></th>
<th><strong>To what extent do you refrain from doing this?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None of the time</td>
<td>All the time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Balance personal and career priorities</strong></th>
<th><strong>To what extent do you actively do this?</strong></th>
<th><strong>To what extent do you refrain from doing this?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None of the time</td>
<td>All the time</td>
</tr>
</tbody>
</table>
## APPENDIX A5

The Negotiation of Developmental Tasks Scales with Standardised Factor Loadings and Subscale Reliability

### Approaching Developmental Tasks

<table>
<thead>
<tr>
<th>Task</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know where you want to be in five years</td>
<td>.888</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have clear career plan</td>
<td>.757</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan for your future</td>
<td>.599</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ask your friends for emotional support</td>
<td>.889</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receive support from your friends</td>
<td>.714</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discuss problems with people who are close to you</td>
<td>.629</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance commitments with study</td>
<td>.703</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance social life with study</td>
<td>.694</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance personal and career priorities</td>
<td>.599</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reliability: Cronbach’s Alpha

| Reliability: Cronbach’s Alpha | .81 | .79 | .74 |

### Avoiding Developmental Tasks

<table>
<thead>
<tr>
<th>Task</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know where you want to be in five years</td>
<td>.857</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have clear career plan</td>
<td>.705</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan for your future</td>
<td>.561</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discuss problems with people who are close to you</td>
<td>.803</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>Cronbach's Alpha</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ask your friends for emotional support</td>
<td>.700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receive support from your friends</td>
<td>.621</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance commitments with study</td>
<td>.807</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance personal and career priorities</td>
<td>.602</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance social life with study</td>
<td>.592</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reliability: Cronbach’s Alpha</strong></td>
<td><strong>.79</strong></td>
<td><strong>.77</strong></td>
<td><strong>.76</strong></td>
</tr>
</tbody>
</table>
APPENDIX A6

The Student Adaptation to College Questionnaire (SACQ) Australian Version

Presentation of this entire measure was excluded in accordance with Deakin University Copyright Laws. Sample items from each subscale are presented.

The statements below describe university experiences. How do you anticipate you will react to the following statements after you have entered university and have been there for 6-7 weeks?

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Description</th>
<th>Applies very closely to me</th>
<th>Doesn’t apply to me at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>I expect I will know why I am at university and what I want out of it.</td>
<td>* * * * * * * * *</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>I expect I will be quite satisfied with my social life at university.</td>
<td>* * * * * * * * *</td>
<td></td>
</tr>
<tr>
<td>Personal</td>
<td>I expect I will be feeling blue and moody a lot.</td>
<td>* * * * * * * * *</td>
<td></td>
</tr>
<tr>
<td>Belonging</td>
<td>I am pleased now about my decision to attend this university in particular.</td>
<td>* * * * * * * *</td>
<td></td>
</tr>
</tbody>
</table>
Dear Student,

Congratulations on your entry to Deakin University. We hope the time you spend at Deakin will be an enjoyable period of time filled with much learning and the development of new friendships and interests. We are aware that the transition to university, while exciting, can also be stressful for some students. For this reason, we in the School of Psychology, are conducting a study that investigates how first year university students adjust to university life and study. We are especially interested in how your social networks and relationships with others can affect your adjustment. The study we are conducting is longitudinal, meaning that we are tracking students through the first year of university – from the early stages of trimester 1 to the end of trimester 2. We are asking students to fill in a questionnaire at 4 time points throughout the year.

We would sincerely appreciate your involvement in this study. The study will require you to complete a questionnaire that takes approximately 40 minutes or less to complete. As a thank-you for your participation in the study, we will provide you with a $20 reimbursement (credited to your Deakin card if you are an on campus student, or a gift certificate if are an off campus student). This will be provided to you at the conclusion of the study. If you are interested in taking part in the study, could you click on the hyperlink below.

http://www.deakin.edu.au/psychology/research/unitrans/

It is important to note that your information will be treated with the utmost confidentiality. The general research findings (not your personal responses) will be used to help the Division of Student Life and the Deakin University Student Association (DUSA) understand the opportunities and challenges you experience as a first year student and will inform their programs and activities.

If you have any questions about the study, please feel free to contact the project assistant Hannah Gitsham: hgitsham@deakin.edu.au

Yours faithfully,

Dr Gery Karantzas, Senior Lecturer and Chief Investigator
School of Psychology, Deakin University
APPENDIX A8

Plain Language Statement (PLS)

DEAKIN UNIVERSITY
PLAIN LANGUAGE STATEMENT AND CONSENT FORM

Plain Language Statement

Date: [to be inserted closer to commencement date]

Full Project Title: Understanding the Role of Attachment Style and Attachment Networks in Adjustment to University Transition

Principal Researcher: Dr. Gery Karantzas, School of Psychology

This Plain Language Statement and Consent Form is 4 pages long. Please make sure you have all the pages.

1. Your Consent
You are invited to take part in this research project. This Plain Language Statement contains detailed information about the research project. Its purpose is to explain to you as openly and clearly as possible all the procedures involved in this project so that you can make a fully informed decision whether you are going to participate.

Please read this Plain Language Statement carefully. Feel free to ask questions about any information in the document. You may also wish to discuss the project with a relative or friend or your local health worker. Feel free to do this.

Once you understand what the project is about and if you agree to take part in it, you will be asked to sign the Consent Form. By signing the Consent Form, you indicate that you understand the information and that you give your consent to participate in the research project.

You should retain the copy of the Plain Language Statement and Consent Form to keep as a record.

2. Purpose and Background
The purpose of this project is to understand your experience of the transition into first year university. In this study you will be asked to complete a series of online questionnaires that will require you to reflect on your relationships, strategies to cope with the stress of university life and your adjustment to the university transition.

A total of 200 people will participate in this project.

Previous experience has shown that while university enrolments are increasing, the amount of students completing university is decreasing. The largest number of students drop out in the first year. Research to date suggests that students coping and adjustment to university is influenced by social support they have around them. However, exactly who students turn to for support and why is unknown. This study aims to address this gap in knowledge.
You are invited to participate in this research project because you are a first year student at Deakin University. The information about this project is being forwarded to you by the Division of Student Life at Deakin University through their email list of students.

3. Funding
This research is not being funded by Deakin University nor any external funding body.

4. Procedures
Because the study focuses on how student's change over the first year of university, participation in this project will involve you completing the same online questionnaire on three occasions (during the first month of semester two, mid-way through the semester and at the end of the semester). Each time you fill-in the online questionnaire it will take you about 45 minutes. You will need to be 18 years and over and provide consent prior to participating in the study. The information you provide will remain confidential and you are free to withdraw from the study at any time. Examples of the types of questions you will be asked include: “I find it relatively easy to get close to others”, “I feel like others care about me”, “This person will always be there for me”, “I tend to dissolve my social network”, “I avoid even thinking about my problems”, “I keep my emotions to myself”, “I keep up to date with my academic work”.

The researcher will monitor the project online and will confidentially retrieve participants’ online questionnaire responses once the data is submitted.

5. Possible Benefits
Possible benefits include an understanding of how students’ relationship styles shape their seeking of support, coping and adjustment to university. Moreover, this research will provide strategies about how students can best adjust to this transition. This information will be sent to you as a short report and presented to the Division of Student Life at Deakin University. The Division of Student Life can then pass on this information to all students entering the first year of university. This information will be most helpful to those students who are not adjusting well to the transition.

6. Possible Risks
Possible risks, side effects and discomforts include a small chance that participating in the research may make you aware that you are not adjusting well to university. This in turn may cause you some emotional distress. In the event that you become distressed you are free to withdraw from the study. In the unlikely event that you experience any emotional discomfort during or after the completion of the questionnaire you are encouraged to contact the Kids’ Help Line on 1800 55 1800, Lifeline counselling phone service on 13 11 14, or contacting the Division of Student Life on your campus Melbourne: (03) 9244 6333, Geelong: (03) 5227 2333, Warrnambool: (03) 5563 3333.

7. Privacy, Confidentiality and Disclosure of Information
Any data you supply will be stored on a secure password protected computer server. Back-up copies of the data will be stored on password-protected CD Rom and locked in a cabinet at Deakin University for a minimum of six years from the date of research publication. Upon submitting your online data, the researcher will separate any identifiable information you provide in the online consent form from the online questionnaire. This will ensure that your privacy is maintained and that your data remains confidential. When you submit your data for the first time a random identification number will be generated to match your responses across the three time points that you fill in the questionnaire. This will safeguard against the need for the researcher use your personal details outside your e-mail. Your e-mail will be necessary in order to send you the link for the follow-up online questionnaires.

Any information obtained in connection with this project and that can identify you will remain confidential. It will only be disclosed with your permission, subject to legal requirements. If you give us your permission by signing the Consent Form, we plan to publish and present the results as part of peer-reviewed journal articles and conferences presentations.
In any publication or conference presentation, information will be provided in such a way that you cannot be identified. Only the responses of the entire group (not individuals) will be reported.

8. Results of Project
As noted above, the results of the project will be sent to you in the form of a short report and include strategies about how students can best adjust to this transition. This information will also be sent to the Division of Student Life at Deakin University. The results of this research will also likely be published in peer-reviewed journals and presented at conferences. We will also provide you at the end of the year with a summary report regarding the main findings of the study.

9. Participation is Voluntary
Participation in any research project is voluntary. If you do not wish to take part you are not obliged to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. Any information obtained from you to date will not be used. By participating and completing all questionnaires at the three stages of the project you will be credited either $20 to you Deakin Card or receive a $20 gift voucher.

Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your relationship with Deakin University. Check the box for the online Consent Form only after you have carefully read this plain language statement. If you decide to withdraw from this project, please notify the research team on the contact details provided at the end of this plain language statement.

10. Ethical Guidelines
This project will be carried out according to the National Statement on Ethical Conduct in Human Research (2007) produced by the National Health and Medical Research Council of Australia. This statement has been developed to protect the interests of people who agree to participate in human research studies.

The ethics aspects of this research project have been approved by the Human Research Ethics Committee of Deakin University.

11. Complaints
If you have any complaints about any aspect of the project, the way it is being conducted or any questions about your rights as a research participant, then you may contact:

The Secretary HAEG-H, Dean’s Office, Faculty of Health, Medicine, Nursing and Behavioural Sciences, 221 Burwood Highway, Burwood Victoria 3125, Telephone: (03) 9251 7173, Email hbs.research@deakin.edu.au.

Please quote project number HEAG-H 100_08.

12. Reimbursement for your costs
You will not be paid for your participation in this project.

13. Further Information, Queries or Any Problems
If you require further information, wish to withdraw your participation or if you have any problems concerning this project (for example, any side effects), you can contact the principal researcher.

The researcher responsible for this project is:

Dr. Gery Karantzas
School of Psychology
Faculty of Health, Medicine, Nursing and Behavioural Science
221 Burwood Hwy, Burwood, VIC. 3125
Ph: 03 9244-6959
Email: gery.karantzas@deakin.edu.au
NOTE: GIVEN THE ONLINE NATUE OF THE STUDY THE CONSENT FORM WILL APPEAR ONLINE. ASA RESULT PARTICIPANTS WILL NOT BE GIVEN A COPY OF THE CONSENT FORM BUT WILL HAVE THE OPPORTUNITY TO PRINT OR SAVE THE DOCUMENT. IMPORTANTLY PARTICIPANTS CANNOT SIGN THE DOCUMENT. IN PLACE OF A SIGNATURE THE PARTICIPANT WILL NEED TO TICK A BOX AGREING AND CONSENTING TO PARTICIPATE IN THE RESEARCH.

DEAKIN UNIVERSITY
PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: [participant to enter name online]

Consent Form

Date: [participant to enter date online]

Full Project Title: Understanding the Role of Attachment Style and Attachment Networks in Adjustment to University Transition

I have read, and I understand the attached Plain Language Statement.

I freely agree to participate in this project according to the conditions in the Plain Language Statement.

I have been given a copy of the Plain Language Statement and Consent Form to keep.

The researcher has agreed not to reveal my identity and personal details, including where information about this project is published, or presented in any public form.

Participant's Name (printed) ………………………………………………………………………

Please check the box below to participate in the research:

☐ By checking this box I agree to having freely consented to participate in this research

Date ………………………..
Dear Student,

Thank you for participating in our study examining the student transition to university. As you may remember, we in the School of Psychology, are conducting a study that investigates how university students adjust to university life and study. We are especially interested in how your social networks and relationships with others can affect your adjustment. The study we are conducting is longitudinal, meaning that we are tracking students through the first year of university – from the early stages of trimester 1 to the end of trimester 2. We are asking students to fill in a questionnaire at the 4 time points throughout the year.

We would sincerely appreciate you to complete the second online questionnaire. The questionnaire will take approximately 40 minutes or less to complete. As a thank-you for your participation in the study, we will provide you with a $20 reimbursement (credited to your Deakin card if you are an on campus student, or a gift certificate if are an off campus student). This will be provided to you at the conclusion of the study, after completing the survey for the final time. If you are interested in continuing with the study, could you please click on the hyperlink below.

http://www.deakin.edu.au/psychology/research/unitrans2/

It is important to note that your information will be treated with the utmost confidentiality. The general research findings (not your personal responses) will be used to help the Division of Student Life and the Deakin University Student Association (DUSA) understand the opportunities and challenges you experience as a first year student and will inform their programs and activities.

If you have any questions about the study, please feel free to contact the project manager Hannah Gitsham: hgitsham@deakin.edu.au

Yours faithfully,

Dr Gery Karantzas, Senior Lecturer and Chief Investigator
School of Psychology, Deakin University
References


power analysis program for the social, behavioral, and biomedical sciences.

physical and emotional distancing. In J.A. Simpson & W.S. Rholes (Eds.),
*Attachment theory and close relationships* (pp. 189-219). New York: Guilford Press.

Feeney, B.C., & Van Vleet, M. (2010). Growing through attachment: The interplay
between attachment and exploration in adulthood. *Journal of Social and Personal


Publishing Company Inc.

Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: A study of
emotion and coping during three stages of college examination. *Journal of


Fraley, R.C. (2002). Attachment stability from infancy to adulthood: Meta-analysis and
dynamic modelling of developmental mechanisms. *Personality and Social
Psychology Review, 6*, 123-151.

conceptualizing and studying stability and change in attachment security. In W.S.
Rholes & J.A. Simpson (Eds.). *Adult attachment: Theory, research, and clinical
implications* (pp. 86- 132). New York: Guilford Press.


Marks, G. (2007). Completing university: Characteristics and outcomes of completing and non-completing students. Executive Summary: Longitudinal Surveys of


Following Relationship Breakup. *Journal Of College Student Development, 43* (2), 213.


