Financial Hardship and Strain Predict Student Well-being: The Importance of Socialisation, Social Support and Young Adult Roles

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Submitted in fulfilment of the requirements of the degree of Doctor of Philosophy

24 August 2015
Abstract

For most tertiary students, participation in higher education occurs directly after high school, when they are navigating a dynamic, and potentially stressful, pathway to adulthood. The years spent studying are often the most cash-strapped for young adults, when economising heavily and sometimes going without are normative experiences. Australian university students report substantial hardship, regularly cutting back their spending on basic necessities and simple life pleasures (Bexley, Daroesman, Arkoudis & James, 2013). A limited income and having to economise in many areas of life can take a toll on health and well-being.

This dissertation examines the associations between experiences of financial hardship, perceived strain and psychological well-being for young adults at university. How these associations differ for student young adults with and without supportive resources is then examined. Finally, the associations between financial normative socialisation and young adults’ financial behaviours are explored between students and full-time workers. Two samples of Australian young adults were surveyed. The first two studies include 614 Western Australian university students (67% female, M_age = 20.83, SD_age = 2.02) drawn from a single tertiary institution as part of the Australian Pathways to Life Success for University Students (AusPLUS) survey. The third study includes a sample of 301 Western Australians (68% female, M_age = 18.15, SD_age = 1.04) surveyed as part of the Post-High School follow up to the Youth Activity Participation Study (YAPS). In both samples, respondents completed a web-based survey.

In Study 1, the transactional theory of stress and coping (Lazarus and Folkman, 1984) is applied to explain how students’ experience of financial hardship and strain is linked to psychological well-being in the AusPLUS sample. This study tests the
mediating role of perceived financial strain in the association between objective measures of financial experience and psychological well-being using the transactional framework. The mediation model of student financial experiences demonstrates superior fit when compared against the prevailing direct effects model most commonly presented in the literature. This result suggests that objective measures of financial hardship indirectly predict student well-being through perception of financial strain. It is posited that objective measures of financial hardship on their own do not account for student psychological health; rather, students’ appraisal of financial hardship as threatening is the psychological mechanism that holds the key to the impact of financial hardship on psychological health.

Not all students who are cash-strapped report negative experiences and poor mental health and this variation may be partly explained by differences amongst young adults in progression toward attainment of markers of adulthood. A transactional model of student financial hardship suggests a process through which student circumstances and resources might exacerbate perceptions of strain, or protect well-being from perceptions of threat. In Study 2, using the AusPLUS sample, the roles of a key marker of young adulthood, moving out of the parental home, and the perceived adequacy of parental financial support are tested as moderators of the paths in the meditational model examined in Study 1. Students living independently and perceiving adequate parental financial support report the strongest association between economising behaviours and perceived financial strain. Living with parents, regardless of perceived adequacy of parental financial support, is associated with weaker links between perceived financial strain and well-being. The association between financial strain and psychological well-being was strongest for students who were living independently and perceived inadequate support from their parents.
Research examining the development of healthy financial behaviours in young adults has highlighted the critical role played by parental socialisation (e.g., Shim, Serido, Tang, & Card, 2015); however, this research has predominantly focused on student young adults. In Study 3, financial socialisation of student young adults is compared to that of full-time employed young adults, accounting for independent living situation, using the YAPS sample. Results demonstrated that students’ financial behaviours are strongly predicted by their parents’ financial expectations. However, the financial behaviours of employed young adults were most strongly predicted by parental financial modelling. For students, living away from the parental home may be associated with missed opportunities to observe parents’ financial behaviours, whereas for employed young adults, independent living is associated with perceiving higher financial expectations from parents.

Taken together, this dissertation demonstrates that university students’ experiences of financial hardship involve strain and are associated with low psychological well-being. The experience of financial hardship and strain varies as a function of supportive resources and the markers of adulthood attained. The support provided by continued residence in the parental home is protective of well-being in the face of financial strain, and financial support from parents is protective for student young adults who have made the move out of home. Young adults who choose to pursue tertiary education are often considered to be delaying financial independence (Arnett, 2000). Although this can be directly inferred by students’ greater likelihood to remain in the parental home (Cobb-Clarke, 2008), the finding that their financial behaviour is more strongly led by parents’ expectations, compared to employed young adults, may explain one underlying process accounting for a delay in financial independence.
Statement of Originality

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

__________________________
Stuart James Watson
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Acknowledgements

To my supervision team, Professor Bonnie Barber, Dr Kathy Modecki and Dr Suzanne Dziurawiec, you have provided a solid support and guidance base to me during this journey. Your time, patience, commitment and kindness are so very much appreciated and will never be forgotten. To Bonnie, my principal supervisor and friend, I have learned so much from you about research, and even more from you about life. Thank you.

I am grateful to Murdoch University for supporting my candidature between 2009 and 2014, and to Griffith University for allowing me to complete my PhD with the support of my supervision team. I would like to express my gratitude specifically to the School of Applied Psychology at Griffith, and in particular, Associate Professor Liz Conlon, who assisted personally with my transfer.

To my PhD peers, Corey Neira, Cathy Drane, Lynette Vernon, Roberto Parraga-Martin, Gerald Zeng, Gaynor Edwards and Renee Carey, thank you for making my journey such an amazing one. The support you all provided has been instrumental to my completion and the strong personal friendships we have cultivated will endure for life. And my sincere thanks to the Youth Activity Participation Study for the huge amount of opportunities that this project provided me – I owe much to the key people affiliated with this project.

To close friends and colleagues, thank you for being an amazing group of people. At different points in time, you have each provided me an ear and a critical mind to enable me to work through issues in both my PhD and my life. In particular, Adrian N., Yolanda, Adrian S., Sarah, Ellen, James, Anthony, Simone, Janey, Amy, Cal. and Donna.
There have been two key mentors in my life whom I wish to pay special mention to. Dr Diane Lee: you inspired my thinking in many ways and you helped me so much to find out more about who I am. Thank you for believing in me. To Peter Hamilton, you were the first teacher to show you believed in me and I thank you for your transformative support.

To my Mum and Dad. Thank you. Your patience and love are endless. My family: Mum, Dad, Mark, Andrew, Jenna, Pam (Mum # 2), Joe, Maree, Will, Matt and Aleisha, and little Lincoln, Lilah, Mitchell and April: I am very fortunate to have landed in the presence of you all. Thanks for putting up with me! To Mark: it is amazing to have you back for the end of my journey because you were the catalyst for it all.

My beautiful wife, Jess. I love you more than words can express and you will never know truly how much your support means to me. Thank you. To Ella, my little munchkin: your squeezy cuddles calm the butterflies in my tummy. I’m looking forward to spending more time with you to help change all 100 of your babies’ nappies. And Lucas. I found out you were coming on the day I submitted this thesis. I cannot wait to hold onto you and smell your head.
Acknowledgement of Papers included in this Thesis

Included in this thesis are papers in Chapters Three, Four and Five, which are co-authored with other researchers. My contribution to each co-authored paper is outlined at the front of the relevant chapter. The bibliographic details for these papers including all authors, are:


Appropriate acknowledgements of those who contributed to the research but did not qualify as authors are included in each paper.

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(Countersigned) ___________________________ (Date)________________

Supervisor: Professor Bonnie L. Barber
CHAPTER ONE: Introduction and Overview

The markers of successful transition to adulthood have shifted in recent decades. Adulthood in Western countries was historically defined by getting married and becoming a parent for a better part of the twentieth century. However, more recently, this definition has been challenged, with research showing that young adults predominantly do not consider marriage and parenthood as fundamental to the achievement of adulthood (Arnett, 1998, 2000). Instead, young adults rate financial independence, increased responsibility and autonomy from their parents as more accurately representing what it means to be an adult (Lopez, Chervinko, Strom, Kinney, & Bradley, 2005; Nelson & Barry, 2005). The period of young adulthood is dynamic and presents a diverse range of employment and educational opportunities to explore (Arnett, 2000); however, the timing and duration of such opportunities are highly variable (Räikkönen, Kokko & Rantanen, 2011). For example, one young adult may enter full-time employment post-high school, whereas a second young adult may enrol at a tertiary institution to undertake further education. Other young adults may take on a mixture of employment and education.

Income from employment is a strong predictor of young adults’ ability to financially support themselves. A young adult who is also a university student (student young adult hereafter) has an average annual disposable income that ranges between one-fifteenth and half of that of an employed young adult’s income (Muir, Mullen, Powell, Flaxman, Thompson & Griffith, 2009). Thus, for student young adults, limited financial resources can impose challenging financial experiences, and because the exploration and development of financial independence, autonomy and a mature financial behaviour set is limited while attending college (Arnett, 2000; Shanahan, 2000), a delay in the successful transition to adulthood may be experienced.
Young Adults and Financial Hardship

Limited financial resources are indicative of financial hardship and have been associated with deleterious levels of financial strain in student young adults (Halliday-Wynes & Nguyen, 2014). Although financial hardship and strain are not experiences exclusive to university students, the financial constraints and limitations experienced while studying towards attainment of a degree can contribute significantly to low psychological well-being (Bexley, Daroesman, Arkoudis & James, 2013). This potential compromise to well-being can be compounded by an associated delay of young adult developmental achievements. Without enough money, student young adults are likely to remain dependent on their parents for financial support for longer than employed young adults remain dependent, leading to a later transition into adulthood (Arnett, 1994; Shanahan, 2000). This extended period of dependence on parents, and a potentially resulting lack of agency in personal financial behaviour, can undermine psychological health and well-being. The financial developmental challenges experienced by student young adults may explain part of the reason that late-transitioning adults report lower psychological wellbeing, life satisfaction and self-esteem, and more depressive symptoms (Räikkönen, Kokko, Chen, & Pulkkinen, 2012; Räikkönen, Kokko, & Rantanen 2011; Schoon, Chen, Kneale, & Jager, 2012).

Given that finance-related developmental tasks are central to the adulthood transition (Arnett, 2001; Lopez et al., 2005; Nelson & Barry, 2005) and student young adults’ finances are limited relative to employed young adults (Muir et al., 2009), simultaneous pursuit of a degree and achievement of financial independence can be challenging. Compared to students, young adults who are employed full-time are better placed to develop and achieve financial independence from their parents. With a steady income, full-time employment is likely to provide more opportunities to develop
financial independence through engagement in a broader range of adult financial
behaviours, such as qualifying for credit and mortgaging a home. Without adequate
income, the developmental milestone of financial independence is beyond the reach of
many student young adults. The work or education pathway a young adult chooses,
then, is likely to influence access to financial resources either constraining or facilitating
and limit certain financially-linked opportunities for adulthood transition markers such
as living independently as well as the accompanying self-perceptions of autonomous
adult status (Shanahan, 2000; Shanahan, Porfeli, Mortimer & Erickson, 2005). By
examining the impact of income limitations on student young adults’ lives, and the
extent to which these limitations contribute to feelings of strain, we can begin to
illustrate experiences and circumstances associated with delaying financial
independence and autonomy. Further, an understanding of the financial consequences
associated with studying, and the resulting delay of financial independence, will provide
insight as to why those who delay the transition to adulthood often report low well-
being.

The World Health Organisation (2011) has reported on the key role played by
social and economic factors in psychological well-being. According to the report,
poverty and entrenched disadvantage are strong indicators of depression, suicide, and
low quality of life. Education, employment and social support were identified as
protective factors for psychological well-being during times of significant financial
strain and economic uncertainty. Although the long-term financial benefits of tertiary
education are improved employability and stability, the period during which tertiary
study is undertaken is strongly associated with financial strain for many students, and in
some ways is similar to experience of those entrenched in poverty. Consequently, the
financial strain experienced by student young adults can be a strong predictor of
reduced psychological well-being (Bexley et al., 2013; James, Bexley, Devlin, &
Marginson, 2007). Findings from the Longitudinal Surveys of Australian Youth (LSAY) show that one-quarter of Australian university students report moderate to high financial strain (Halliday-Wynes & Nguyen, 2014). In order to avoid poor economic circumstances in the future, some students must endure significant financial hardship and place themselves at increased risk of financial strain and psychological ill-health during the pursuit of their degree.

**Student Economising and Financial Strain**

The majority of students in Australian universities commence and complete their studies in the years immediately following high school (post-high school) and preceding adulthood (ABS, 2013). Despite the increasing cost and debt associated with tertiary education in Australia, rates of student enrolment in university education increase yearly (Department of Education, 2014). As enrolments have increased, so too have students’ reports of financial hardship and strain. Since 2006, the prevalence of restrictive economising practices has grown amongst Australian university students (Bexley et al., 2013). In fact, Bexley’s et al. (2012) recent snapshot of the Australian tertiary population shows a significant increase in the prevalence of financial coping behaviours amongst students. Conscious reductions in spending on necessities such as health care, food, travel and accommodation are used in order to cope with limited resources. Students also report attending fewer social events in order to afford basic necessities. Further, some students skip classes so that they can devote more of their time to earning an income. These findings suggest that students are undertaking a concerning level of economising behaviour in order to attain their educational goals.

The extent to which Australian students are economising has been linked with perceptions of significant financial strain (Bexley et al., 2013; Creed, French, & Hood, 2015; Hartley, James, & McInnes, 2005; James et al., 2007). Students’ need to cut back
on essentials such as groceries and medical consultation, and on luxuries such as social events and communications to keep in touch with friends and family, have been associated with reports of constant worry regarding their financial situation. In addition, financial hardship and strain in students has been associated with poor psychological (e.g., Mulder & Cashin, 2015) and physical (e.g., Solberg & Valiarreal, 1997) well-being. For more than a decade, the majority of Australian university students have rated financial issues as a significant source of worry (Bexley, 2012; James et al., 2007). Worrying about financial issues has been identified as a leading cause of low psychological and physical health in university students (Mulder & Cashin, 2015). In addition, financial economising and coping behaviours have been associated with poor academic outcomes (Callender, 2008; Hunt, Lincoln & Walker, 2004). Importantly, for young adults at university, these negative financial experiences occur during a key developmental period, the transition to adulthood, with likely short- and long-term implications for well-being and their future.

Financial Socialisation, Social Support and Young Adult Development

A responsible proactive financial behaviour set and appropriate levels of economising are conducive to healthy functioning and well-being (Serido, Shim & Tang, 2013; Xiao, Tang & Shim, 2009). Given the financial limitations experienced by many young adults, and the strained experience of students in particular, it is important to understand the mechanisms through which healthy financial behaviour is acquired during the transition from adolescence to adulthood. Parents and peers are important socialisers for young adults’ financial behaviours (McNeill & Turner 2013; Shim, Barber, Card, Xiao, & Serido, 2010). Young adults observe their parents and peers behaving in certain ways with money and such observations contribute to shaping their own financial behaviour. Further, young adults’ financial behaviour is shaped by
perceptions of what their parents want them to do with money. Because young adults’ developmental experiences vary considerably, it is likely that financial socialisation experiences will differ depending on the specific challenges and developmental tasks encountered as a student or worker.

Amongst Australian university students, reliance on parental financial support has grown during the last decade (Bexley et al., 2013; James et al., 2007). For instance, support may be provided to young adults in the form of money for bills and other fees, resources such as textbooks, or transport in order to attend classes (Bexley et al., 2013). The families of young adults can function as potential sources of protection from the negative effects of perceived financial strain (e.g., Rodriguez, Mira, Myers, Morris, & Cordoza, 2003; Solis & Durband, 2015). In addition to the more tangible resources provided by parents, remaining in the parental home can provide further financial protection. In fact, the majority of students who remain living in the parental home have access to accommodation, meals and the Internet (Cobb-Clark, 2008). However, delaying the move out of home during young adulthood may also yield negative consequences for development, as students are delaying acquisition of greater autonomy and financial independence (Arnett, 2001).

On average, student young adults’ income is substantially lower than that of employed young adults (Muir et al., 2009). A higher income brings a wider range of autonomous financial opportunities and greater responsibility, such as financing a new car, mortgaging a house, using credit cards and a greater propensity to contribute to savings compared to those with a lower income. This increase in financial responsibility and opportunity requires developing and refining a mature financial skillset; such a focus increases the salience of financial behaviours of people in one’s environment (see Reno, Cialdini & Kallgren, 1993). Thus, it is logical that moving into full-time
employment during young adulthood may be associated with an increase in focus on financial behaviours of friends and family, whereas the limited income and increased financial hardship associated with university attendance may be associated with a dependence upon direction from others. Investigating the links between instrumental roles, such as work or study, and financial experiences may reveal key links between financial socialisation, behaviour and well-being. Such evidence could then assist in identifying circumstances associated with high financial strain and compromised well-being.

**Dissertation Overview**

This dissertation examines the financial experiences and challenges that young adult university students in Australia face as they navigate their way to adulthood. More specifically, this dissertation investigates how indicators of financial hardship and the appraisal of those hardships impacts upon psychological well-being among young adults. The utility of financial support from parents as protection from adverse effects of hardship is also explored. In addition, the role of key adult transition markers in channelling financial experiences and related psychological outcomes during young adulthood is examined. Finally, the role of financial socialisation in the development of young adults’ financial behaviours is examined for young adults who go on to full-time employment compared to those who go on to university.

The first aim of this dissertation is to investigate from a psychological perspective, the indirect association between financial economising behaviours and well-being for university students through perceptions of financial strain. The effects of financial hardship on health and well-being indicators are inconsistent in the literature. Further, simple direct effects are the predominant focus of investigations, with a lack of focus placed on exploring the complexity of the stress and coping experience from a
psychological perspective. A second aim is to determine the protective utility of family support for student young adults in the presence of financial hardship and strain. Support will be operationalised in two ways: parental financial support and the non-monetary support provided by living in the parental home. Thus, traditional functional supports will be examined in conjunction with the protective utility of the parental home.

A third aim is to determine the extent to which the association of parental and peer financial norms with financial behaviours varies among young adults in different post-high school instrumental roles: specifically, between students and full-time employed young adults. Young adulthood is a dynamic period, which presents many opportunities for success and failure. Difference amongst instrumental roles may be useful in explaining disparities in the development and acquisition of financial behaviour during young adulthood. Financial socialisation processes that guide development of financial behaviour may function in distinct ways depending on the circumstances in which young adults are operating. When dependence upon parents is highest, socialisation pressures may act most compellingly upon behaviour.

These three aims are addressed and presented in three empirical papers, broadly guided by the conceptual model illustrated in Figure 1.1. Paths in the conceptual model reflect three sets of empirical questions, the findings of which are presented in three individual research studies (referred to as Chapters 3, 4 and 5 hereafter). The model posits that young adults’ financial behaviours are shaped by key people in their lives, through a process of socialisation whereby young adults observe how their parents and peers behave with money and also are influenced by perceptions of how they are expected to behave (see paths marked S3). The extent to which a young adult saves their money, budgets and economises in response to financial limitations is posited to predict
subjective well-being (see paths marked S1). First, young adults appraise the extent to which their financial behaviours lead to perceptions of financial stress. Following appraisal, perceptions of strain predict psychological well-being. Independent living and social support are hypothesised to modify the associations between economising, perceived financial strain and well-being (see paths marked S2).
Figure 1. Conceptual model of young adults’ experiences with financial strain.
Note. S1 denotes pathways examined in Study 1 (Chapter 3); S2 denotes pathways examined in Study 2 (Chapter 4); S3 denotes pathways examined in Study 3 (Chapter 5).
Chapter two. Chapter two presents a review of the relevant literature and the theoretical models relating to young adulthood, financial hardship and strain, and well-being. Because the focus of this dissertation is primarily student young adults, the developmental period of young adulthood is used to frame the research (Arnett, 2001; Shanahan, 2000). The developmental tasks and subjective perceptions about adult attainment are noted to be markers of adulthood that can be influenced by financial circumstances. University students’ financial experiences with hardship and strain are examined, particularly from an Australian perspective. The Transactional Theory of Stress and Coping (Lazarus & Folkman, 1984) is then used as a framework to discuss how financially stressful events can impact upon university students’ psychological health. Literature is then reviewed exploring the financial influence of parents and peers on young adults’ financial behaviour. A particular focus on financial socialisation in university students is taken (Shim et al., 2010), using the Theory of Normative Social Behaviour (Rimal & Real, 2005) to differentiate the utility between descriptive and injunctive normative influence. Next, the literature describing the role of social support, and how it has been shown to protect psychological health using the buffering hypothesis (Cohen & Wills, 1984), is presented. Finally, the effects on financial socialisation, hardship and well-being of moving out of the parental home and of the instrumental roles undertaken during young adulthood are also presented.

Chapter three. In Chapter 3, the first empirical study investigates the mediating role of perceived financial strain between economising behaviour and psychological well-being for student young adults. In this chapter, the relation between objective and subjective measures of financial strain is explored. Although previous literature has used both measures of strain individually, it is argued that objective measures of financial strain (i.e., economising behaviours) are indirectly associated with
psychological well-being (i.e., depressed mood and life satisfaction), through subjective measures of financial strain (i.e., perceived financial strain).

**Chapter four.** In Chapter 4, the second empirical study tests the interaction between independent living and perceived adequacy of parental financial support as moderators of the indirect pathways of financial hardship and strain that are modelled in Chapter 3. Explicitly, conditional associations are tested between economising behaviours and perceived financial strain, and perceived financial strain and psychological well-being.

**Chapter five.** In Chapter 5, the third study examines the process of financial normative socialisation for young adults undertaking different post-high school instrumental roles. Using the theory of normative behaviour as a theoretical framework, the extent to which young adults’ financial behaviour is influenced by parent and peer descriptive norms, and parent injunctive norms, is examined. In this chapter, the associations between parental and peer financial norms and financial behaviour are compared between student and working young adults. The function of independent living is also explored as a predictor of perceived norms between students and workers. Differences in normative perceptions between students and workers are considered in the context of delaying financial independence and healthy financial behaviours, and in terms of implications for explaining why delays in adult transition are associated with lower well-being.

**Chapter six.** In Chapter 6, the aims of this dissertation are addressed in a general discussion of the findings, which brings together the findings for Chapters 3, 4 and 5 with respect to the conceptual model. Then, several contributions to knowledge are explored based on a synthesis of the results from the three studies. Recommendations
for future directions in research on financial hardship and strain, and on young adult transitions are then presented and discussed.

Overall, this dissertation takes a comprehensive view of financial hardship and strain experiences by young adults at university. Applying the stress and coping framework to the associations between financial behaviour, perceived financial strain and well-being fills a gap in the literature that has predominantly examined these associations as direct effects. For student young adults, a transactional stress and coping model could help predict those at-risk of financial strain and inform strategies to protect against perceived strain. An understanding of how young adults are financially socialised differently depending on their instrumental roles and markers of adulthood can provide insight into how these factors might influence vulnerability to heavy economising, and financial hardship and strain.
References


*European Psychologist, 16*, 314–323. doi: 10.1027/1016-9040/a000050


2. CHAPTER TWO: Literature Review

During much of the twentieth century, in many Western cultures, entry to adulthood was defined by marriage, parenthood and full-time employment. Although these markers are still relevant, recent contributions to the study of young adult development show that young adults’ views of what it means to be an adult differ compared to twentieth century views (Arnett, 2007). Nowadays, more adolescents and young adults report subjective experiences as prevailing indicators of adulthood, with fewer reporting traditional objective indicators of status, such as marriage and parenthood (Arnett, 2001; Nelson & Barry, 2005). The predominant subjective indicators reported by young adults include whether individuals consider themselves financially independent of their parents, autonomous in their decision-making, and responsible for their own lives. The shift in conceptualisation of adulthood has been attributed to the relaxing of rigid societal expectations that were once placed upon young people and the resulting expansion of opportunities available during the transition out of adolescence (Arnett, 2007). Young adults are now delaying transitions to traditional markers of adulthood by marrying later, having children at an older age, and studying for longer after they graduate high school (Shanahan, 2000). Young adulthood is conceptualised to apply to 18-25 year olds and is considered the most dynamic and stressful periods of the lifespan (Arnett, 2001).

Following adolescence, young people face a series of decisions about further education, careers, romantic partnerships, and moving out of the parental home; the choices made during this period can determine the opportunities that present to a young adult and set them on trajectories toward both positive and negative outcomes (Arnett, 2001; Cohen, Kasen, Chen, Hartmark, & Gordon, 2003; Räikkönen, Kokko, Chen, & Pulkkinen, 2012; Shanahan, 2000). A key developmental task during young adulthood
is the development of financial independence, or the ability to be financially self-
sufficient (Arnett, 2001; Cohen et al., 2003). However, young adult pathways differ in
their propensity to promote the development of financial independence. For university
students, the development of financial independence is often delayed because student
roles and associated income limitations influence opportunities and interactions relating
to finance with people around them (Halliday-Wynes & Nguyen, 2014). A limited
income is also associated with financial hardship, strain and low psychological health in
student young adults.

Finance is consistently reported as the most prevalent source of stress amongst
Australian adults (Casey, 2013), having an impact on many facets of life (ABS, 2011).
Casey’s report (2013) on the Stress and Well-being survey of Australia demonstrates
that more than half of Australian adults indicate financial issues as their primary source
of stress and that financial issues rate amongst the top five stressors for most adults.
When financial resources are few, and access to additional non-financial resources is
limited, people are likely to experience financial stress. For young adults, in particular,
financial issues are rated as the highest source of stress (Casey, 2013). Tertiary students
are amongst the most financially stressed adults because of the time constraints
associated with studying and their limited capacity to earn (Bexley, Daroesman,
Arkoudis & James, 2013). The majority of students commence and complete their
studies in the years immediately following high school (ABS, 2013a). Restricted
resources during this period can limit attainment of key indicators of adulthood:
increased autonomy in decision-making, individuating from parents and developing
financial independence (Arnett, 2001). For university students, little is known about the
development of healthy financial behaviours and positive adjustment with respect to
links among management of resources, financial strain, and well-being. Even less well understood is how different life circumstances may exacerbate or buffer those links.

**Australian Students’ Financial Experience**

Close to 30% of Australians aged between 18 and 25 years are enrolled in university (ABS, 2013b) and this age group constitutes the majority of the Australian university population (59%; ABS, 2013a). With such a large proportion of young adults taking the university path, it is important to understand how the student role is related to healthy financial behaviour, financial hardship and psychological health of Australian young adults. Knowledge of the financial experiences of Australian university students has been expanded by three large-scale surveys (Bexley et al., 2013; Halliday-Wynes, & Nguyen, 2014; James, Bexley, Devlin, & Marginson, 2007). These three studies find that students are generally a financially strained population. Specifically, almost one in five students report going without food and other necessities (Bexley et al., 2013), and one in 13 (Halliday-Wynes, & Nguyen, 2014) students report considering discontinuing their studies in order to cope financially. Although these findings outline the current financial conditions that students are facing in Australia, there is a limited focus on the effects of financial strain on student psychological well-being and the extent to which these effects differ by student circumstances.

In the first of the recent comprehensive Australian surveys, James et al. (2007) outlined the worsening financial circumstances of tertiary students between cohorts surveyed in 2000 and 2006. They reported that the majority of the students were “highly anxious about ‘making ends meet’” (p. 1), and that many lacked adequate financial support. Students reported feeling forced to engage in drastic financial economising behaviours, such as foregoing food and medical attention, in order to continue studying.
Term-time employment and hours spent working rose substantially between the 2000 and 2006 cohorts, and in both cohorts, students reported needing to work in order to afford basic necessities (such as food and accommodation).

In a follow-up national study, Bexley et al. (2013) detailed the financial circumstances of Australian tertiary students across two cohorts between 2006 and 2012. Two-thirds of their student sample reported their financial situation was often a source of worry and half of the sample lacked adequate financial support to counter their anxieties. In addition, restrictive economising practices were found to be common. In the 2012 cohort, foregoing food and other basic necessities were more frequently reported economising practices than in the 2006 cohort, and those who reported worrying about money were three times more likely to defer their studies compared to students who worried about money less. Students also reported increasing their receipt of parental financial support.

A third study conducted by Halliday-Wynes and Nguyen (2014) investigated the impact of financial stress on young people studying at university. They used data from the Longitudinal Surveys of Australian Youth (LSAY), which tracked young Australians from adolescence through to young adulthood. At age 20, one-quarter of LSAY participants who were attending university reported moderate to high financial stress, which was indicated by reports of multiple financially stressful experiences and restrictive economising practices. Restrictive economising practices were prevalent, with one in 15 young adults going without meals, one in 13 young adults going without medicine or doctor consultation, and one in three having to ask friends and family for money. Together, these three reports indicate a concerning level of financial hardship and economising practices amongst Australian university students, particularly for young adult students. The results also highlight the need to focus attention on the extent
to which such financial hardship leads to feelings of financial strain during university study, and whether financial strain undermines young adults’ well-being.

**International differences in student financial experience.** Although there is emerging literature based on Australian students, the associations between student financial experiences and health and well-being have been examined predominantly in other Western countries. The prevailing models of student financial experience are primarily based on US and British samples. However, there are fundamental differences between the Australian tertiary system and both the US and British university systems that limit the utility of applying these models to an Australian population. Australian students have access to a deferred government loan scheme, *Higher Education Loan Scheme (HELP)*, to finance their entire tuition, which they are only required to repay once their taxable income exceeds a specific amount, which is more than the Australian minimum wage. In contrast, only partial government funding is available for American students (The College Board, 2009), and not all British students are eligible for full tuition support (Student Finance England, 2009). Tuition costs for some American and British students, then, are their own responsibility, which leads them into debt in the form of personal loans. Alternatively, parents take on the responsibility of funding their children’s college education, which may place restrictions on parents’ ability to support their children in other ways, and may determine lifestyle conditions placed upon the student.

The second difference among countries is the smaller proportion of US (55%; Pryor, Hurtado, DeAngelo, Palucki Blake, Tran, 2010) and UK (82%; Higher Education Statistics Agency, 2014) students who remain in their hometown to study compared to Australian students (91%; ABS, 2013a). The implications associated with normative versus non-normative relocation for tertiary study has likely led to differences in student
support structures and systems between the US, the UK and Australia. Living away from home and being physically isolated from family has implications for accessing family support during stressful periods (Halliday-Wynes & Nguyen, 2014; Räikkönen, Kokko, & Rantanen 2011; Seiffge-Krenke, 2009). Although fewer Australian students relocate significant geographic distances for their study, less than half live with their parents during their tertiary education (ABS, 2013a).

Despite the substantial descriptive contributions to knowledge regarding Australian student financial experiences, additional empirical research into how their experiences differ by adulthood transitions and social support will contribute to the comparatively small but emerging literature base. This research will contribute to knowledge by determining how variations in adulthood transitions and roles account for different financial experiences reported by Australian students. In doing so, the development of resources for Australian students may be guided by the identification of specific factors that are related to Australian higher education contexts, such as how studying out of home and employment status predict or protect against financial strain. This contextualised look at the Australian financial strain of Australian student young adults could nuance our understanding of the relation to well-being. Overall, the international student financial stress literature assists with hypothesis generation and a point of comparison for Australian research, and is reviewed below.

**Financial Hardship and Strain at University**

By virtue of their role, students are likely to experience both time poorness and limited financial resources, making their financial circumstances a major focus of investigation for the last two decades. Much of the research can be grouped based on use of particular financial hardship indicators, including objective indictors, coping
indicators and subjective indicators. A diverse range of objective and subjective indicators of financial hardship and strain have been used to describe adult financial experience. These different approaches have then been used to investigate the impact of financial hardship and stress on university student outcomes, with mixed results. Objective indicators of financial experience have been inconsistently linked to hardship and strain; whereas, more consistent links are found with subjective perceptions of financial strain. The following section reviews the student finance literature and highlights the different approach to measuring student financial hardship and strain, and links to student outcomes, with specific focus on psychological well-being.

**Objective indicators of financial experience.** Effects of objective measures of financial experience, such as being in debt (Boddington & Kemp, 1999; Morra, Regehr, & Ginsburg, 2008; Norvilitis, Merwin, Osberg, Roehling, Young, & Kanas, 2006; Seaward & Kemp, 2000) and engagement in term-time employment (Bradley, 2006; Broadbridge & Swanson, 2005; Curtis & Shani, 2002; Hunt, Lincoln & Walker, 2004), have been explored on both academic and health outcomes. Employment during the semester has been associated with poor academic performance (Callender, 2008; Curtis & Shani, 2002; Metcalf, 2003) and reduced psychological well-being (Broadbridge & Swanson, 2005). However, most students report they understand their need to work during their studies in order to support themselves (Wray & McCall, 2007), and others report perceived benefits of working while studying (Creed, French, & Hood, 2015).

Actual level of debt has not been a reliable predictor of student achievement and well-being; however, anticipation of debt is more strongly predictive of stress over and above actual debt (Morra et al., 2008). Interestingly, the majority of Australian students accumulate a substantial university tuition debt (HELP; James et al., 2006). Students report mixed feelings towards the HELP loan scheme. Some students report that
accumulating a university tuition debt provides them the opportunity to attend university, whereas for other students the debt is a constant source of their worry (James et al., 2006). Anticipated debt, of course, taps a subjective dimension of debt, rather than debt per se, and may, or may not allude to a preoccupation with looming stress. A review of subjective measures of financial hardship and stress is presented further below.

Another objective approach considers the relative ratio of available resources to financial responsibilities and necessities as the primary indicators of financial stress (ABS, 2011). Examples include being unable to raise $2000 within seven days for a necessary item or service, being unable to afford a holiday at least one week in the year, and being unable to afford hobbies. The ABS (2011) argues that low income, and indicators associated with low-income, do not necessarily imply financial strain, because households reporting high incomes, although less-frequently than households reporting low incomes, also report financially stressful experiences. Further, inconsistency of the findings in this area of research may be due to a failure to capture subjective experience created by financial circumstances in the measures. Possessing debt may be highly stressful for some students, but not for others. And likewise, the need to work during the semester may result in stress for some students, but not for other students. The reason that some students perceive strain in response to their financial circumstances and others do not may be associated with the response to their circumstances.

Coping Indicators: Economising behaviour as financial hardship. More recently, student financial hardship has been measured via financial coping behaviours, also known as economising behaviours (Shim, Xiao, Barber, & Lyons, 2009; Stein et al., 2013). Behaviours aimed at economising with limited funds, including going
without meals and being unable to heat the home, indicate the presence of financial hardship. Examining economising behaviour as an approach to measuring financial hardship extends beyond the instance of an event or situation, and indicates a process of cutting back on spending as a coping response to limited resources. Measurement of economising behaviour aims to assess the behavioural consequences of financial hardship through use of a coping strategy to manage a stressor in response to threat (Serido, Shim, Mishra, & Tang, 2010).

Of crucial importance here is the ability to infer hardship due to use of a coping strategy. For example, two students may hold the same amount of debt, work the same number of hours in a week, and both live away from the parental home. One student who does not perceive much in the way of support from their social network may appraise their situation as threatening and change a number of their behaviours in order to cope with a perceived threat of limited finances. Conversely, the second student may perceive support from several sources, engage in fewer economising behaviours and thus, not perceive the same levels of threat. For students who remain living in the parental home, economising may not be perceived as stressful because living with parents often provides passive access to other non-monetary resources, such as food and other amenities (Cobb-Clark, 2008). Measures of economising behaviours, compared to purely objective measures of financial experience, have been shown to strongly and consistently predict financial, health and life satisfaction outcomes in students (Shim et al., 2009; Serido et al., 2010; Stein et al., 2013).

**Subjective Indicators: Perceptions of financial strain.** Feelings of worry, concern and strain due to financial hardship tap into the subjective appraisal and impact of financial experience. Perceived financial strain is conceptualised as the subjective appraisal of an individual’s financial situation as being deficient and not meeting the
requirements of their life (Angel, Frisco, Angel, & Chiriboga, 2003). This measurement approach centres on the subjective feelings associated with financial hardship, and probes affective responses such as worry, concern and dissatisfaction. Financial behaviours, such as budgeting, saving and tracking expenses, have been shown to predict indicators of financial strain (Xiao, Tang & Shim, 2009). Researchers have also documented the negative impact of financial strain on the health and well-being of specific populations often considered at-risk, such as elderly adults (Angel et al., 2003; Chou, Chi, & Chow, 2004; Kahn & Pearlin, 2006), psychiatric patients (Mattsson, Topor, Cullberg, & Forsell, 2008) and young adults (Dunn et al., 2008; Zimmerman & Katon, 2005).

Research on student financial hardship has typically either examined the direct link of objective measures of financial hardship with specific outcomes, or direct links between subjective measures of financial hardship and specific outcomes (Bradley, 2006; Curtis & Shani, 2002; Hunt et al., 2004; Metcalf, 2003, 2005; Monks, 2001; Shim et al., 2009; Taylor, 1998; Watts & Pickering, 2000). A small collection of studies using non-student samples have shown that the association between subjective measures of financial hardship and well-being are often stronger than the relation between financial behaviours and well-being (e.g. Angel et al., 2003; Chou et al., 2004). The strength of association between financial behaviour and psychological well-being may be determined by appraisal and perception of financial strain, which, as represented in the conceptual model presented in the preceding chapter (see Figure 1.1), indicates an indirect pathway between financial behaviours, through the perception of strain and having an impact on well-being.

In the student finance literature, research has been predominantly descriptive and there has been little psychological theory behind the investigations of student finance.
There is a need to consider more than economic, health and academic impacts of financial hardship. The psychological and emotional impacts of financial hardship are less well understood. Further, even less is understood about the processes whereby financial strain leads to psychological problems for students, particularly when accounting for diversity in the Australian student population. Lazarus and Folkman’s (1984) transactional theory of stress and coping could enhance knowledge and understanding of students’ psychological experiences of financial hardship by providing a framework that identifies distinct moments in the process of perception and appraisal of an experience as threatening. The notion of threat and appraisal is intrinsically associated with measures of financial economising, as economising implies a coping response to threat. Referring back to the model being examined in this dissertation (Figure 1.1), the links between financial economising behaviour and psychological well-being may be explained by students’ perceptions of financial strain.

**Finances and psychological well-being.** There is strong and consistent empirical evidence supporting the adverse impact of poor financial behaviours, such as not saving and budgeting, and financial hardship on psychological health. Not exclusively a student issue, negative psychological effects of poor financial behaviours are found in general adult populations (Cracolici, Giambona & Cuffaro, 2011; Dolan, Peasgood, & White, 2008; Joo & Grable, 2004) and specific elderly and minority populations (Angel et al., 2003; Berry, 2007; Chou et al., 2004; Kahn & Pearlin, 2006). Casey (2013) highlighted specifically the impact of financial stress on young adults’ well-being; one in five respondents report that financial stress impacts strongly upon their mental health. Moreover, *personal financial issues* was the leading cause of stress reported amongst 18 to 25 year old respondents, with “Issues related to study” the fifth most prevalent cause of stress. After young adulthood, financial stress was rated as less of a concern (Casey,
Of most relevance to this dissertation, the negative consequences of an overextended financial situation on health and well-being while at university are well documented (Mulder & Cashin, 2015; Stecker, 2004; Stein et al., 2013; Xiao et al., 2009).

There is also consensus in the literature that adaptive and proactive financial behaviours lead to increased well-being and quality of life. In student populations, financial behaviour has been linked to many dimensions of well-being. Healthy financial behaviours can predict increased academic well-being (Mistry, Benner, Tan, & Kim, 2009), life and financial satisfaction (Shim et al., 2009; Xiao et al., 2009), and physical and psychological well-being (Andrews & Wilding, 2004; Norvilitis et al., 2006; Roberts, Golding, Towel & Weinreb, 1999). Thus, financial behaviour should be considered as a determinant of financial hardship, strain and well-being, and the differences in young adults’ lives may explain the variance in financial experience.

The specific association between perceived financial strain and well-being has been explored mostly in at-risk and older adult populations. Perceived financial strain has been linked to diagnoses of clinical depression and other psychiatric disorders such as psychosis (Chou et al., 2004; Dijkstra-Kersten, Biesheuvel-Leliefeld, van der Wouden, Penninx, & van Marwijk, 2015; Dunn et al., 2008; Mattsson et al., 2008; Zimmerman & Katon, 2005), reduced physical health (Angel, et al., 2003), reductions in life quality and satisfaction (Creed & Klisch, 2005; Leung, Moneta, & McBride-Chang, 2005), and the notion of heavy allostatic load that leads to long-term detriment on health (Kahn and Pearlin 2006). The presented literature demonstrates the prevailing negative impact that financial hardship has on all individuals, and in particular, student young adults. Few empirical studies, however, have investigated the link between
perceived financial strain and well-being in a sample of student young adults; a gap that the current dissertation aims to address.

**Transactional theory of stress and coping.** Lazarus and Folkman’s (1984) theory of stress and coping suggests an individual acts as much on their environment as the environment acts on the individual. Cognitive appraisal is central to their theory, which they argue enables person-driven action on the environment. When an event is appraised as threatening, the stress response allows a person to alter their behaviour, and guides decision-making in an attempt to ameliorate the potential negative outcomes associated with the threat. The appraisal process consists of two reoccurring components: primary appraisal and secondary appraisal. A primary appraisal of a stressor marks it as either irrelevant or threatening. During secondary appraisal, a decision is made about the appropriate options for action against the stressor (i.e. coping behaviours). Through the cycle of cognitive appraisal and subsequent action, the person and the environment interact through a series of ongoing transactions. The student financial hardship literature could benefit from the application of the stress and coping framework, as it may provide an explanatory process as to how the individual aspects of financial hardship may cascade to resulting perceived financial strain and, in turn, psychological ill-health.

The application of Lazarus and Folkman’s theoretical framework to financial hardship in student young adults has the potential to be useful in explaining variations in students’ experiences of financial hardship and strain. Not only does the theory provide a framework for conceptualising how financial behaviours, financially stressful experiences, economising behaviours and perceived financial strain may be related, it also explicates a process model characterised by time and feedback. Determinants of healthy financial behaviour, such as financial normative socialisation, which is the
extent to which financial behaviour is influenced by the behaviours and expectations of key people in your social network, may account for why some people cope better than others when faced with financial hardship. Further, the stress appraisal approach may account for the potential psychological mechanism that underlies the link between financial hardship and psychological well-being. The identification of appraisal within this framework suggests discrete points during the transactional process when supportive mechanisms are likely to be protective, perhaps conditioning the association either between the discrete stressful event and appraisal, or between appraisal and psychological health outcomes.

**Variations in Young Adult Financial Hardship and Strain**

Not all students will engage broadly in economising behaviours when faced with financial hardship and not all student young adults who report financial hardship will also report the perception of financial strain. Further, not all students who perceive financial strain will suffer significant psychological ill-health. Several factors may be useful in accounting for differential links, including socialising determinants of financial behaviour, the provision of supportive resources, and indicators of, and pathways to adulthood. In the following section, literature is presented on hypothesised determinants and moderators of the student financial hardship model, as proposed in Figure 1.1 in the preceding chapter. Financial socialisation processes by parents and peers are presented to explore variations in the development of healthy financial behaviour in students. The availability of social support may partially explain the variation in outcomes of seemingly similar situations; financial hardship may be less detrimental to well-being when supports are available (Cohen & Wills, 1985). In addition, different life pathways, such as moving out of the parental home and studying at university or working full-time, could account for some of the variation in financial
behaviour, hardship and well-being as experienced by young adults. Further, the
diversity of circumstances experienced by young adults on different pathways may
contribute to how parents and friends influence them with respect to their finances.
Using Lazarus and Folkman’s (1984) stress and coping framework, these differences
amongst students can be tested as determinants of hardship and moderators during the
threat appraisal process.

**Student financial normative socialisation.** Financial socialisation of young
adults occurs through a number of socialising processes, including teaching, modelling,
expectations and experience, and involves key people in young adults’ social networks
(Shim, Barber, Card, Xiao & Serido, 2010). Financial socialisation, particularly by
parents, has been demonstrated as a key determinant of young adults’ financial
behaviour and well-being, and psychological well-being (Allen, Edwards, Hayhoe, &
Leach, 2007; Gudmunson & Danes, 2011; Kim, LaTaillade & Kim, 2011; Serido, Shim
(2013) argue that financial behaviour is a developmental process that indicates
preparedness for full-time adult roles, such as a career. Further, their research links
financial socialisation processes, such as the normative influence of others, and healthy
financial behaviours to rises in well-being, which they posit is attributable to the
increase in autonomy that is felt during the development of financial independence
(Serido et al., 2013; Shim et al., 2010; Shim et al., 2015; Xiao et al., 2009).

Shim et al. (2009) found parents are key socialisers in US students’ financial
knowledge and behaviour, substantially stronger than the influence of work experience
and financial education combined. Other research has consolidated the role of parents,
and added the importance of peers and prior schooling in collectively socialising
university students’ financial behaviour (Shim et al., 2010; Shim et al., 2015; Webley &
The mechanisms through which this process occurs include parental direct teaching, parental financial behaviour modelling and parental expectations. The Theory of Normative Social Behaviour distinguishes between the roles of modelling and expectations – also referred to as descriptive and injunctive norms, respectively – in the shaping of behaviours (Rimal & Real, 2005). Descriptive norms are defined as how others behave in certain situations (i.e. modelling), whereas injunctive norms are defined as how people believe others expect them to behave in certain situations (i.e. expectations; Rimal & Real, 2003). Parental financial expectations are more strongly linked to student young adult behaviours than parental modelling (Shim et al., 2015).

Parents are not the sole drivers of student financial behaviours. Peers can be particularly influential in shaping young adult behaviour in general (Youniss & Smollar, 1985). In other domains, such as adolescent sexual (Gilliam, Berlin, Kozloski, Hernandez, & Grundy, 2007), anti-social (Ary, Duncan, Duncan, & Hops, 1999; Brown, Clasen, & Eicher, 1986) and drug abuse (Allen, Donohue, Griffin, Ryan, & Turner, 2003; Durkin, Wolle, & Clark, 2005) behaviours, peers have been established as influential. Peer influence can result from a desire for group membership, whereby identifying with a certain group aligns individuals’ behaviour with that of a group they strongly identify with (Rimal & Real, 2003; Terry & Hogg, 1996). The influence of antisocial and risky peers on young people’s behaviour declines during adolescence, and after high school, parent and peer prosocial pressures become more salient (Berndt, 1979). Given that young adults are aiming to achieve the successful transition to adulthood, it is likely that young adults, who are developing financial independence and capabilities, will model their behaviour on a group they wish to identify with. Therefore, peer influence is an important factor to consider when examining financial socialisation. Aside from being influential drivers of financial behaviour, people in
young adults’ social networks can also be considered as sources of protection and financial support.

**Social support.** Social support provided by family is consistently linked to overall well-being, adjustment and functioning (Cohen & Wills, 1985). Sarason, Pierce and Sarason (1994) identified three general areas of social support research including social network structure, support functions, and the distinction between availability perceptions and receipt of support. It has been argued that social network structure is a relatively weak measure compared to the other two approaches, as merely adding up people in a network does not provide an adequate measure of the utility and efficacy of the support provided (Fiori, Antonucci, & Cortina, 2006; Vandervoort & Skorikov, 2002). The second area of investigation, support functions, has demonstrated the effective and beneficial aspects of social support provided to individuals during times of stress (Sarason et al., 1994). Types of functional support include emotional, informational and instrumental support, and social companionship, with their functional efficacy posited to be the result of synchrony between the nature of the stressor and type of support provided (Cohen & Wills, 1985). However, functional support does not consider the receiver’s perception that the provided support is sufficient, highlighting the need to consider the third area of social support; perceived social support. The perceived availability and adequacy of social support is considered a more reliable indicator of support efficacy because the actual availability of these resources is not as important as the belief that they are available and effective when they are needed (Sarason et al., 1994). For student young adults, the perceived adequacy of social support provided by parents during university is more likely to benefit well-being.

Researchers have argued for the overall importance of an individual’s social network, particularly as a functional means to cope during stressful events. Cohen and
Wills’ (1985) meta-analysis of the support literature developed a refined conceptualisation of social support, delineating between types of support and the effects. Two types of social support were theorised: one pertaining to social network structure, structural support, and one pertaining to the function of the support, functional support. The authors argued that structural support provides a general protective advantage for wellbeing. Functional support, however, was argued to protect well-being by providing a buffer from high levels of stress. Protection is provided when the support made available is suitable to address the type of stress being experienced (Cohen & Wills, 1985). For example, the effects of financial stress would be best limited by financial support that removes or weakens the financial threat. The notion of social support as a buffer of stressful events works within the theoretical framework of Lazarus and Folkman’s (1984) transactional model of stress and coping. The framework suggests that, if support is perceived as available, then coping resources are given a boost and the stress is reappraised as less harmful and more manageable. Following from this, support provided by parents could buffer the effect of financial hardship and strain on student young adults’ wellbeing, if that support directly addresses threatening financial experiences.

Although the relationship between social support and financial stress has not received much attention in the student financial hardship literature, social support has been found to be related to financial stress in other samples, such as married couples and the family unit (Conger, Rueter, & Elder, 1999; Robertson, Elder, Skinner, & Conger, 1991). These studies have demonstrated that strong associations between stress and wellbeing weaken when social support is considered as a conditioning factor. Thus, social support as a moderator of the link between financial hardship and strain and wellbeing for student young adults is feasible. The transactional framework
(Lazarus & Folkman, 1984) suggests two possible points at which social support can act as a buffer of financial hardship and strain. The first point is between the stressful event and the appraisal of the stressful event; the second is between appraisal and well-being. Cohen and Wills (1985) suggested that the perception of accessible social support at either of these two points has the potential to buffer the negative effects of the stressful event. Research testing the buffering hypothesis has predominantly focused on the latter association (Auerbach, Bigda-Peyton, Eberhard, Webb & Ho, 2011; Chou et al., 2004; Krause, 2005). The extent to which the provision of support can weaken the situation as stressful has received little attention, and given the severe economising behaviour reported by students, testing the buffering potential of parental support between economising and financial strain is critical.

Although the literature provides evidence for the main effect of social support on well-being (Bouteyre, Maurel & Bernaud, 2007; Crockett, Iturbide, Torres Stone, McGinley, Raffaeili, & Carlo, 2007; Rodriguez, Mira, Myers, Morris, & Caroza, 2003; Solis & Durband, 2015), the stress-buffering model is yet to be applied as a framework to student financial stress. Much is understood about the role of support in other areas of students’ lives. For example, family social support has been linked to increased academic achievement and performance (Deberard, Spielmans, & Julka, 2004; Jacobs & Dodd, 2003) and mental well-being (Bouteyre et al., 2007; Stecker, 2004) in students. These findings point to the importance of a student’s social network during times of stress. In line with theories of stress, appraisal and coping, it is possible that support resources prompt the person to reappraise a stressful situation as less threatening, buffering the stressor and altering the outcome. In this way, support resources would be conceptualised as indirectly influencing outcomes through reappraisal of financial hardship and strain.
Recent comprehensive reports on Australian university students have reported an increase in students’ reliance on parental financial support while at university (Bexley et al., 2013; James et al., 2007). The increase coincides with an increase in financial hardship and strain reported by Australian university students. Further, more students are electing to stay in the parental home while at university, which can also offer supportive benefits (Cobb-Clark, 2008). How family support might protect Australian university students’ well-being in the presence of financial hardship and financial strain has not yet been investigated, despite increasing student reliance on parents during the last decade. It is suggested that studying the role that parental financial support plays on the link between financial strain and well-being is a much needed next step in the research in order to determine individual differences in the strength of the link.

**Different pathways to adulthood.** Although young adults’ perceptions of a successful transition to adulthood are the focus of recent research, traditional transition markers thought to characterise adulthood in the past, including moving out of the parental home and getting a job (Arnett 2000; Cohen et al., 2003; Räikkönen et al., 2012), remain useful when conceptualised as tasks that measure progress towards adulthood (Shanahan, Porfeli, Mortimer, & Erickson, 2005). The differences in life experiences, opportunities and role-specific circumstances, such as earning a full-time income for employed young adults, can require the development of task-specific skills and behaviour sets (Arnett, 2000; Schulenberg, Bryant & O’Malley, 2004; Shanahan, 2000). Although young adults consistently report financial independence as an indicator of adulthood, some tasks and adult pathways will promote the development of financial independence better than others due to the accessibility provided by certain experiences and opportunities, such as moving out of the parental home or by earning a full-time income. Thus, delays in the development of financial independence in young adults, as
indicated by adult transition markers and roles, may be associated with different experiences of socialisation, financial hardship and strain, and psychological well-being.

**Independent living.** Moving out of the parental home provides young adults with an opportunity to explore autonomy and develop an independent identity, and contribute to perceiving financial independence (Xiao, Chatterjee & Kim, 2014). However, without an adequate income to be self-sufficient, moving out may not be an option, or if it is an option, it can also place a young adult at risk of financial hardship. Although a normative task during young adulthood, moving out can be limited by young adults’ ability to leave their parents’ homes (Cobb-Clarke, 2008; Schulenburg, Bryant & O’Malley, 2004). Circumstances limiting the ability to move out include unemployment, parental inability to financially support their children living out of home, and pursuing post-secondary education (Arnett, 2001; Cobb-Clarke, 2008; Goldscheider & Goldscheider, 1994). Alternatively, some young adults have resources enabling their freedom to move out; for example, full-time employment or adequate support from parents. In recent years, young adults are opting to live with their parents longer to maximise the supportive benefits that living with parents can provide (Cobb-Clark, 2008; Halliday-Wynes & Nguyen, 2014). Remaining in the parental home is more common amongst student young adults, due to their limited earning power (Muir, Mullen, Powell, Flaxman, Thompson & Griffith, 2009). However, not all student young adults are in the position to choose their living arrangements, which may explain part of the variation in student young adults’ experiences of financial hardship and strain.

Timing and readiness are associated with well-being when moving out of the parental home. In a female-only sample, leaving the parental home during the young adult transition was associated with healthier well-being, compared to those who remained in the parental home into the post-transitional period (Lee & Gramotnev,
Personal agency in the choice to leave is also associated with greater well-being, with those feeling autonomous in their choice to move experiencing greater well-being (Kins, Beyers, Soenens, & Vansteenkiste, 2009). These findings are supported by research demonstrating significantly worse psychological outcomes for young adults whose transition to adulthood is delayed or early (Räikkönen et al., 2012; Räikkönen, Kokko, Rantanen, 2011). Therefore, making the choice to either stay or leave the parental home during the age-normed period is critical for the subjective well-being of young adults. Although associated with normative achievement and increased autonomy, leaving the parental home also poses a risk to financial well-being by increasing financial demands.

**Instrumental roles.** A critical step in gaining financial independence during young adulthood is by securing full-time employment. Full-time employment often provides financial opportunities that foster the development of independence and autonomy by earning an income, moving out of the parental home and generally exploring newfound autonomy in financial decision-making (Shanahan et al., 2005). Some young adults proceed directly into full-time employment post-high school, whereas others enter tertiary education with the long-term goal of more secure, gainful employment. There is a need, therefore, to investigate how the choice of roles during the transition impacts upon financial experiences and developmental tasks. Studentship is often associated with restricted financial resources and prolonged financial dependence on parents (Bexley et al., 2013). Arnett (2001) suggests that undertaking further education following high school can result in delaying financial independence and, in turn, the transition to adulthood. Therefore, choosing to study at university, compared to joining the full-time workforce after high school, poses a threat to financial
independence, which may be explained by differences in the financial socialisation process between adult roles.

Due to the hypothesised delay in financial independence for students, much of the financial socialisation literature comprises research on university samples. This research has highlighted the importance of parental financial expectations for student young adults’ financial behaviours (Serido et al., 2013). Serido et al. (2013) posit that parental expectations guide students’ development of healthy behaviours as they become more independent and make financial decisions. Although there is a growing literature base for a university student financial socialisation model, there is very little research reported using non-university adults (e.g., Cho, Gutter, Kim & Mauldin, 2012), and nothing reported that compares the financial socialisation process between student and working young adults. It is feasible that the variability in adult task progression amongst young adults may account for differences in the normative socialisation process within similar young adult instrumental roles. Considering theoretical frameworks of young adulthood suggest that students’ often delay their financial independence (Arnett, 2001; Shanahan, 2000), the extent to which this normative socialisation process is different for full-time employed young adults, compared to student young adults, is important to consider, as knowledge in this area is clearly lacking.

Parental and peer influences for employed young adults and student young adults may also vary as a result of these differing instrumental roles. Within the peer-rich environment of university, the degree to which peer and parental influence on financial behaviour differ is important to discern. Although research suggests that parents are likely to be a stronger influence on young adults’ financial behaviour due to a developing adult identity (Shim et al., 2010; Terry & Hogg, 1996), for students the delay in financial independence (Arnett, 2001; Shanahan, 2000) and prolonged reliance
on their parents (Bexley et al., 2013; Cobb-Clarke, 2008) may indicate incongruence with an adult identity. The influence of peers, therefore, may be similar to the influence of parents for students’ financial behaviours. Understanding how financial socialisation might differ by adult instrumental roles may account for some of the variation in the main drivers of young healthy financial behaviour in young adults.

When young adults delay the development of greater financial autonomy and independence by pursuing high education, it is important to understand the extent to which the delay in the progression to adulthood might compound their experiences with hardship and strain. Delays in the transition to adulthood have been associated with reduced psychological well-being in the long-term (Räikkönen, Kokko, & Rantanen, 2011). In addition, comparing the financial socialisation process between students and employed young adults may help illustrate what delaying financial independence actually looks like. Current financial socialisation models are applicable mostly to the financial behaviours of young adults at university and do not account for the variability amongst young adult roles and specific adult transition markers, such as independent living.

**Current Dissertation**

The young adult developmental period is characterised by several major changes towards increased autonomy and responsibility. These changes have implications for the development of sound financial behaviours, experiences with financial hardship and strain, and psychological well-being. Adults report that the development of financial independence is essential for the perception of adult status (Arnett, 2001; Cohen et al., 2003); however, the variety of post-high school instrumental roles creates considerable
diversity in the pace with which young adults can achieve self-perceptions of financial independence. The literature presented above demonstrates that university study can be financially limiting and is associated with considerable financial hardship and strain. The dissertation explores differences in financial socialisation, hardship and strain, and well-being as a function of diverse life circumstances after high school.

The first aim of this dissertation is to investigate the indirect association between financial economising behaviours and well-being through university students’ perceptions of financial strain (see Figure 1.1). Current financial hardship literature has investigated the direct associations between financial behaviour and perceived strain (e.g., Serido et al., 2010; Shim et al., 2009), financial behaviour and well-being (e.g., Gutter & Copur, 2011; Hunt et al., 2004; Metcalf, 2003), and perceived strain and well-being (e.g., Angel et al., 2003; Chou et al., 2004). However, the indirect association, as shown in the conceptual model (Figure 1.1), has received little attention. Through the application of a stress and coping model (Lazarus & Folkman, 1984), the subjective perceptions of financial strain as a psychological mechanism to explain the association between financial behaviour and well-being will identify distinct opportunities during the stress and coping process where support can be protective. Although this indirect association has been examined in other populations, such as elderly adults (Chou et al., 2004), the first study (Chapter 3) addressed whether or not the indirect association is explained by perceived financial strain in an Australian student population.

The second aim of this study is to determine the protective utility of family support for student financial hardship, strain and psychological well-being (see Figure 1.1). A defining marker of adulthood is living independently by moving out of the parental home (Arnett, 2001). About half of Australian students live away from the parental home (ABS, 2013a). Independent living during young adulthood is associated
with limited support and accessibility of resources (Cobb-Clarke, 2008). As a result, more Australian students are opting to stay in the parental home in order to protect themselves from financial hardship and strain (Bexley et al., 2013). For those who have left the parental home, then, how the perception of adequate parental support might be protective is important to investigate.

The third aim of the study is to compare financial normative socialisation patterns between student and employed young adults, and how these patterns of socialisation predict financial behaviour (see Figure 1.1). The dominant role of parental influence in student young adults’ financial behaviours has been established in the financial socialisation literature (Norvilitis & McLean, 2010; Webley & Nyhus, 2006; Shim et al., 2010; Shim et al., 2015). Parental financial expectations (i.e. injunctive norms) strongly predict students’ financial behaviours (Serido et al., 2010); however, the financial normative socialisation for young adults undertaking roles other than studentship has received little research attention. Variation in the development of financial behaviour between students and workers could begin to clarify what relative delays in financial independence and autonomy look like in terms of financial socialisation.
References


Dijkstra-Kersten, S. M., Biesheuvel-Leliefeld, K. E., van der Wouden, J. C., Penninx, B. W., & van Marwijk, H. W. (2015). Associations of financial strain and income...
with depressive and anxiety disorders. *Journal Of Epidemiology and Community Health.* doi: 10.1136/jech-2014-205088


Preface to Chapter 3

Extensive investigations into student finances have confirmed that financial hardship experienced by Australian university students has an impact on stress levels and enjoyment of life (Bexley, Daroesman, Arkoudis, & James, 2013; Halliday-Wynes & Nguyen, 2014). While at university, the average yearly income for a student is only a fraction of that earned by young adults who work full-time (Muir, Mullen, Powell, Flaxman, Thompson, & Griffiths, 2009). As a result, university students report often going without food and medical consultation due to income and resource limitations. These financial hardships can have an impact on many aspects of students’ lives (Callender, 2008; Mulder & Cashin, 2015; Solberg & Vilarreal, 1997), and have the potential to affect the transition to adulthood and future well-being (Räikkönen, Kokko & Rantanen, 2011; Shanahan, 2000).

There is little research that has investigated the underlying psychological experience of financial hardship and strain during university education. Further, the student finance literature has measured financial experience and hardship using a range of indicators, which have shown inconsistent associations with student academic, psychological and physical outcomes. In Chapter 3, the first of three empirical studies aims to elucidate the process whereby objective and subjective aspects of financial hardship predict university students’ psychological well-being. Previous research has predominantly conceptualised the impact of financial hardship upon student outcomes as direct or additive. Using Lazarus and Folkman’s (1984) transactional theory of stress and coping, the indirect effect of objective measures of financial hardship on psychological health, through subjective measures (i.e. the psychological experience of financial hardship), is tested (Figure 2.1). Using structural equation modelling, an
indirect effects model is non-hierarchically compared to the prevailing direct effects model that is prevalent in the literature.

**Figure 2.1.** The conceptual model tested in Chapter 3 (Study 1).

**References**


3. CHAPTER THREE: Study 1

The Role of Economizing and Financial Strain in Australian University Students’ Psychological Well-being

This chapter includes a co-authored paper. The bibliographic details of the co-authored paper, including all authors, are:


My contribution to the paper involved:

I collected and prepared the data, formulated the question in collaboration with my co-authors, analysed the data, and drafted the manuscript. My co-authors then reviewed the manuscript draft, suggesting edits.

______________________________ (Date)________________

Stuart J Watson

______________________________ (Date)________________

Corresponding author of paper: Professor Bonnie Barber

______________________________ (Date)________________

Supervisor: Professor Bonnie Barber
Abstract

University students have reported that they engage increasingly in more financial economizing behaviors to cope with limited resources, often to the detriment of their well-being. The objectives of this study were to investigate the mediating role of perceived financial strain between economizing behaviors and depressed mood and life satisfaction, and to compare this mediator model to the prevailing direct effects model currently reflected in the literature. Using structural equation modelling, latent-variable mediation analysis supported the notion that economizing behaviors significantly, but indirectly, predict greater depressed mood and lower life satisfaction through perceived financial strain. When examined using non-hierarchical model comparison indices, the mediation model was a superior fit to the data, compared to the direct effects model.
The Role of Economizing and Financial Strain in Australian University Students’ Psychological Well-being

A nation-wide study investigating Australian university students’ finances revealed that one in eight students reported foregoing basic necessities, such as food and medical attention, due to a lack of money (James et al. 2007). The experience of financial adversity for tertiary\(^1\) students is not exclusively Australian; these strained financial experiences have also been reported in other Western countries. Such circumstances may contribute to psychological and physical harm. However, not all students who experience financial adversity suffer, which suggests the impact of a challenging financial situation may be subject to psychological influence. How a students’ appraisal of their financial situation influences their well-being is the focus of this study.

Due to diversity in global university systems, experiences of Australian university students are likely to vary in comparison with those of university students in other countries; this variation is likely to contextualize the nature and impact of students’ strained financial experiences. In Australia, domestic students have access to a deferred government loan scheme for higher education, requiring repayment once their income surpasses a certain threshold. Administrative fees and costs associated with textbooks are not deferred. For the majority, however, the usual costs of living remain, requiring students to balance study and employment, which often results in delaying moving out of the parental home. Australian young people (20 to 34 years of age) who live with

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\(^{1}\) In Australia, a tertiary student is any individual enrolled in a post-secondary diploma or degree program at an educational institution, such as a university or technical college.
their parents are more likely to be studying full-time than they are be employed full-time (Australian Bureau of Statistics 2009). During the last decade, almost half of all Australian university students lived with their parents while studying (Australian Bureau of Statistics 2013). Further, very few domestic Australian students attend university outside of their home state (< 10%; Department of Education, Science and Training 2009), compared with US students (29%; e.g., Shim and Serido 2011). Two-thirds of the Australian population live in major cities (Australian Bureau of Statistics 2012); thus, fewer students require relocation in order to study. Despite deferral of degree cost during study and fewer students living interstate, other sources of financial stress, such as transport and living expenses, can contribute to Australian students’ experiences of financial strain during tertiary study.

In 2007, an Australian cohort study found that almost three-quarters of students identified their financial situation as a constant source of worry (James et al. 2007). Time constraints associated with full-time study can contribute to a discrepancy between needs and attainable resources; in order to afford basic necessities, students in the study reported undertaking substantial hours of employment. The students, however, also reported that working long hours lowered their academic performance and achievement. Further, compared to data from a cohort six years prior, more students had sought financial assistance from their parents in order to afford accommodation away from the parental home and other basics. This report highlighted the gravity of the worsening financial situation of some Australian university students. Similarly to students in the US, Australian students often take on a full-time commitment to their studies while being forced into restrictive economizing practices; it is therefore important to understand the impact of economizing on student well-being.
Not all students experience the strains of economic constraints, and some progress has been made in understanding student characteristics that predict financial adversity. Contextual factors, such as residing outside the parental home, originating from a financially unstable family, credit card debt, and unemployment, have been shown to contribute to an increased likelihood of reporting financial adversity during studentship (Hansen and Rhodes 1988; James et al. 2007; Kirby and Conlon 2005; Lucas and Lamont 1998; Norvilitis et al. 2006). In addition, individual psychological variables shown to predict financial adversity include low financial socialization and financial knowledge, and maladaptive financial attitudes and behaviors (Boddington and Kemp 1999; Borden et al. 2008; Monks 2001; Shim et al. 2009; Shim et al. 2010). A wide variety of measures, however, have been used to operationalize financial adversity in these studies, resulting in a scattered view of the field and of how financial adversity is thought to correlate with other constructs.

A number of negative outcomes have been associated with financial adversity. Students who report greater adversity report poorer academic achievement and satisfaction (Bradley 2006; Curtis and Shani 2002a, 2002b; Metcalf 2005; Ross et al 2006; Watts and Pickering 2000), and reduced psychological (Gerrans et al. 2013), physical and social well-being (Ross et al. 2006). Collectively, these studies have highlighted environmental and contextual demands of studentship that reduce students’ access to money and their ability to earn, catalyzing negative flow-on effects to their health and well-being. The serious nature of these findings underscores the urgency to understand the effect of financial adversity on university students’ well-being and to identify those students for whom the experience of adversity is a threat. To do this, however, it is necessary to distinguish between adversity measures.
Operationalization of financial adversity. Measures such as actual debt, term-time employment and engagement in negative financial behaviors have been used as objective proxies for financial adversity (Bradley 2006; Curtis and Shani 2002a, 2002b; Hunt et al. 2004; Metcalf 2003, 2005; Monks 2001; Shim et al. 2009; Taylor 1998; Watts and Pickering 2000). The predictive strength of these diverse measures to well-being, however, has been weak (e.g., Morra et al. 2008; Ross et al. 2006; Taylor 1998), making it difficult to draw any solid conclusions concerning the impact of financial adversity. For example, Morra et al. (2008) found actual level of student debt to be a weak predictor of financial strain, compared to the much stronger predictor of anticipated levels of future debt. This may be because objective measures do not account for the context surrounding the student and the decisions that may have led to their financial situation. This notion is not currently well represented in the literature and is an important gap to fill, in order to more accurately measure adversity, accounting for the influence of psychological processes. An alternative objective proxy for students’ experience of financial adversity may be a measurement of their engagement in economizing behaviors. Economizing behaviors are conceptualized as coping strategies adopted to address the deficit between needs and available resources. Theoretically, an individual would only engage in economizing behavior to cope directly with financial adversity. Thus, economizing behaviors may be a superior way to capture the aspects of financial adversity likely to reduce an individual’s psychological well-being. Early indications have suggested that maladaptive economizing behaviors predict reduced levels of well-being in students (Shim et al. 2009; Stein et al. 2013).

Because the perception of debt has been demonstrated to be a much stronger predictor of negative outcomes than a purely objective measure of debt (Morra et al. 2008; Ross et al. 2006; Shim et al. 2009), it seems important to also consider students’
own appraisal of their financial situation when attempting to measure their experiences of adversity. For example, engaging in paid employment during the semester has been shown to lower well-being only if the student’s perception of the work is negative or if no long-term benefits are perceived (Taylor 1998). It is logical, then, to expect that the perception or appraisal of students’ financial situation is more crucial in predicting well-being than simply whether or not students have high debt or are employed. The manifest state that follows the subjective appraisal of the individual’s own financial situation as being needs-deficient has been referred to as perceived financial strain (Angel et al. 2003). Conceptualized in this way, perceived financial strain has been shown to reliably predict well-being (Mistry et al. 2009; Wray and McCall 2007). Thus, perceived financial strain should reliably account for individuals’ perception of their financial situation.

Past research on perceived financial strain has generally focused on populations more typically considered at risk, such as elderly adults (Angel et al. 2003; Chou et al. 2004; Kahn and Pearlin 2006), young adults (Dunn et al. 2008; Zimmerman and Katon 2005), and clinical populations (Mattsson et al. 2008), rather than university students. Researchers have linked perceived financial strain to clinical depression (Chou et al. 2004), reduced physical health (Angel et al. 2003) and lower life quality and satisfaction (Mattsson et al. 2008). Perceived financial strain has also been positively associated with allostatic load – the notion that chronic stress produces prolonged drain on an individual’s health (Kahn and Pearlin 2006). It follows, then, that appraisal may be a central psychological process in the effect of financial adversity on a student’s well-being. The current model being presented in the literature, however, has focused mainly on the independent direct effects of various objective and subjective measures on student outcomes. Effectively, this way of testing the impact of financial adversity on
well-being neglects the possible role of psychological processes, such as how the individual feels about their behavior – perceived financial strain – and, thus, it is not well understood whether financial adversity predicts well-being indirectly through individuals’ own subjective appraisal of their situation.

Perceived financial strain, as an explanatory mechanism of the effect of adversity on well-being, has received limited research attention. In an elderly Chinese population, Chou et al. (2004) reported that the relation between a person’s income source and their resulting depression was mediated by perception of financial strain. Further, Bacikova-Sleskova et al. (2007) reported perceived financial strain as mediating the relationship between unemployment and both self-rated health and mental health of high-school leavers. Mistry et al. (2009) found that the perception of tertiary students’ family financial situation mediated the relation between parents’ objective report of financial stress and young adults’ depressive symptoms. Together, these findings support the idea that objective measures of financial adversity indirectly predict well-being through the perception of adversity. These findings also offer a theoretical explanation for why some students who experience financial adversity report low well-being and other students do not.

Cognitive-relational theory considers the perception of stress to be fundamental to the experience-well-being relation. According to cognitive-relational theory, how a particular situation is appraised is crucial to the development and management of stress (Lazarus and Folkman 1984). This theory conceptualizes the impact of stress on well-being as transactional, suggesting that appraisal of a stressful situation leads to a coping decision whereby the person interacts with their environment to deal directly with the source of the stress. In turn, students’ choice of coping strategy influences the stressor either positively or negatively, leading to further appraisal and decisions concerning the
failure or success of coping strategies previously implemented. In terms of financial adversity, the application of this theory posits that when people are faced with objective experiences of a specific financial situation, subjective appraisal of the situation leads to specific acts of coping (i.e., economizing). In turn, individuals then appraise their economizing (i.e., perceived financial strain), which can affect their well-being either positively or negatively. Thus, consistent with Lazarus and Folkman’s theory, the subjective experience of students’ financial situation should be considered an instrumental psychological process in how their experience of financial adversity influences their health and well-being.

In light of cognitive-relational theory, objective measures of financial adversity indicate the possibility of stress, but may not take into account the underlying cognitive processes that are likely to determine their influence. For instance, students who are unable to afford transport in order to attend classes and social outings in order to catch up with friends are likely to perceive their financial situation negatively, which is likely to result in poorer well-being. However, another student who economizes identically, but who places less importance on attending classes or social excursions, may perceive less adversity than the first student.

Further, as students’ personal and environmental circumstances vary widely, it follows that personal circumstances are also likely to influence how a student perceives the need to economize. Given that most conventionally-aged students are experiencing the transition into adulthood, the issues that surround this period are likely to influence their perception of financial strain. One of the more fundamental developmental tasks for the emerging adult is financial autonomy (Arnett 2000), and key to this task is living independently away from immediately accessible parental support (Schulenberg et al. 2004). Paradoxically, research has highlighted the importance of residing with
financially supportive parents or guardians during times of financial adversity, with many students returning to the parental home in order to cope with increased financial strain (Brougham et al. 2009; James et al. 2007). Moving away from the parental home and the perceived support it can provide has been demonstrated to lead to perceptions of increased strain (Khawaja and Dempsey 2008). In order to become established as young adults, students must navigate a new level of independence and responsibility, but also a riskier and potentially more stressful level of financial autonomy, which can lead to uncomfortable, or even maladaptive, economizing. The resulting financial situation may lead to the perception of financial strain and, thus, adversely affect well-being and satisfaction with life. In the long-term, chronic financial adversity could lead the young-adult toward a life trajectory not associated with success (Valentino et al. 2013). Thus, it is imperative to better understand the role that perception plays in the financial adversity and well-being relation.

The current study. The purpose of this study was to test an alternate proposition to the current prevailing conceptualization of how financial adversity influences student well-being. Figure 3.1 depicts how the variables under study were predicted to relate, according to current conceptualizations, as prescribed by findings reported in the literature. In this model, living status was hypothesized to predict both perceived financial strain and economizing behavior, but was not expected to be associated directly with student well-being outcomes. In turn, the influence of perceived financial strain and economizing behaviors on life satisfaction and depressed mood were considered independent of each other. According to the literature, both subjective and objective measures of financial adversity (i.e., perceived financial strain and economizing behaviors) were directly predictive of measures of student well-being; however, these measures are often considered independent predictors of well-being. In
other words, the process of their combined predictive ability on well-being has not yet been investigated.

Figure 3.1. The literature model, showing proposed relationships between variables.
Large rectangles represent observed variables; Small rectangles represent observed indicators; Large ellipses represent latent variables; Small ellipses represent error terms; Single-headed arrows represent directional relationships; Double-headed arrows represent covariance

This study tested perceived financial strain as a mediator of the relation between financial economizing behaviors and student well-being. It was hypothesized that economizing behaviors would be related to two indicators of well-being through perceived financial strain. Figure 3.2 illustrates the hypothesized mediational model, which proposed an alternative to how financial strain and well-being have been typically tested. According to the pathways in the model, living status and engagement in economizing behavior were hypothesized to predict perceived financial strain. In turn, perceived financial strain was hypothesized to predict both life satisfaction and depressed mood. This model hypothesized that perception of financial strain is the explanatory mechanism as to why objective measures of financial adversity (i.e.,
economizing behaviors) are related to student well-being. The hypothesized mediation model was compared to the direct effects model, presented in Figure 3.1, to test for superior fit.

![Diagram of mediation model]

Figure 3.2. The mediation model, showing hypothesized relationships between variables

**Methods**

**Respondents.** Six-hundred and fourteen students from a Western Australian university participated in this study. The sub-sample formed part of a larger sample (N = 957) that completed a survey as part of the Australian Pathways to Life Success for University Students (AusPLUS) project. In order to control for effects of age on financial stability and focus on only the students experiencing the adolescent to young adult life transition, the sample was limited to 18- to 25-year-olds, or conventional-age, university students. Two-thirds (66.8%) of the sub-sample were female and the average age was 20.83 years (SD = 2.02). *Table 3.1* shows the demographic characteristics of the sample by their living status during the university semester. Predominantly, the respondents were local, full-time undergraduates. Postgraduates comprised a small proportion of the sample and were retained given their comparable financial experiences and course fee structure to undergraduate students in Australia (James et al. 2007).
Interestingly, almost half of respondents who reported living with their parents considered themselves financially independent.

*Table 3.1 Students' Demographic Characteristics by Living Status Group*

<table>
<thead>
<tr>
<th></th>
<th>Living with Parents (N = 309)</th>
<th>Not Living with Parents (N = 305)</th>
<th>All (N = 614)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>200 (64.7)</td>
<td>210 (68.9)</td>
<td>410 (66.8)</td>
</tr>
<tr>
<td>Male</td>
<td>109 (35.3)</td>
<td>95 (31.1)</td>
<td>204 (33.2)</td>
</tr>
<tr>
<td><strong>Residency</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>West Australian</td>
<td>296 (95.8)</td>
<td>189 (62.0)</td>
<td>485 (79.0)</td>
</tr>
<tr>
<td>Non-West Australian</td>
<td>13 (4.2)</td>
<td>116 (38)</td>
<td>129 (21.0)</td>
</tr>
<tr>
<td><strong>Level of Study</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate</td>
<td>296 (95.8)</td>
<td>280 (91.8)</td>
<td>576 (93.8)</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>13 (4.2)</td>
<td>25 (8.2)</td>
<td>38 (6.2)</td>
</tr>
<tr>
<td><strong>Mode of Study</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part-time</td>
<td>42 (13.6)</td>
<td>39 (12.8)</td>
<td>81 (13.2)</td>
</tr>
<tr>
<td>Full-time</td>
<td>267 (86.4)</td>
<td>266 (87.2)</td>
<td>533 (86.2)</td>
</tr>
<tr>
<td><strong>Perceived Financial Independence</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent</td>
<td>138 (44.7)</td>
<td>201 (65.9)</td>
<td>339 (55.2)</td>
</tr>
<tr>
<td>Dependent</td>
<td>171 (55.3)</td>
<td>104 (34.1)</td>
<td>275 (44.8)</td>
</tr>
</tbody>
</table>
The sample comprised 6% of the university’s total population, with females, undergraduates and international students slightly overrepresented by up to 10%. Compared with Australian university statistics (Department of Industry, Innovation, Climate Control, Science, Research and Tertiary Education 2009), females and undergraduates were overrepresented by 10% and 20%, respectively, within the sample, suggesting that the sample is more representative of the specific tertiary institution than of the total Australian tertiary population. However, our study, as is the case in the many studies that use a university sample, is fairly representative of the larger population.

**Measures.** For this study, an Australian adaptation of a survey used for the Arizona Pathways to Life Success for University Students project (APLUS; see Shim et al. 2009; Shim et al. 2010) was used. The Arizona version of the survey was modified for an Australian student population by removing contextual American language and concepts, and several questions and scales pertinent to the focus of the AusPLUS project were added. The focus of the web-based survey was the financial behaviors and well-being of Australian university students.

**Sociodemographic variables.** Respondents were asked to provide their age and gender. For residency, respondents indicated either Western Australian residency or non-Western Australian residency. For level of study, respondents indicated the year of study in which they were currently enrolled (i.e., first, second, third, fourth, and postgraduate). For mode of study, respondents indicated either full-time or part-time enrollment status. For living status, respondents reported either living with their parents or not living with their parents during the semester. For perceived financial independence, respondents responded yes or no to the item “I am financially independent from my parents” in order to determine whether they perceived themselves
to be financially independent of their parents. This indicator is not the same as financial independence for taxation purposes with respect to an individual appearing or not appearing on the parents’ tax return.

**Perceived financial strain.** A subjective two-item scale was used to assess perceived financial strain, which was conceptualized as the students’ own appraisal of their financial situation. Both items were rated using a 5-point Likert scale, where 1 = *strongly disagree* and 5 = *strongly agree*. The two items used were “I have difficulty paying for things” and “I am constantly worried about money” and they were found to exhibit good internal consistency (α = .81). The two items were used as reflective indicators in order to form the latent variable, perceived financial strain.

**Economizing behaviors.** Economizing behaviors were conceptualized as financial behaviors used to address financial adversity, and were measured using a dichotomized (0 = *no*, 1 = *yes*), seven-item scale that showed good internal consistency (KR-20 = .75). The seven items were “Indicate whether you have engaged in the following activities within the past six months because you didn’t have enough money: Changed food shopping or eating habits to save money; cut back on social and entertainment expenses; cut back on communication bills; cut back on travel expenses; cut back on spending on personal care; reduced your number of classes to work more; postponed medical or dental care because you didn’t have the money to pay for it.” The variable was constructed by summing all seven items and, thus, was represented as an observed variable in the analyses. A higher score suggests greater engagement in economizing behaviors.

**Depressed mood.** Depressed mood was conceptualized to reflect the respondents’ mood state in the past six months, but was not a measure of clinical depression. The
four items ($\alpha = .69$) were measured using a 5-point Likert scale, where 1 = *never* and 5 = *daily* and used the same question stem, “How often do you?”. The items were “feel unhappy, sad or depressed?”, “feel that difficulties are piling up so high you can’t overcome them?”, “feel tired out all of the time?” and “lose your appetite OR eat a lot when you get upset?” The four items were used as reflective indicators in order to form the latent variable, depressed mood.

**Life satisfaction.** Life satisfaction was conceptualized as how satisfied respondents were with their current life circumstances. The scale included three items ($\alpha = .74$), each rated using a 5-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*) and used the same question stem, “Indicate to what extent you agree with the following statements:”. The items were “so far I have gotten important things I want in life”, “in most ways my life is close to my ideal” and “if I could live my life over, I would change almost nothing”. The three items were used as reflective indicators in order to form the latent variable, life satisfaction.

**Procedure.** Respondents were recruited via three modes of advertisement: A link on the University’s student portal web page, electronic mail, and a link on the student representative organization’s electronic newsletter. Instructions and information were provided at the top of the web page. Upon completion of the survey, respondents were prompted to submit their selections, which then loaded a new web page that offered the opportunity to enter both an e-mail address and a student identification number into a prize draw. The prize draw consisted of a major prize (an iPod Touch) and minor prizes (10 double passes to a movie). The separate pages were required to ensure anonymity, as they were recorded and stored independently. Due to the survey being web-based, consent was assumed when the respondent clicked “submit” on completion of the survey. Completed surveys were stored on a private university server.
Results

Using AMOS 17 (Arbuckle 2008) and a two-stage approach to analysis (see Anderson and Gerbing 1988), structural equation modeling was used to compare the fit of two non-hierarchically-related models. Prior to testing the full measurement model, single-factor congeneric models of each latent factor were fit to assess factor unidimensionality. Then, in line with Anderson and Gerbing’s approach to SEM, the measurement model was fit and discriminant validity between latent factors was assessed by fitting a confirmatory factor analysis (CFA). Following a well-fitting measurement model, the confirmed factors and their indicators were included in the structural models, testing the relations between observed and latent factors. The fit of the hypothesized mediational model was then compared to a non-hierarchically-related direct effects model.

Missing data. The sample originally comprised 651 students; however, missing values analysis was used to identify patterns of missing values across observed variables, and to show whether the values were missing at random or systematically. A total of 31 cases had missing values for the key categorical variables, which are: economizing behaviors and living status. These cases were excluded from the data set because values for these variables could not be imputed. The fact that missing data for scale variables were rare (< 1% for each variable) provided support for imputation. Expectation-maximization was used to impute values (see Allison 2003; Scheffer 2002), resulting in a complete data set (N = 620). Data were multivariate normal (Mardia’s Coefficient = .938) following the deletion of six cases identified as multivariate outliers (p < .001); altogether, 614 respondents were used in the analysis.
Descriptive statistics. Table 3.2 displays scale descriptive statistics, compared inferentially by living status. For perceived financial strain and depressed mood, mean scores were at the scale mid-point or higher for both living status groups; thus, irrespective of living status, students’ financial and mood experiences were, on average, negative. Conversely, life satisfaction for both living status groups was higher than the scale mid-point, suggesting that, on average, students agree that they are satisfied with their lives. Respondents who did not live with their parents reported significantly higher perceived financial strain and depressed mood, and significantly lower levels of life satisfaction, compared to respondents who did live with their parents.

Table 3.2 Means, Standard Deviations and Ranges of all Composite Scale Variables by Living Status Group

<table>
<thead>
<tr>
<th></th>
<th>Living with Parents (N = 309)</th>
<th>Not Living with Parents (N = 305)</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Economizing Behavior</td>
<td>0 - 7</td>
<td>3.26</td>
<td>2.03</td>
</tr>
<tr>
<td>Perceived Financial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strain</td>
<td>1 - 5</td>
<td>3.09</td>
<td>1.12</td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td>1 - 5</td>
<td>3.23</td>
<td>0.86</td>
</tr>
<tr>
<td>Depressed Mood</td>
<td>1 - 5</td>
<td>2.97</td>
<td>0.79</td>
</tr>
</tbody>
</table>

Note. Group means compared using independent samples t-test
The sample reported engaging in, on average, almost four of the seven economizing behaviors during the six-month period prior to completing the survey. Students who were not living with their parents reported engaging in almost one additional economizing behavior, which was significant, compared to students living with their parents. For students who reported engagement in more economizing behaviors, reductions in spending on food, social, personal and health domains were more prevalent compared to spending reductions on communication and reducing classes in order to work more. Table 3.3 displays item-specific frequencies for each economizing item between living status students.

**Measurement model.** The following single-factor congeneric models of the three latent factors were fitted: perceived financial strain; depressed mood; and life satisfaction. Each congeneric model fit the data well, with inspection of eigenvalues showing a unidimensional factor structure for each model. Inspection of standardized residuals and modification indices provided no basis for modification. The three latent factors were then fit together as a CFA model. Table 3.4 displays the results of the CFA model and the internal consistency values for each latent variable. The CFA model fit the data well ($\chi^2(24, N = 614) = 45.15, p = .006, \text{CFI} = .985, \text{RMSEA} = .038(90\% \text{C.I.:} .020-.055)$). Following inspection of eigenvalues (confirming a three-factor structure, covariance residuals and modification indices), the measurement model did not require modification. Further, structure coefficients provided evidence of discriminant validity. Supported by the CFA, perceived financial strain was informed by two indicators, life satisfaction by three indicators, and depressed mood by four indicators in the structural models.
Table 3.3 Frequency Statistics (%) for all Economizing Behavior Items, by Living Status Group

Indicate whether you have engaged in the following activities within the past six months because you didn’t have enough money:

<table>
<thead>
<tr>
<th>Activity</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changed food shopping or eating habits</td>
<td>36.2</td>
<td>63.8</td>
</tr>
<tr>
<td>Cut back on social and entertainment expenses</td>
<td>27.8</td>
<td>72.2</td>
</tr>
<tr>
<td>Cut back on communication bills</td>
<td>68</td>
<td>32</td>
</tr>
<tr>
<td>Cut back on travel expenses</td>
<td>57</td>
<td>43</td>
</tr>
<tr>
<td>Cut back on spending on personal care</td>
<td>34.3</td>
<td>65.7</td>
</tr>
<tr>
<td>Reduced your number of classes to work more</td>
<td>81.2</td>
<td>18.8</td>
</tr>
<tr>
<td>Postponed medical or dental care</td>
<td>69.9</td>
<td>30.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activity</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changed food shopping or eating habits</td>
<td>15.7</td>
<td>84.3</td>
</tr>
<tr>
<td>Cut back on social and entertainment expenses</td>
<td>15.1</td>
<td>84.9</td>
</tr>
<tr>
<td>Cut back on communication bills</td>
<td>50.5</td>
<td>49.5</td>
</tr>
<tr>
<td>Cut back on travel expenses</td>
<td>42</td>
<td>58</td>
</tr>
<tr>
<td>Cut back on spending on personal care</td>
<td>16.4</td>
<td>83.6</td>
</tr>
<tr>
<td>Reduced your number of classes to work more</td>
<td>79</td>
<td>21</td>
</tr>
<tr>
<td>Postponed medical or dental care</td>
<td>48.9</td>
<td>51.1</td>
</tr>
</tbody>
</table>
Table 3.4 Confirmatory Factor Analysis Results for Measurement Model Showing Latent Factor Loadings and Cronbach's Alphas

<table>
<thead>
<tr>
<th>Latent Variable/Indicator</th>
<th>B</th>
<th>β</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Financial Strain</td>
<td>.81</td>
<td>.72</td>
<td></td>
</tr>
<tr>
<td>I have difficulty paying for things</td>
<td>.87</td>
<td>.72</td>
<td></td>
</tr>
<tr>
<td>I am constantly worried about money</td>
<td>1.16</td>
<td>.95</td>
<td></td>
</tr>
<tr>
<td>Depressed Mood</td>
<td>.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(How often do you...)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>feel unhappy, sad or depressed</td>
<td>.66</td>
<td>.66</td>
<td></td>
</tr>
<tr>
<td>feel that difficulties are piling up so high you can't overcome them</td>
<td>.68</td>
<td>.63</td>
<td></td>
</tr>
<tr>
<td>feel tired out all of the time</td>
<td>.70</td>
<td>.62</td>
<td></td>
</tr>
<tr>
<td>lose your appetite OR eat a lot when you get upset</td>
<td>.67</td>
<td>.52</td>
<td></td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td>.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In most ways my life is close to my ideal.</td>
<td>.80</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>So far, I have gotten important things I want in life.</td>
<td>.71</td>
<td>.68</td>
<td></td>
</tr>
<tr>
<td>If I could live my life over, I would change almost nothing.</td>
<td>.73</td>
<td>.63</td>
<td></td>
</tr>
</tbody>
</table>

Note. All coefficients significant < .001.

Table 3.5 shows the correlation matrix for all latent variables in the models. The two models compared in this paper were non-hierarchically related: They comprise the same latent variables, but their hypothesized relations and form differed. To compare the fit of two non-hierarchically related models, employing the difference of chi-square ($\Delta \chi^2$) test is not a valid analytic plan; instead both the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) can be used to compare these models (Kline 2005; Kuha 2004). These indices reward parsimony in models by penalizing
model complexity; thus, a well-fitting model with lower AIC and greater degrees of freedom would be considered a better fitting model (Burnham and Anderson 2004; Kline 2005).

*Table 3.5 Correlation Matrix for Latent Variables*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Economizing Behavior</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Living Status</td>
<td>0.27a</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Perceived Financial Strain</td>
<td>0.63</td>
<td>0.24a</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Life Satisfaction</td>
<td>-0.23</td>
<td>-0.09a</td>
<td>-0.36</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5. Depressed Mood</td>
<td>0.29</td>
<td>0.11a</td>
<td>0.47</td>
<td>-0.66</td>
<td>1</td>
</tr>
</tbody>
</table>

*Note.* Living Status coded 0 = *living with parents*, 1 = *living away from parents*.

*a* Denotes a point-biserial correlation between dichotomous and continuous variables.

*The direct effects model.* Referring to fit statistics reported in *Table 3.6*, the chi-square statistic suggested a significant and large fit discrepancy between the direct effects model and the data. A commonly held cut-off for the normed chi-squared ($\chi^2$/d.f.) statistic is six (Kline 2005); the direct effects model substantially exceeded this cut-off. Further, several fit indices provided evidence that the model is poorly fitting in accordance with Hu and Bentler’s (1999) cut-off values. Inspection of standardized residual covariances suggested large discrepancies between numerous observed variables; in particular, large discrepancies (> 10) were observed between perceived financial strain items and the economizing behaviors variable, providing further evidence of a poorly fitting model.
### Table 3.6 Comparing Model Fit for Two Non-hierarchical Models

<table>
<thead>
<tr>
<th>Fit Index</th>
<th>Direct Effects Model</th>
<th>Mediational Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$</td>
<td>272.62</td>
<td>87.8</td>
</tr>
<tr>
<td>d.f.</td>
<td>39</td>
<td>40</td>
</tr>
<tr>
<td>$\chi^2$/d.f.</td>
<td>6.99</td>
<td>2.19</td>
</tr>
<tr>
<td>CFI</td>
<td>0.87</td>
<td>0.97</td>
</tr>
<tr>
<td>RMSEA (90% C.I.)</td>
<td>.10 (.09-.11)</td>
<td>.04 (.03-.06)</td>
</tr>
<tr>
<td>AIC</td>
<td>326.62</td>
<td>139.77</td>
</tr>
<tr>
<td>BIC</td>
<td>445.96</td>
<td>254.69</td>
</tr>
<tr>
<td>PFS $R^2$</td>
<td>5%</td>
<td>40%</td>
</tr>
<tr>
<td>DM $R^2$</td>
<td>17%</td>
<td>22%</td>
</tr>
<tr>
<td>LS $R^2$</td>
<td>9%</td>
<td>13%</td>
</tr>
</tbody>
</table>

The hypothesized mediational model. The mediation model fit the data well\(^2\) (Table 3.6). Although the chi-squared estimate for the mediational model was significant, fitting models using large samples results in estimation sensitivity to small discrepancies in the chi-square statistic between the model and the data, increasing the model's likelihood of being rejected (Hu and Bentler 1999); therefore, the mediation model was considered to fit the data well, with additional fit indices providing further evidence for this view. Inspection of standardized residual covariances provided no evidence of significant discrepancies between observed variables in the model. The chi-

\(^2\) Model fit statistics did not differ significantly when fitting the model using a sample with postgraduate students removed ($\chi^2 (40, N = 576) = 87.77, p < .001, \chi^2$/d.f. = 2.19, CFI = .97, RMSEA = .05 (90% C.I.: .03-.06), AIC = 139.77, BIC = 253.02). Further, pathways coefficients did not differ significantly between the models. Consequently, postgraduate students were retained in the sample.
squared estimate was substantially smaller than the direct effects model’s estimate and the normed chi-squared statistic was well below six. Adding further support for the mediational model over the direct effects model, the mediational model accounted for a greater range in endogenous variables (Table 6). In terms of explicit non-hierarchical model comparison, Table 6 shows that the mediational model yielded much smaller AIC and BIC index estimates compared to the direct effects model, indicating that the mediational model is both more parsimonious and a better fitting model compared to the direct effects model.

Figure 3.3 depicts the pathway estimates for the mediational model. Living status during the semester correlated significantly with economizing behaviors, such that students who did not live with their parents engaged in significantly more economizing behaviors compared to students who did live with their parents. Living away from the parental home approached significance as a predictor of greater perceived financial strain. Engaging in economizing behaviors predicted greater perceived financial strain. In turn, perceived financial strain predicted greater depressed mood and lower life satisfaction. Notably, the covariance pathway between error terms, z2 and z3, represents the shared variance between depressed mood and life satisfaction that is not explained by their predictors in the hypothesized model.
Figure 3.3. The structural mediational model showing standardized coefficients and variance accounted for in each latent variable

Note. * p < .05, *** p < .001

Mediation. Hayes (2009) asserts that reporting the Bootstrapped indirect effect provides sufficient evidence for mediation. Bootstrapping the product coefficient of the mediated pathways produces both a 95% confidence interval estimate for the coefficient and an associated p-value that tests whether or not the indirect coefficient estimate differs significantly from zero. Using the bootstrapping technique to test for mediation has been gaining in popularity (Hayes 2009); this is, in part, due to simulation studies that have provided evidence for the technique’s power compared to other methods, such as the Sobel test and the Baron and Kenny steps method (MacKinnon et al. 2004; Williams and MacKinnon 2008).

The relation between economizing behaviors and depressed mood was significantly mediated by perceived financial strain (Bootstrapped standardized coefficient for the indirect effect = .283 (95% C.I.: .215-.356), p = .001). As economizing behaviors increased by one standard deviation, depressed mood increased indirectly through perceived financial strain by .28 of a standard deviation. In addition, the relation between economizing behaviors and life satisfaction was significantly mediated.
by perceived financial strain (Bootstrapped standardized coefficient for the indirect effect = -.218 (95% C.I.: -.286 to -.151), p = .001). When economizing behaviors increased by one standard deviation, life satisfaction decreased indirectly through perceived financial strain by -.22 of a standard deviation. These mediational findings suggest that students’ appraisal of their financial situation is an important explanatory process between objective financial behavior and their well-being.
Discussion

Our results support the hypothesis that perceived financial strain mediates the relation between economizing behavior and student well-being. Specifically, engagement in economizing behavior was related to perceived financial strain, which predicted both depressed mood and lower life satisfaction. For example, students who more frequently reduced their class load to earn money, or who cut down on their grocery spending and neglected their health to avoid expense, worried more about money and had more difficulty paying for goods; in turn, these students felt more sad and dissatisfied with their lives. These findings suggest that the perception of a situation provides the psychological mechanism through which financial adversity affects a student’s well-being.

In addition to testing perceived financial strain as a mediator, this study aimed to test the fit of the hypothesized mediation model compared to the prevailing conceptual model, which generally specifies objective and subjective measures of financial adversity as independent direct effects. In comparing the fit of the models, the hypothesized mediation model fit the data significantly better than the direct effects model; this finding provides further support for perceived financial strain as mediating the relation between economizing behavior and student well-being. The substantial disparity in model fit also provides preliminary, cross-sectional support for the transactional relation between financial adversity and well-being, whereby students’ appraisal of their financial situation is crucial in predicting the effect adversity will have on their well-being. Furthermore, the strength of the hypothesized mediational model and the mediated pathways provide evidence for the argument that objective measures of financial behavior may only relate indirectly to well-being through the perception of the individual’s own situation. Specifically, the findings provide evidence for perceived
financial strain acting as an intermediate psychological process between engagement in economizing behavior and both depressed mood and life satisfaction.

Although most previous research has supported a direct link between markers of financial adversity and well-being, studies that have looked at indirect markers, with results that were consistent with those reported here, are rarer (Bacikova-Sleskova et al. 2007; Chou et al. 2004; Mistry et al. 2009). Moreover, this study’s novel contribution is the use of a potentially more accurate objective measure of financial adversity (i.e., economizing behaviors) and the examination of a university sample. The use of economizing behaviors, operationalized in a manner that probes engagement when a student is directly exposed to a stressor, considers the context surrounding each student’s financial adversity, while also achieving measurement objectivity. Whereas previous studies mostly report weak and ambiguous relations between more commonly used objective measures, such as amount of debt or employment status, and well-being, economizing behavior was a strong and significant indirect predictor of well-being in this study. This finding is consistent with recent US research (Shim et al. 2009), and is important because operationalizing objective measures of financial adversity in this way improves measurement precision.

The importance of testing this model using an Australian tertiary population is evident in findings of James et al. (2007), who identified and described a student population experiencing high financial adversity. The above-average number of economizing behaviors reported by the current respondents indicates that life as a university student involves substantial sacrifice and struggle. Those who reported greater economizing were more likely to report reductions in spending on food, and in the social, personal care and health domains, rather than reductions in communication spending or reducing classes to work more. This pattern of economizing illustrates that
the importance of completing a university degree drives students towards risky economizing strategies that may open their health and well-being to vulnerabilities. Further, those who reported more cutbacks experienced greater strain. The mean financial strain score for these students was above the scale midpoint, indicating that on average, the respondents agreed that they continually worried about money. There was also substantial variability, and that variability predicted well-being. Given the financially adverse circumstances reported by the majority of these respondents, it is important to understand the effects of financial economizing on health and well-being so that effective policy and programs can be developed to alleviate the experience of strain.

Approximately one-third of respondents were living away from the parental home and considered themselves to be financially independent of their parents. Both of these characteristics are considered cornerstones of successfully achieving financial autonomy during the transition to adulthood (Arnett 2000). On average, these respondents engaged in almost five of the seven economizing behaviors and reported levels of financial strain greater than the scale mid-point. Perceived financial independence and living away from parents generates substantial sacrifice and strain, although financial autonomy is a critical developmental task to achieve during the adolescent to young-adult transition. This study is a preliminary step toward demonstrating that objective and subjective measures of financial adversity affect the individual’s well-being through an interdependent, possibly transactional process. Future longitudinal research is needed to test this finding and apply cognitive-relational theory to financial adversity in students and the wider population. The applicability of Lazarus and Folkman’s (1984) model on financial adversity requires longitudinal research in order to examine students’ reappraisal of their financial situation, engagement in further economizing to address
shortcomings of the previous strategy, and the mechanism by which this new cycle affects subsequent well-being. Findings of such an investigation may help identify and isolate critical intervention points for deployment of financially and psychologically supportive programs and structural provisions for university students, protecting them when they confront financial hurdles.

Instead of advising students to commit to fewer employment obligations during a semester or to accumulate less debt, neither of which may be feasible given individual circumstances, perhaps assisting students in limiting negative perceptions of their financial situation through cognitive restructuring may be more effective. The current findings dictate that engaging in economizing behaviors leads to perceptions of financial strain and these negative appraisals reduce perceived well-being; however, economizing is an adaptive coping response to address limited resources in the face of demand. Guiding students to a more positive understanding of their need to economize in pursuit of their educational goals and placing their behaviors in the perspective of the time-limited context of tertiary education may positively alter their perceptions of strain and contribute to healthier well-being.

Tertiary institutions and student representative groups could also be instrumental in reducing perceptions of strain in students by implementing strategies aimed at reducing their need to economize; this recommendation has been made in Australia (Bexley et al. 2013; Bradley et al. 2008). Most Australian tertiary institutions have an on-campus medical center providing government-subsidized consultation to students; however, more than two-thirds of current students reported postponing medical or dental costs in order to economize. Improving publicity during student orientation for the medical services available on campus may increase students’ use of health care services. Furthermore, because the most prevalent economizing behaviors were
reductions in food shopping, entertainment and personal care, student representative groups could assist by offering guidance on economical shopping skills and effective budgeting strategies. Also, student groups could work closely with charitable organizations that can provide support in the form of food and personal care items to students experiencing severe financial strain.

Situational and structural characteristics of a student’s environment may protect against the negative appraisal of their need to economize. Students living independently whose friends come from similar socioeconomic backgrounds with similar current financial circumstances may not perceive their situation as strained, given the relative social comparison. Such attitudinal support, plus access to university and community services that supplement students’ day-to-day food and material supplies, may inhibit negative appraisal of financial circumstances and provide a protective mechanism for well-being (see Cohen and Wills 1985). Future research investigating factors that buffer self-appraisal may provide insight into protective factors against perceived financial strain.

The current study has limitations that restrict the generalizability of the findings. First, the sample under investigation is restricted to tertiary students enrolled at one university. The circumstances surrounding one cohort of students residing in Western Australia may not be fully applicable nationally or internationally. Potential generalization of the current findings requires analysis of data collected from a wider range of Australian universities. Second, future research is required to establish the longitudinal stability of these results and to provide additional support for the application of the transactional theory of stress to financial adversity in students. To achieve this goal, sampling the same students at various time points is required, in order
to capture the effect of the financial stressor on an individual’s perception of the stressor, and the impact of perception on well-being.

Despite the limitations, these findings highlight the importance of perceptions about financial adversity in university students. How students feel about their financial circumstances is an important explanatory mechanism through which measures of objective financial circumstances can be linked to well-being. Understanding the processes that underlie financial adversity could contribute to providing more effective and useful interventions for “cash-strapped” university students and, given the links to well-being, this is an important goal.
References


perception of health. Mediating effect of financial situation and social contacts?


Preface to Chapter 4

The superior fit of the indirect model over the direct effects literature model in Chapter 3 provides support for the inference that objective indicators of financial hardship are not directly associated with well-being; rather, the association is indirect through perceptions of strain, such that appraisal of an objective experience as threatening predicts low well-being. This result demonstrates support for the application of the transactional theory of stress and coping (Lazarus & Folkman, 1984) to young adults’ financial experiences at university. Application of the transactional model is beneficial because it provides points in the process of stress and well-being where other factors may account for variation in students’ experience of financial hardship. The transactional theory posits that appraisal of an experience as threatening can depend upon circumstantial and protective factors, such that the same threatening experiences in the future can be appraised differently. Given the temporal framework of the theory, it can be proposed that these contextual and protective factors condition the impact of financially stressful experiences, varying the impact upon well-being. Research has reliably provided support for the notion of social support as a protective factor against stress (Cohen & Wills, 1984).

Chapter 4 utilises the transactional model that is supported in Chapter 3 to explore whether university students’ experiences with financial hardship differ depending on attainment of a marker of adulthood (living independently), and the degree to which they feel adequately financially supported by the parents. Specifically, differences in the links between objective indicators of financial hardship, strain, and psychological well-being will be examined by testing for a multi-group interaction between four groups varying in independent living and perceived adequacy of parental financial support (see Figure 3.4). Recent research has shown that young adults are increasingly remaining in
the parental home during university in order to benefit from the protection the parental home can provide (Cobb-Clarke, 2008; Cohen, Kasen, Chen, Hartmark, & Gordon, 2003). Chapter 4 will extend the literature by testing the protective benefits of residing in the parental home for student young adults, and accounting for the perceived adequacy of parental financial support.

Figure 3.4. The conceptual model tested in Chapter 4 (Study 2).

References


4. CHAPTER FOUR: Study 2

Living Situation and Perceived Parental Financial Support as Protective Factors against Financial Strain Among Australian University Students

This chapter includes a co-authored paper. The bibliographic details of the co-authored paper, including all authors, are:


My contribution to the paper involved:

I collected and prepared the data, formulated the question in collaboration with my co-authors, analysed the data, and drafted the manuscript. My co-authors then reviewed the manuscript draft, suggesting edits.

_____________________________ (Date)________________

Stuart J Watson

_____________________________ (Date)________________

Corresponding author of paper: Name of Corresponding Author

_____________________________ (Date)________________

Supervisor: Name of Supervisor
Abstract

Objective: This study examines how differences amongst young adults’ residential arrangements and parental support are related to variation in university students’ financial and psychological well-being.

Method: Six-hundred and four students completed an online survey about financial experiences and supports, and well-being. Students were split into four groups depending on their living situation and perceptions of adequate parental support. A multi-groups approach tested path differences amongst the groups.

Results: Living at home with parents combined with perceiving lower parental financial support was associated with lower financial strain and higher psychological well-being, compared to reporting higher financial support when living at home, and living out of home regardless of support ($p < .001$). For students living outside of the parental home and perceiving inadequate parental financial support, economising was most strongly associated with perceived financial strain ($p < .05$), which in turn, most strongly predicted lower well-being ($p < .05$).

Conclusions: It is suggested that the non-monetary assistance provided by remaining in the family home nullifies the protective benefits of perceiving adequate parental financial support; however, when living away from the parental home, perceiving adequate parental financial support can buffer negative effects of financial strain on well-being.
Living Situation and Perceived Parental Financial Support as Protective Factors against Financial Strain Among Australian University Students

Between 2006 and 2012, Australian university students increased their reliance on parental financial support (Bexley, Daroesman, Arkoudis, & James, 2013). According to a large, Australia-wide cohort study, the increase included both money for university-related expenses, such as books and fees, and non-monetary support, such as food and accommodation (Bexley et al., 2013). This increasing dependence on parental support is likely due to the steadily increasing cost of living in Australia and undersupply of rental properties to meet demands (WACOSS, 2011). The greater prevalence of support-seeking in the recent cohort highlights the importance of a supportive family network during what can be a lengthy period of financial strain. For many conventional-age students (18 to 25 years old), university attendance comes during a period when they are attempting to establish greater autonomy from their parents. For young adult students, then, it is necessary to identify how different modes of parental support might influence their financial experiences and well-being.

Conventional-aged students are in the developmental period of young adulthood, which is considered to be amongst the most stressful periods in the lifespan (Arnett, 2000). Chosen pathways, such as education and work, determine young adult experiences (Cohen, Kasen, Chen, Hartmark, & Gordon, 2003). These experiences provide opportunities to develop skills and coping strategies, unique to each pathway, in combination with developing autonomy. In the past, developmental indicators commonly experienced during young adulthood included status markers, such as moving out of the parental home, getting a job, and finding a romantic partner (Cohen et al., 2003). More recently, however, these conventional markers have been considered less applicable due to changing cultural expectations of young adults (Arnett, 2001);
instead, young adults’ perceptions of a successful transition to adulthood have been the focus of research. These perceptions generally include greater personal responsibility, autonomous decision-making, and increased financial independence (Arnett, 2000, 2001). But, given the financial strain that can accompany university attendance, working toward a degree can delay attainment of financial independence.

**University students’ need to economise.** There is a substantial time commitment required for full-time study. Juggling multiple roles, developmental tasks and substantial time commitments can lead to considerable burden on a young adult (Arnett, 2000; Jacobs & Dodd, 2003). Due to the resulting time-poorness, most students are unable to work full-time hours and so must tighten their budget. Students report engagement in a variety of coping strategies, both adaptive, such as conscious reductions in spending on necessities like food, travel and accommodation and risky ones, such as postponing medical attention. Bexley et al. (2013) highlighted the concerning level of economising that Australian students implement, with two-thirds of students reporting that their financial situation is often a source of worry. Financial strain has been consistently associated with adverse health outcomes (e.g. Bacikova-Sleskova et al., 2007; Metcalf, 2003; Wray & McCall, 2007).

Although most students cope by working during the semester, term-time employment has been linked with poor academic performance (Callender, 2008; Curtis & Shani, 2002; Metcalf, 2003) and reduced psychological well-being (Broadbridge & Swanson, 2005). Students, however, recognise the necessity of working in order to support themselves financially (Wray & McCall, 2007) and do report that employment while studying can yield perceived benefits for their own industry experience (Robotham, 2013). Other coping strategies and protective factors available to students, then, play a critical role in protection from strain. Because perceptions of financial
strain mediate the association between economising behaviours and student well-being (Watson, Barber & Dziurawiec, 2014), students can benefit from reducing strain from cutbacks, either by targeting the source of stress or by seeking protection from it. The support provided by students’ social networks may provide some protection.

**Financial support.** There is a functional importance provided by support during stressful events (e.g., Cohen & Wills, 1985; Robbins, 1995). Two types of social support are theorised: one pertaining to social network structure, or *structural support*, and one pertaining to the function of the support provided, or *functional support* (Cohen & Wills, 1985). Structural support provides a general protective advantage for an individual’s wellbeing, which has been referred to as the *main effect hypothesis*. Functional support, however, can ameliorate the impact of stress on well-being, which has been referred to as the *buffering hypothesis*. One qualification, though, is that functional support is a buffer only when the support received is congruent with the stressor (Cohen & Wills, 1985); for example, receiving money when financial resources are deficient.

The buffering hypothesis is central in Lazarus and Folkman’s (1984) transactional model of stress and well-being. When people are faced with stress, their appraisal of the event as threatening or benign is key in determining the impact on their well-being. Evidence for the buffering effect has been demonstrated in older adults (e.g. Chou, Chi, & Chow, 2004), migrants (e.g. Crockett et al., 2007), and students (e.g. Vandervoort, 2002). This consistency across diverse populations is testament to the strength and generalisability of the protective qualities of support during stress.

The transactional model suggests two points during which support can ameliorate the impact of stress: between the stressful event and the individual’s appraisal of the
stressful event, or between an individual’s appraisal of the event and the impact of their appraisal on their well-being. Most studies investigating the buffering hypothesis have focused on the latter (i.e., between perceived stress and well-being; e.g. Crockett et al., 2007). The remainder have focussed on support structure as a predictor of well-being (e.g., Bouteyre, Maurel, & Bernaud, 2007) and the importance of support during the transition through young adulthood (e.g. Holahan, Valentiner, & Moos, 1994). Little is known about the buffering potential of financial support between the stress of economising and the individual’s appraisal of their economising as stressful.

**The parental home as a buffer.** Leaving the parental home at the end of adolescence is a common experience in Western cultures; however, the timing and circumstances that influence young adults to move out vary. Reasons include education, getting married, having children, and socio-political and economical influences (Arnett, 2001; Cobb-Clark, 2008). Recently, though, moving out of the parental home has been delayed into young adulthood, especially for students, and the decision to stay has been linked to the benefits of support (Cobb-Clark, 2008). Not all students have the opportunity to choose their living arrangements, though, and some students do not have access to instrumental financial support from their parents. Remaining in the parental home can provide the resources and protection from stress necessary to study; however, it can also hinder the perceived development of financial autonomy and well-being. Thus, it is critical to understand to what extent living with parents, impacts on young adults’ financial experiences because the resulting impact can be lifelong (Rääkkönen, Kokko, & Rantanen, 2011).

Personal circumstances may prevent the move out of home, which is incongruent with conventional adulthood status markers. In a female-only sample, leaving the parental home during the young adult transition was associated with healthy well-being.
but only for those whose move was independently driven (Lee & Gramotnev, 2007). The importance of personal agency when making the move out of home has also been established for both late adolescent males and females (Kins, Beyers, Soenens, & Vansteenkiste, 2009). Therefore, personal agency and the impact of living situation on well-being contribute to the subjective experience of young adulthood. Although associated with increased autonomy and financial responsibility, leaving the parental home also poses a risk to financial well-being.

The present study. The aim of this study was to test whether young adult students’ financial and emotional experiences differed depending on whether they lived with their parents or not, and perceived adequacy of parental financial support. Links between economising, financial strain, and well-being were tested across living situations and levels of parental financial support.

Methods

Respondents. Respondents were 604 West Australian university students. To focus on young adults, only 18- to 25-year-old university students (n = 614) were included, selected from a larger sample (N = 957) who completed a survey as part of the Australian Pathways to Life Success for University Students (AusPLUS) project. Two-thirds (67.1%) of the sample were female, and the majority were undergraduates (93.9%) who were studying full-time (86.6%).

The sample comprised 6% of the university’s total population, with females, undergraduates and international students slightly overrepresented relative to the university’s population by up to 10%. Compared with Australian university statistics (Department of Industry, Innovation, Climate Control, Science, Research and Tertiary
Education, 2009), females and undergraduates were overrepresented by 10% and 20%, respectively, within the sample.

**Measures.** An Australian adaptation of the survey from the Arizona Pathways to Life Success for University Students project (Shim, Xiao, Barber, & Lyons, 2009) was used. Respondents were asked to provide their age, gender, the year of study (i.e., first, second, third, fourth, and postgraduate), and whether they were enrolled full-time or part-time.

**Student groups.** The groups that form the basis of this study were created using the combination of two variables: living situation and perceived parental financial support. Living situation was assessed by asking where respondents lived at the time of the survey. Response options were: *in student housing, in a rental property, in my own house, and at home with my parents*, and *other*. Ten participants were removed from the sub-sample because they responded “other”, which did not allow them to be coded in either of the two living situation groups. Respondents who selected *at home with my parents* were coded as *living in the family home*, and all remaining respondents were coded as *living away from the family home*. Half of the sample were living at home with their parents (50.5%); the remaining proportion (49.5%) comprised students living away from their parents.

Perceived parental financial support was measured with a three-item scale (α = .88), using a 5 point Likert-type scale (1 = Much less than I would like to 5 = As much as I would like). The items were “I have family members that I can rely on for non-monetary financial aid (e.g., meals, clothing, textbooks, other necessities),” “I have family members who will help me financially through university when I cannot afford it,” and “I have family members who will help me pay bills when I cannot afford to pay
them (automotive, mobile, mortgage, etc.).” A composite average using these items was created and then dichotomised, splitting students into those reporting less support than they would like (less than 4) and those reporting as much support as they would like (greater than or equal to 4). Two-fifths (39.4%) of respondents perceived inadequate parental financial support; the remaining students (60.6%) perceived adequate support. Crossing residential status with support, respondents were grouped into the following categories: home without support (14.2%; parental financial support $M = 2.84, SD = .75$), home with support (36.3%; $M = 4.67, SD = .39$), away without support (25.2%; $M = 2.35, SD = .92$), and away with support (24.3%; $M = 4.65, SD = .41$). As intended in the coding, the two without support groups reported significantly lower financial support than both with support groups; but it is important to note that the away without support group also reported significantly lower perceived parental financial support than the home without support group ($p < .001$).

**Perceived financial strain.** A two-item scale was used to assess perceived financial strain, which was the students’ appraisal of their financial situation (see Watson, Barber & Dziurawiec, 2014). Both items were rated using a 5-point Likert scale, from $1 = strongly disagree$ to $5 = strongly agree$. The two items, “I have difficulty paying for things” and “I am constantly worried about money,” were found to exhibit good internal consistency ($\alpha = .81$). An average was computed where a higher score indicates greater financial strain.

**Economising behaviours.** Economising behaviours were those behaviours used to directly address a deficit in financial resources, and were measured using a dichotomised ($0 = no, 1 = yes$), seven-item scale ($KR-20 = .75$). The variable is a composite sum, where a higher score indicates engagement in more economising behaviours.
**Well-being.** Two dimensions of well-being were measured: depressed mood and life satisfaction. Depressed mood reflects the respondents’ mood state over the past six months, but was not a measure of clinical depression. The four items from Modecki, Barber and Vernon (2013; α = .69), have the question stem “How often do you” and use a 5-point Likert scale, where 1 = never and 5 = daily. An example item was “feel unhappy, sad or depressed?” The items were averaged, with a higher score indicating more depressed mood.

Life satisfaction indicates how content respondents were with their life circumstances. The scale included three items (α = .74) using the question stem, “Indicate to what extent you agree with the following statements:” and were rated using a 5-point Likert-type scale (1 = strongly disagree, 5 = strongly agree). An example item is “in most ways my life is close to my ideal.” A mean was computed, with a higher score indicating more satisfaction.

**Procedure.** Respondents were recruited via three modes of advertisement: A link on the University’s student portal webpage, electronic mail and a link on the student Guild’s electronic newsletter. Instructions and information were provided at the top of the web page for respondents to read. Upon completion of the survey, respondents anonymously submitted their survey, which then loaded a new web survey page for entry of their e-mail address and student identification number, if they wished to enter the prize draw for an iPod Touch, or one of 10 double passes to the cinema. Ethical approval for this project was granted by the university’s Human Research Ethics Committee.

**Statistical Analyses.** A multi-groups design was used to test the equivalence of a path model across four groups: home without support, home with support, away without
support, and away with support. The multi-groups analysis was conducted using AMOS (Arbuckle, 2008). The chi-square difference test was used to determine the change in model fit between a model constraining all groups’ pathways to equality, and a model allowing for all groups’ pathways to be freely estimated (the unconstrained model). A significant discrepancy between the fit of both models (i.e., a significant $\Delta \chi^2$), although supportive of a less parsimonious model, implies that pathways differ between groups and that the subsequent loss in degrees of freedom is warranted. Pairwise parameter comparisons, which provide critical ratios for parameter differences between the groups, are then examined for paths that differ between groups (Byrne, 2009; Hair, Black, Babin, & Anderson, 2010).

**Missing data.** The sample originally comprised 651 students. A total of 31 cases had missing values for the key categorical variables: economizing behaviours and living situation. These cases were excluded from the data set because values for these variables could not be imputed. Missing data for scale variables were rare (< 1% for each variable) supporting imputation. Expectation-maximization was used to impute values, resulting in a complete data set ($N = 620$). Data were multivariate normal ($Mardia’s Coefficient = -1.71$) following the deletion of 16 cases identified as multivariate outliers ($p < .001$); altogether, 604 respondents were included in analyses.

**Results**

*Table 4.1* includes descriptive statistics for each group and the composite sample. These data show that the *away without support* group have, on average, engaged in almost five of the seven economising behaviours in the six months prior to the survey. The *home with support* group reported engaging in almost two fewer behaviours.
Perceived financial strain and depressed mood were highest, and life satisfaction lowest, amongst students in the *away without support* group.

*Table 4.1 Group Differences on Composite Scores*

<table>
<thead>
<tr>
<th></th>
<th>Home Without Support</th>
<th>Home With Support</th>
<th>Away Without Support</th>
<th>Away With Support</th>
<th>Contrasts</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>F</em></td>
<td><em>M (SD)</em></td>
<td><em>M (SD)</em></td>
<td><em>M (SD)</em></td>
<td><em>M (SD)</em></td>
<td></td>
</tr>
<tr>
<td>Economising Behaviours</td>
<td>24.74</td>
<td>3.92 (2.05)</td>
<td>3.01 (1.97)</td>
<td>4.72 (1.78)</td>
<td>AWo &gt; AW, HWo, HW, AW, HW</td>
</tr>
<tr>
<td>Perceived Financial Strain</td>
<td>18.37</td>
<td>3.33 (1.03)</td>
<td>3.00 (1.15)</td>
<td>3.84 (0.95)</td>
<td>AWo &gt; HWo, AW, HW, HW</td>
</tr>
<tr>
<td>Depressed Mood</td>
<td>12.68</td>
<td>3.15 (0.78)</td>
<td>2.89 (0.78)</td>
<td>3.38 (0.82)</td>
<td>AWo, HWo &gt; AW, HW</td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td>18.82</td>
<td>2.88 (0.83)</td>
<td>3.37 (0.83)</td>
<td>2.82 (0.88)</td>
<td>HW, AW &gt; HWo, AW, HW</td>
</tr>
</tbody>
</table>

Note. Contrasts show significant differences at p < .05 using Tukey post-hoc comparisons.

* All *F*-ratios are significant at p < .001

Prior to fitting the multi-group model, a model was fit for each group individually. All groups fit the data well, which satisfied tenability assumptions for multi-group analysis. *Table 4.2* shows the correlation matrices for each of the four groups. The
constrained multi-group model, where all pathways for each group were constrained to equality, fit the data well, \( \chi^2 (17, N=604) = 42.05, p = .001, CFI = .93, RMSEA = .05 \) (90% C.I.: .031-.069). The unconstrained model was also a strong fit for the data, \( \chi^2 (8, N=604) = 26.24, p = .001, CFI = .062, RMSEA = .062 \) (90% C.I.: .036-.089). The incremental discrepancy between the constrained model and unconstrained model was significant, \( \Delta \chi^2 (9, N=604) = 18.82, p < .05 \), suggesting that parameter pathway estimates did differ significantly between the four groups.

*Table 4.3* shows the direct path coefficients for each group and identifies paired pathways that differ significantly; only significant pairwise comparisons will be addressed. The association between economising behaviour and perceived financial strain was positive and significant for each group. With every one standard deviation increase in economising behaviour, students from each group reported approximately half of one standard deviation increase in their perception of financial strain. For students in the *away with support* group, compared to the *away without support* group, a broader engagement in economising behaviours was associated with significantly greater increases in perceived financial strain.
**Table 4.2 Unconstrained Model Correlation Matrices** by Group

<table>
<thead>
<tr>
<th></th>
<th>Home Without Support &amp;</th>
<th>Home With Support&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Away Without Support &amp;</th>
<th>Away With Support&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>1. Economising</strong></td>
<td>-</td>
<td>.47**</td>
<td>.05</td>
<td>-.02</td>
</tr>
<tr>
<td><strong>Behaviours</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. Perceived Financial</strong></td>
<td>.53**</td>
<td>-</td>
<td>.12</td>
<td>-.04</td>
</tr>
<tr>
<td><strong>Strain</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3. Depressed Mood</strong></td>
<td>.15**</td>
<td>.28**</td>
<td>-</td>
<td>-.35**</td>
</tr>
<tr>
<td><strong>4. Life Satisfaction</strong></td>
<td>-.09*</td>
<td>-.18*</td>
<td>-.40**</td>
<td>-</td>
</tr>
</tbody>
</table>

Notes: ** p-value < 0.01; * p-value < 0.05

<sup>a</sup>Home Without Support above the diagonal and Home With Support below the diagonal.

<sup>b</sup>Away Without Support above the diagonal and Away With Support below the diagonal.
Table 4.3 Group Pathway Coefficients Showing Results of Pairwise Comparison Tests

<table>
<thead>
<tr>
<th></th>
<th>Home Without Support (n = 86)</th>
<th>Home With Support (n = 219)</th>
<th>Away Without Support (n = 152)</th>
<th>Away With Support (n = 147)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Financial Strain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economising Behaviours</td>
<td>0.47**</td>
<td>.53**</td>
<td>.44*</td>
<td>.57*</td>
</tr>
<tr>
<td>Depressed Mood</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Financial Strain</td>
<td>0.16&lt;sub&gt;a&lt;/sub&gt;</td>
<td>.28**</td>
<td>.38&lt;sub&gt;b&lt;/sub&gt;**</td>
<td>.25**</td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Financial Strain</td>
<td>-0.04&lt;sub&gt;a&lt;/sub&gt;</td>
<td>-.18**&lt;sub&gt;a&lt;/sub&gt;</td>
<td>-.35&lt;sub&gt;b&lt;/sub&gt;</td>
<td>-.22&lt;sub&gt;a&lt;/sub&gt;</td>
</tr>
</tbody>
</table>

Note. Coefficients with different row subscripts differ significantly at p < .05 z-scores.

** p-value < 0.01; * p-value < 0.05

The association between perceived financial strain and depressed mood was positive and significant for three groups, but not the home without support group. This association was strongest for those in the away without support group; more economising behaviour was associated with an increase in depressed mood. For students in the away without support group, compared to the home without support group, greater perceived financial strain was associated with significantly more depressed mood.

The association between perceived financial strain and life satisfaction was negative and significant for three groups, with the single exception of students in the...
home without support group. The association was strongest for those in the away without support group; more economising behaviours was associated with lower life satisfaction. This path varied the most between groups. The largest difference in strength was between the away without support group and the home without support group, whose coefficients differed significantly.

Discussion

Students who were living away from home and perceived inadequate parental financial support reported more economising behaviours than all other groups of students, and were amongst the most financially strained and the least psychologically well students. The perception of adequate, compared to inadequate, perceived parental financial support during tertiary study was associated with weaker relations between students’ perceptions of financial strain and their mood and life satisfaction. This result suggests that parental financial support that meets student needs can protect their well-being, and is consistent with the buffering hypothesis (Cohen & Wills, 1985). Interestingly, there were no significant associations between financial strain and well-being for the home without support, their average well-being was significantly lower than both with support groups. However, although both with support groups reported significantly better well-being that the home without support group, their well-being was significantly negatively associated with their perceptions of financial strain. Collectively, these findings suggest that the buffering potential of parental financial support on well-being is moderated by the living arrangements of the student. A caveat to the interpretation of the parental home as a buffer is that dynamics within the parental home, such as family discord, were not examined but may influence the extent to which remaining in the home can be protective.
Interestingly, students in the *away with support* group perceived greater levels of strain with every additional economising behaviour they engaged in, compared to the *home without support* group. Although having moved out of the parental home, the perception of adequate parental financial support was associated with more financial strain compared to perceiving inadequate parental financial support. This finding is contrary to the buffering hypothesis, providing further support for the notion that the protective potential of perceived parental financial support in the context of personal finance and well-being is influenced by student living situation. Alternatively, this may simply suggest that students living away from their parents who are more strained receive more financial support from their parents.

Students living away from the parental home are in the most vulnerable position when their perceptions of financial strain are high, with the well-being of those who perceive inadequate parental financial support most at-risk. It could be inferred that, although living away from the family home and perceiving inadequate parental financial support is associated with slightly lower perceived financial strain, the apparent general benefit is reduced when there is financial trouble, by the significantly stronger effects of strain on well-being. A caveat to these findings, however, is that although these groups’ paths are significantly different, the associations remain comparatively strong, suggesting that the financial experiences of students living outside of the family home can be only partly ameliorated by adequate parental financial support. Although associations between financial strain and well-being for both at-home groups did not differ significantly, these associations were both significantly weaker than the *away without support* group. Together, the patterns across all groups suggest a general protective effect of remaining in the parental home during tertiary study. The implication for student well-being, then, is that remaining in the parental home during
tertiary study could be more protective than living outside of the parental home, even if adequate parental financial support is perceived.

The positive association between perceived financial strain and depressed mood for both away-groups suggests that the experience of financial strain can be particularly detrimental to students’ mood when they have moved out of home, but may be more so for students who perceive inadequate financial support from their parents. In this situation, young adults enter a novel world, with relatively little experience, and, perhaps, feel a hopelessness associated with low resources and no one to lean on. The financial threat that they perceive, then, goes on to impact seriously on their psychological well-being, more strongly than on students who remain in the parental home.

The finding that perceived financial strain is negatively associated with life satisfaction at a significantly higher level for the away without support group, compared to all other groups, is particularly worrying. Because life satisfaction is a measure of global well-being, in comparison to depressed mood, which is a non-clinical measure of state disposition, away without support students, who reported significantly higher levels of financial strain compared to all other groups, may be the most psychologically at-risk group of students during young adult development. While these students are likely to be the least constrained in exploring their financial independence and developing their autonomy, doing so in an environment without direct or indirect protection may be placing their well-being at risk.

The positive associations between economising behaviour and perceived financial strain reported across all groups suggest that, regardless of circumstances, engaging in a broader set of economising behaviours is associated with more strained financial
experience. However, economising behaviour and perceived financial strain was most strongly related for students who perceived adequate parental financial support, regardless of their living situation. Although neither of these two groups’ mean level of economising was the highest amongst all groups, the stronger associations may be indicative of just how strained perceptions can become when, despite receiving adequate parental financial support, students’ economising is more restrictive.

For students who live with their parents but perceive inadequate parental financial support, financial strain was not significantly associated with reduced well-being. These students may be able to explore financial autonomy while benefitting non-financially from their living situation, through the provision of meals, accommodation and shared facilities, such as media and communications. That this was the lone group whose perception of financial strain was not significantly associated with their well-being suggests that staying in the parental home, even with little other financial support from parents, can protect young adult students from strained financial experiences, and compromised well-being. Although more financial strain was associated with lower well-being for students living at home and perceiving adequate financial support from their parents, they reported healthiest mean well-being outcomes. These findings highlight a general protective component of living with parents while studying at university.

Implications. The pursuit of a degree during young adulthood yields considerable financial strain. While consistent with previous research (Bexley et al., 2013), the comparatively stronger associations for students who perceived adequate parental financial support alludes to a compounding perception of strain. Consistent with developmental theory, these students feel the pressure of attaining financial autonomy, but are caught in the pursuit of an education in an environment that does not provide
many financial opportunities. These results provide preliminary support for the protective advantage from financial strain while living with parents while at university. The reality of financial dependence on family may contribute to perceptions of greater financial strain, given the desirability of achieving what society considers a significant marker of adulthood; however, the benefits may support healthier financial transitions post-degree.

Although staying in the parental home is shown to be protective for student young adults, that option may not be available or practical for everyone. For students who cannot remain in the parental home, and particularly for those who are not in a position to receive adequate financial support from the parents, these findings are most concerning. Their negative financial experiences are most strongly associated with lower well-being. Although these students would likely have access to government supports, such as rental assistance and other allowance schemes, these results suggest that if they are accessing these schemes, they may not provide the same protection from perceptions of financial strain.

Universities and student representative groups could partner with charitable organisations to assist in reducing perceptions of strain in these students by targeting interventions to reduce their need to economise. Wider marketing of, and incentives to use the on-campus health resources may tackle students’ reportedly high prevalence of postponing medical and dental costs. However, given that some economizing behaviours can be adaptive, such as reducing communication and travel costs, it is not feasible to target interventions that drastically reduce a student’s need to economise. Changes to policy that increase students’ knowledge of where to seek financial counselling and budgeting services, and improve their access to these services, may assist these students gain greater control over the resources they have. Guiding these
students to a more positive understanding of their need to economize during the time-limited context of tertiary education may contribute to healthier well-being.

**Limitations and future research.** Given that this paper focuses on financial experiences of student young adults, attention to instrumental behaviours linked to work would have been useful. In recent years, the conditions of studentship have undergone change. While fewer students are in paid employment, those who are in paid employment are working longer hours, and more students are relying on government funding to assist them through university (Bexley et al., 2013). Future research is needed to understand the roles of term-time employment, work hours per week, and government assistance. Additionally, the data were cross-sectional, and as such, theory has been the driver of hypothesised directionality. Conducting longitudinal research using the transactional model of stress to guide methodology would offer further support for applying this model to students’ financial experiences. Finally, because the respondents were recruited using convenience sampling, calculation of the minimum sample size required for adequate statistical power was not conducted prior to data collection.

**Conclusion.** Ultimately, these results show that economising during university is associated with students’ perception of financial strain, even for students living at home and perceiving financial support from parents. The resulting appraisal of stress predicts lower mood states and lower satisfaction with life. Students who remain in the parental home during university may be poised for a less financially stressful and more satisfying life. Even students who do not feel that their parents meet their needs for support, remaining in the parental home during university may allow them to benefit from the indirect support of accommodation, meals and other amenities. However, if students living away from home can position themselves to have their needs supported
by their parents, experiences of heightened financial stress may be appraised as less threatening due to the protection that adequate parental financial support can provide.
References


Postscript to Chapter 4

In Chapter 3, the results provided support for an indirect effects model of economising behaviour, financial strain, and psychological well-being. It was inferred from the results that students’ psychological well-being was associated with the extent to which they economised through appraisal of economising as placing them in financial strain. In Chapter 4, the associations between economising behaviour and perceived financial strain, and between perceived financial strain and psychological well-being, were different dependent on where the student lived (in the parental home versus away from the parental home) and the extent to which they perceived adequate financial support from their parents. The study presented in Chapter 4 focussed only on the differences between the four groups for each direct path in the model. In addition to the differences presented in the published study, there were also differences between the four groups for indirect paths in the model. These data were not included in the published paper, but are included here for completeness.

**Indirect path comparisons.** The indirect effects of economising behaviours on students’ well-being through perceived financial strain (Watson et al., 2014) are presented in Table 4.4. In the table, the bootstrapped indirect paths for each of the four groups are shown. With the exception of home without support, the indirect effects of economising behaviour on both depressed mood and life satisfaction through perceived financial strain were significant. For students in the *home with support, away without support* and *away with support* groups, economising behaviours were associated with higher depressed mood through perceived financial strain. Similarly, for students in these groups, economising behaviour was associated with lower life satisfaction through perceived financial strain. For the *home without support* group only, perceived financial strain and both depressed mood and life satisfaction were not significantly associated,
although the association between economising behaviour and perceived financial strain was significant and comparable with the other groups. This result suggests that for home without support students, the association of perceived financial strain with psychological well-being may be buffered by living with parents. However, cutting back on basics was still significantly associated with financial strain, similar to students in the other groups. Thus, the non-monetary benefits provided by living in the family home while studying may provide some protection from the negative effects of financial strain on well-being.
### Table 4.4 Bootstrapped Standardized Coefficients (with 95% Confidence Intervals) for the Indirect Effect Pathways for Each Group

<table>
<thead>
<tr>
<th>Indirect Path</th>
<th>Home Without Support (n = 86)</th>
<th>Home With Support (n = 219)</th>
<th>Away Without Support (n = 152)</th>
<th>Away With Support (n = 147)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depressed &lt;--- Economising</td>
<td>$\beta$</td>
<td>$p$</td>
<td>$\beta$</td>
<td>$p$</td>
</tr>
<tr>
<td>Mood Behaviours</td>
<td>.05</td>
<td>.373</td>
<td>.15</td>
<td>.004</td>
</tr>
<tr>
<td>Life &lt;--- Economising</td>
<td>-.02</td>
<td>.774</td>
<td>-.09</td>
<td>.011</td>
</tr>
<tr>
<td>Satisfaction Behaviours</td>
<td>(-.11 - .06)</td>
<td>(-.17 - -.03)</td>
<td>(-.22 - -.08)</td>
<td>(-.22 - -.05)</td>
</tr>
</tbody>
</table>
Responsible financial behaviours and active coping responses to financial hardship have been linked to increased psychological well-being in student young adults (Shim, Serido, Tang, & Card, 2015; Xiao, Tang & Shim, 2009). Therefore, more needs to be understood about the origins of positive financial behaviours. Young adults’ financial behaviours and coping strategies are shaped strongly by socialising experiences with parents and others (Shim, Barber, Card, Xiao, & Serido, 2010). Consistently, research has demonstrated that parents and peers are influential socialising agents for young adults’ behaviours (Rodriguez, Mira, Myers, Morris, & Cardoza, 2003), and more specifically, financial behaviours (McNeill & Turner, 2013; Shim et al., 2009; Serido et al., 2015).

Theories of normative influence posit that norms will be more or less influential depending on the relevance of a behaviour in young adults’ lives (Kallgren, Reno & Cialdini, 2000). For young adults working full-time and living out of home, financial behaviours, both their own and those of the key socialising agents around them, will be a salient focus in their lives, compared to student young adults who live at home with parents. Thus, financial socialisation experiences should vary for young adults who undertake different instrumental roles after high school (see Figure 4.1).

Chapter 5 investigates whether financial socialisation influences differ for student versus working young adults. Using social norm theory, this study explores the different types of financial norms (i.e. descriptive and injunctive) reported by students and working young adults, and how these norms are linked to financial behaviours. Further, perceived parental and peer norms are tested across the living situations of students and workers, comparing those who live with parents to those who have moved out. In this way, instrumental roles are examined in conjunction with residential contexts, allowing for a
nuanced examination of normative influences across a range of young adult life circumstances.

![Conceptual model diagram]

Figure 4.1. The conceptual model tested in Chapter 5 (Study 3).

References


5. CHAPTER FIVE: Study 3

University Attendance Moderates the Link between Financial Norms and Healthy Financial Behavior for Young Adults

This chapter includes a co-authored paper. The bibliographic details of the co-authored paper, including all authors, are:

Watson, S. J. & Barber, B. L., (under review, invited to revise and resubmit). University attendance moderates the link between financial norms and healthy financial behavior for young adults. *Journal of Family and Economic Issues.*

My contribution to the paper involved:

I collected and prepared the data, formulated the question in collaboration with my co-authors, analysed the data, and drafted the manuscript. My co-author then reviewed the manuscript draft, suggesting edits.

_________________________________ (Date)__________________

Stuart J Watson

_________________________________ (Date)__________________

Supervisor and Co-author: Prof Bonnie Barber
Abstract

Indicators of adulthood have recently been reconceptualized to accommodate the greater variation in pathways available to high school leavers. Young adults’ perceptions are now considered more valid indicators of adulthood than traditional objective markers, with perceived financial independence topping the list. Some pathways chosen at the end of high school, such as full-time employment, present opportunities to develop a mature financial skillset; other pathways, however, such as studentship, do not. In a sample comprising young adults, the associations between parent and peer financial norms and young adults’ financial behavior were explored separately for young adults who were studying and those who were working, controlling for whether or not they had moved out of their parents’ homes. Parental injunctive norms most strongly predicted students’ healthy financial behavior, whereas parental descriptive norms most strongly predicted employed young adults’ healthy financial behavior. Although peer descriptive norms predicted both employed and student young adults’ healthy financial behavior, the predictive role of parents was stronger overall. The findings demonstrate differences in financial socialization for young adults on different pathways after high school and account for delays in developing financial independence and greater autonomy for some during young adulthood.
An important task during young adulthood is the successful achievement of financial independence (Arnett 2000). The development of healthy financial behaviors, such as budgeting, saving, and tracking expenses, is conducive to achieving financial independence and well-being (Xiao et al. 2009). Observations and interactions with parents and peers provide significant opportunities for the development of these behaviors (Allen et al. 2007). However, the importance of financial behaviors and the opportunities to develop them do not emerge at the same age for all young adults. Specific autonomy indicators, such as earning an income and moving out of the parental home, are likely to facilitate the development of mature financial behaviors. The pathway a young adult chooses, then, be it college studentship or employment, is likely to determine the demands for responsible financial behaviors, and thus, the degree to which parents’ and peers’ financial modeling and expectations influence young adults’ own financial behaviors.

Financial socialization is a key determinant of young adults’ financial behaviors (McNeill and Turner 2013). During adolescence, key financial socializing agents include parents, employers, and teachers, with parents exerting the strongest influence on healthy financial behaviors such as budgeting and saving (Kim et al. 2011; Shim et al. 2010). Financial socialization during adolescence predicts later financial attitudes and behaviors, with exploration and consolidation continuing during young adulthood (Shim et al. 2010). Young adults, particularly those studying, can be characterized by limited resources and savings, a susceptibility to debt, and a budget in deficit, and inexperience in basic financial skills. Given these potential vulnerabilities in establishing financial independence, it is important to identify factors that promote or limit exploration of financial autonomy.
**Norms and financial socialization.** Active management and efficient use of limited resources can protect young adults from experiences with financial strain and low financial well-being. However, symptoms of insufficient financial literacy, which include high debt, credit overuse and non-existent savings, are commonly reported by young adults (Beal and Delpachitra 2003). In Australia, young workers report financial attitudes symptomatic of low financial literacy (Dowling et al. 2008). Parents, however, can be influential socializing agents of their children’s financial literacy and behavior (Allen et al. 2003; Shim et al. 2010; Webley and Nyhus 2006) and when young adults are mentored by, and engage in discussion about finances with their parents, they display healthier financial behaviors compared to those without positive parental socialization (Norvilitis and MacLean 2010). Shim et al. (2010) found parents’ roles in shaping students’ financial knowledge and behavior was stronger than the influence of work experience and financial education combined.

During young adulthood, however, peers are a particularly influential referent group, as young adults explore and develop their identity (Youniss and Smollar 1985). Other domains of research, such as adolescent sexual (Gilliam et al. 2007), anti-social (Ary et al. 1999; Brown et al. 1986) and drug abuse (Allen et al. 2003; Durkin et al. 2005) behaviors, show peers as the dominant influence on young adults’ conduct. This peer influence is particularly strong at younger ages, with adolescents’ conformity to peer antisocial behavior peaking during mid-adolescence and then declining toward the end of high school to be overtaken by conformity to parent and peer prosocial pressures (Berndt 1979). Little is known about the relative impact of parents and peers in positive instrumental roles such as financial management and budgeting during young adulthood. Further, we need to learn
how pressures from the two crucial socializing agents are integrated into attitudes and enacted through behaviors.

**Theory of Normative Social Behavior.** The degree to which a norm is influential is contingent upon others’ expectations of norm compliance, and the potential for negative feedback or punishment. The Theory of Normative Social Behavior distinguishes between two types of norms: descriptive and injunctive (Rimal and Real 2005). Descriptive norms are defined as how referent others are perceived to behave in certain situations, whereas injunctive norms are defined as the perceived expectations of referent others for how to behave (Rimal and Real 2003). Researchers have conducted meta-analytic studies that investigate the relative influence of descriptive and injunctive norms on behavior. These studies demonstrate that descriptive norms are more strongly, and more consistently, predictive of behavior (Manning 2009). For young people, often the effect of peer injunctive norms is weak (Grønhøj et al. 2013).

The theory, developed in the context of young adults’ alcohol consumption, proposes that the effect of referent others’ modeling upon an individual’s behavior is conditioned by the effect of other referent groups’ expectations. For example, when referent peers are perceived to be engaging in a specific behavior (descriptive norm), a young adult is more likely to report also engaging in that behavior when they perceive the expectation to do so (injunctive norm; Rimal and Real 2005). Further, depending on the likely sanctions associated with a behavior, injunctive norms expressed by one referent group may intervene between the descriptive norms modeled by another group and the instance of the behavior (Costa et al. 2007; Flay et al. 1994). For example, if a student’s friends are spending a lot of money going out drinking, a resulting decision to join in may be less likely in the face of strong parental injunctive norms to manage within a budget. The
influence of such parental views is likely to differ between employed young adults and university students.

Young adults who attend university often delay their financial development and remain dependent on parental financial support (Arnett 2005; Cobb-Clark 2008). The economic and social context for these young adults, compared to employed young adults, is likely to require a different set of financial behaviors and associated expectations. For example, working, compared to studying, is associated with greater financial knowledge in young adults (Danes and Brewton 2014), which supports the notion of a developing financial behavior set at an earlier age. During young adulthood, the perceived financial pressures of parents and peers are likely to impact on students’ own financial behaviors differently compared to workers because students are likely to have greater financial dependence on parents along with reduced financial resources and responsibilities.

**Instrumental roles and financial socialization.** Commitment to either a university course or full-time employment is a key choice during young adulthood, and the selected instrumental role is a likely determinant of social, economic and developmental experiences. Tertiary students in Australia are cash-strapped, often struggling with limited resources. They often have fewer financial responsibilities compared to employed young adults, resulting in a greater reliance on parents for financial support (Bexley et al. 2013). With fewer resources at their disposal and greater dependence on parents, student young adults are often limited in their freedom to explore financial independence and develop financial autonomy (Yazedjian et al. 2010). As such, student young adults may be less focused on determining their own financial behaviours, allowing their parents’ expectations to influence them.
Employed young adults, conversely, are less likely to experience the same economic and developmental constraints because they are earning an income and can explore their financial independence. Much less is known about the employed young adult population, however, because much of the research on financial behaviors in young adulthood has focused on university students. From the little research that has been done, early financial socialization by parents predicts healthy adult financial behavior (Cho et al. 2012). The opportunity to actively explore financial independence and experience the challenges and risks of managing money may draw employed young adults’ attention to the financial behaviors of those around them (Rimal and Real 2005) and to critically engage with their development of mature financial behaviors. Yet this developmental pathway has been neglected, and research is needed to better understand how employment, compared to university attendance, might lead to a differential impact of parents and peers in the development of financial behaviors during the transition to adulthood.

**Leaving the parental home and financial socialization.** Another key developmental marker of adulthood is leaving the parental home, which contributes to perceptions of financial independence (Xiao et al. 2014). Certain experiences may precipitate the move, including for example, educational attainment, getting married, or having children; also, cultural, socio-political and economic factors can precipitate a move (Arnett 2001; Cobb-Clark 2008; Goldscheider and Goldscheider 1994; Mandic 2008). Recently, though, moving out of the parental home has been delayed until adulthood because of the benefits that living with parents provides (Cobb-Clark 2008). Independent living, then, during young adulthood may influence the salience of certain norms and socializing agents. Living independently is more prevalent among young adults who work full-time than among students (Arnett 2000; Goldscheider and Goldscheider 1994). For young adults in full-time
employment who have moved out of the parental home, financial independence is likely to be a primary focus and their chosen referent group is likely to be those who are perceived to be financially mature and capable adults (Kallgren et al. 2000). The extent to which instrumental roles and independent living determine young adult referent groups and their influence on financial behavior is not well understood, and this study aims to enhance our understanding of these dynamics.

**Current study.** Shim and colleagues’ (2010; 2015) work on financial socialization for student young adults has highlighted the importance of parental role modeling and expectations in shaping healthy financial behaviors. Their approach is guided by theories of consumer socialization and planned behavior to model the impact of earlier financial learning on young adults’ current financial behaviors. In this paper, we intend to draw on both Shim et al.’s (2010) socialization framework based on a sample of student young adults, and on developmental theories regarding young adulthood, to explore whether or not the socialization process is similar for employed young adults.

The influence of parents’ and peers’ perceived financial norms on financial behavior in different young adult instrumental pathways is the primary focus of this study. We test the links between these norms and the development of healthy financial behaviors during young adulthood. More specifically, we investigate the relative influence of parental and peer financial role modeling and parental normative expectations between student young adults and employed young adults. The role of independent living is controlled for in the model because young adults’ perceptions of parental financial role modeling and expectations are likely to differ when they are living outside of the parental home. We also test whether independent living predicts perception of norms differently for student versus employed young adults. Finally, we test whether peer descriptive norms predict the
financial behaviors of young adults, and whether the association differs between those at work compared with those at university. The influence of peers is solid in other domains of behavior; however, Shim et al. (2015) found no significant effect of peers’ financial behaviors on the financial socialization of students. We aim to determine whether or not this is true for working young adults.

**Methods**

**Respondents.** The sample comprised 301 Australian young adult respondents who had previously participated in the Youth Activity Participation Study (see Blomfield & Barber, 2009) during high school. Female respondents (n = 68.1%) outnumbered males. The sample ranged in age between 17 and 21 years (M = 18.15, SD = 1.04) and included more university student respondents (58%) than those who were employed. Table 5.1 displays the demographic composition of the sample, organized by instrumental role type. Fewer male young adults than female young adults were primarily employed, and fewer female young adults than male young adults were primarily students. No significant differences in cell proportions were found between working and student young adults, and independent living.

**Measures.** The YAPS post-high school follow-up survey comprised items intended to measure young adult developmental experiences, which included living arrangements, employment and study status, leisure time use, financial influences, and financial behavior. Respondents provided their date of birth, which was used to calculate their age when they completed the survey, and their gender. Descriptive statistics and measures of internal consistency are provided in Table 5.2.
Table 5.1 Sample n (valid row %*) for Demographic Variables by Instrumental Role, with Age Statistics

<table>
<thead>
<tr>
<th></th>
<th>Students ((n = 174))</th>
<th>Employed ((n = 127))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>65(_a) (69.1)</td>
<td>29(_a) (30.9)</td>
</tr>
<tr>
<td>Female</td>
<td>107(_b) (52.2)</td>
<td>98(_b) (47.8)</td>
</tr>
<tr>
<td><strong>Independent Living</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Living in the Parental Home</td>
<td>140(_a) (59.1)</td>
<td>97(_a) (40.9)</td>
</tr>
<tr>
<td>not paying board</td>
<td>121 (68.4)</td>
<td>56 (31.6)</td>
</tr>
<tr>
<td>paying board</td>
<td>18 (31.6)</td>
<td>39 (68.4)</td>
</tr>
<tr>
<td>Living Away from the Parental Home</td>
<td>34(_a) (53.1)</td>
<td>30(_a) (46.9)</td>
</tr>
<tr>
<td>renting alone</td>
<td>1 (33.3)</td>
<td>2 (66.7)</td>
</tr>
<tr>
<td>renting with flatmates</td>
<td>13 (44.3)</td>
<td>17 (56.7)</td>
</tr>
<tr>
<td>renting with partner</td>
<td>5 (38.5)</td>
<td>8 (61.5)</td>
</tr>
<tr>
<td>student housing</td>
<td>14 (100)</td>
<td>-</td>
</tr>
</tbody>
</table>

Mean Age \((SD)\)  
Students 18.2 (1.05)  
Employed 18.09 (1.02)

* Valid percentage used to adjust for missing values

\(_{a,b}\) Subscripts that differ within Gender and Independent Living denote significantly different cell proportions, using the Chi-square Test of Independence test.
Table 5.2 Item Descriptives (M, SD) and Scale Reliability (a)

<table>
<thead>
<tr>
<th></th>
<th>Students</th>
<th>Employed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (SD)</td>
<td>a</td>
<td>M (SD)</td>
</tr>
<tr>
<td>Parental Injunctive Norms</td>
<td>.78</td>
<td>.88</td>
<td>.83</td>
</tr>
<tr>
<td>My parents think I should...</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Track monthly expenses</td>
<td>3.82 (1.15)</td>
<td>4.17 (1.11)</td>
<td>3.97 (1.15)</td>
</tr>
<tr>
<td>Spend within the budget</td>
<td>4.24 (.93)</td>
<td>4.34 (.96)</td>
<td>4.28 (.94)</td>
</tr>
<tr>
<td>Save money each month for the future</td>
<td>4.39 (.86)</td>
<td>4.55 (.82)</td>
<td>4.46 (.85)</td>
</tr>
<tr>
<td>Parental Descriptive Norms</td>
<td>.83</td>
<td>.88</td>
<td>.85</td>
</tr>
<tr>
<td>Indicate to what degree you think your parent(s) engage in the following behaviours:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Track monthly expenses</td>
<td>4.32 (.94)</td>
<td>4.36 (.89)</td>
<td>4.34 (.92)</td>
</tr>
<tr>
<td>Spend within the budget</td>
<td>4.18 (.94)</td>
<td>4.20 (1.00)</td>
<td>4.19 (.96)</td>
</tr>
<tr>
<td>Save money each month for the future</td>
<td>4.25 (1.00)</td>
<td>4.28 (.92)</td>
<td>4.26 (.97)</td>
</tr>
<tr>
<td>Peer Descriptive Norms</td>
<td>.68</td>
<td>.65</td>
<td>.67</td>
</tr>
<tr>
<td>Indicate to what degree you think your friends engage in the following behaviours:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Track monthly expenses</td>
<td>2.55 (.96)</td>
<td>2.39 (.92)</td>
<td>2.48 (.94)</td>
</tr>
<tr>
<td>Spend within the budget</td>
<td>2.71 (.96)</td>
<td>2.56 (.95)</td>
<td>2.65 (.96)</td>
</tr>
<tr>
<td>Save money each month for the future</td>
<td>2.74 (1.01)</td>
<td>2.72 (1.03)</td>
<td>2.73 (1.02)</td>
</tr>
<tr>
<td>Financial Behaviour</td>
<td>.70</td>
<td>.71</td>
<td>.70</td>
</tr>
<tr>
<td>Indicate how often you have engaged in the following activities within the past six months:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Track monthly expenses</td>
<td>3.42 (1.38)</td>
<td>3.64 (1.30)</td>
<td>3.51 (1.35)</td>
</tr>
<tr>
<td>Spend within the budget</td>
<td>3.55 (1.32)</td>
<td>3.71 (1.24)</td>
<td>3.62 (1.28)</td>
</tr>
<tr>
<td>Saved money each month for the future</td>
<td>3.66 (1.37)</td>
<td>4.00 (1.28)</td>
<td>3.80 (1.34)</td>
</tr>
</tbody>
</table>
**Instrumental Role.** Instrumental Role was the primary role a young adult occupied. Respondents reported both their employment and study circumstances. The variable Instrumental Role was coded using the information provided to determine their primary activity. Respondents who reported working full-time, irrespective of their study circumstances, were coded as Employed. Respondents who reported full-time study, irrespective of employment circumstances, were coded as Students. No respondent reported both working and studying full-time.

**Independent Living.** Respondents reported their living arrangements from among several predetermined categories: living at home with parents and paying board; living at home with parents and not paying board; living alone in a rental property; living with flatmates in a rental property; living with a partner in a rental property; living in student housing. These options were then used to code the variable, Independent Living. Respondents who reported living with parents were coded as 0 = Living in the Parental Home; the remaining respondents were coded as 1 = Living Away from the Parental Home.

**Norms.** All norm items were sourced from Shim et al. (2010). Parental Injunctive Norms reflect young adults’ perceived parental expectations to engage in healthy financial behaviors. Internal consistency between the three items was strong for both the student and employed sample (Table 2). Parental Descriptive Norms reflect young adults’ perceptions of the degree to which their parents engage in (i.e. model) healthy financial behaviors. Peer Descriptive Norms reflect young adults’ perceptions of the degree to which their friends model specific financial behaviors. For each item, respondents were asked to rate their degree of agreement with three items using a 5-point Likert-type scale (1 = strongly disagree to 5 = strongly agree). Each norm scale was created by computing an average of the items comprising the construct.
Financial Behaviors. Financial Behaviors measured the degree to which the respondent engaged in specific healthy financial behaviors in the six months prior to completing the survey (Shim et al. 2010; Shim et al. 2009). Items were measured using a 5-point Likert-type scale (1 = Never to 5 = very often). Internal consistency between items was acceptable. The mean of the three items was computed.

Procedure. Two cohorts of young adults who had participated in the YAPS project while at school were approached for participation in the post-high school survey. During the participation in the final survey at school, respondents had been asked to complete a form if they agreed to be contacted as part of the post-high school follow-up survey. Depending on the contact details provided by respondents, one of three modes of follow-up contact was attempted: an e-mail containing an individualized URL link to the survey was sent to respondents who provided an e-mail address; a postal pack containing a paper copy of the survey was sent to respondents who provided a street address; and, a phone call was made to young adults whose e-mail or postal pack had not been successfully delivered. One round of follow-up was carried out to prompt young adults who had not yet completed their surveys. The online survey was programmed and collected using SurveyMonkey. Participants received a choice of a $20 voucher for either a Department store or iTunes credit as compensation for their time.

Results

A multi-group design was used to test the equivalence of path models for employed and student young adults. The multi-groups analysis was conducted using AMOS (Arbuckle 2008). Multi-group designs allow for testing of significant differences between pathway coefficients for two or more groups. Traditionally, the chi-square difference test is used to determine the change in model fit commencing with equality-constrained pathways.
between the groups, and incrementally allowing each pathway to freely estimate for each group. When relaxing a constrained pathway between groups results in a smaller discrepancy between the data and the model matrices (i.e. a significant $\Delta \chi^2$), a moderating effect by the grouping variable can be implied. The pairwise parameter comparison method, which provides critical ratios for parameter differences using the $z$ distribution, provides the standardized magnitude of the difference between groups’ pathway coefficients (Byrne 2009; Hair et al. 2010). This pairwise method was used to test for moderation in this study, where pathways for each group were freely estimated in the initial instance of fitting the model (Hair et al. 2010). Inspection of critical ratios provided information regarding pathway coefficients that differed significantly between the groups and guided constraining pathways to equality that did not differ in order to produce a final parsimonious multi-group model; this process, however, rendered the model fitting process exploratory rather than confirmatory, which is consistent with the study’s research aims.

**Multi-group path model.** Prior to fitting the multi-group model, a model was fit for each group individually; the models for both groups fit the data well, thus satisfying tenability assumptions for multi-group analysis. An unconstrained multi-group model was then fit where all pathways between both groups were estimated. Table 5.3 displays the correlation matrix and scale descriptive statistics for the unconstrained multi-group model. Employed young adults, compared to students, reported both greater perceived injunctive norms from their parents, $F(1,299) = 4.61, p = .033$, and engaging in more healthy financial behaviors, $F(1,299) = 4.27, p = .040$. Employed and student young adults did not differ in their reports of parental or peer descriptive norms.
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Independent Living</td>
<td></td>
<td>-</td>
<td>-08</td>
<td>-17*</td>
<td>-15†</td>
<td>-08</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Parental Norms</td>
<td>20*</td>
<td></td>
<td>46**</td>
<td>01</td>
<td>45**</td>
<td>4.15</td>
<td>.83</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Parental Descriptive Norms</td>
<td>.08</td>
<td>48**</td>
<td></td>
<td>0.4</td>
<td>29**</td>
<td>4.25</td>
<td>.83</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Peer Descriptive Norms</td>
<td>.09</td>
<td>-01</td>
<td>-04</td>
<td></td>
<td></td>
<td>2.66</td>
<td>.76</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>5. Financial Behaviour</td>
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<td>.36**</td>
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<td>3.54</td>
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<td>Mean</td>
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<td>4.36</td>
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<td>2.57</td>
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<td>Standard Deviation</td>
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<td>.87</td>
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** p-value < 0.01; * p-value < 0.05; † p-value <.10

Notes: Employed young adults below the diagonal and student young adults above the diagonal.
The specified model was a strong fit for the data, $\chi^2 (6, N=301) = 2.81, p = .832, CFI = 1.00, RMSEA = 0.0 (90\% C.I.: 0-.044)$. Pairwise parameter comparisons were inspected in order to identify coefficient estimates that significantly differed between students and those employed. There were two invariant pathways between the two groups: parental descriptive norms predicting parental injunctive norms, and peer descriptive norms predicting financial behavior; both pathways were constrained to equality in the final model. Further, another two pathways approached invariance ($p < .10$) but were not constrained to equality; these pathways were independent living predicting parental injunctive norms and independent living predicting peer descriptive norms. All other path coefficients differed significantly between the groups and were freely estimated in the final model; these pathways were independent living predicting peer descriptive norms; independent living predicting peer injunctive norms; parental injunctive norms predicting financial behavior; and, parental descriptive norms predicting financial behavior.

The constrained final model fit the data well, $(\chi^2 (8, N=301) = 3.43, p = .904, CFI = 1.00, RMSEA = 0.0 (90\% C.I.: 0-.028))$. Upon constraining two parameters to equality between the two groups and thus, fitting a more parsimonious model by two degrees of freedom, the incremental discrepancy between the unconstrained model and the final model was not significant, $\Delta \chi^2 (2, N=301) = .62), p = .732$. Thus, the more parsimonious final model provided tenable support for the view that there were invariant path coefficients between student young adults and employed young adults.

**Direct path coefficients.** Figure 5.1 displays the coefficients for both the student and the employed groups. Parental descriptive norms was significantly positively associated with financial behavior for employed young adults, but not significantly predictive of financial behavior for students. Conversely, parental injunctive norms was significantly
positively associated with financial behavior for students, but not significantly associated for employed young adults. Peer descriptive norms was positively associated with financial behavior, constant across both groups. Also constant across both groups, parental descriptive norms was significantly positively predictive of parental injunctive norms. Living outside of the parental home was significantly associated with perceiving greater parental injunctive norms for employed young adults, but did not significantly predict parental injunctive norms for students. Conversely, living out of the parental home as a student was associated with significantly lower parental and peer descriptive norms; however, neither association was found to be significant for employed young adults.
Figure 5.1. Results for final constrained model.

Standardized path coefficients and $R^2$ for both student young adult and employed young adult (parenthetically) models; pathways with only one coefficient did not differ significantly between groups and so were constrained to equality.

* = $p < .05$; ** = $p < .01$; *** = $p < .001$
**Indirect path coefficients.** None of the indirect pathways (see Figure 5.1) were significant for employed young adults. Conversely, all indirect pathways in the model through parental norms were significant for students; however, the only indirect pathway of theoretical interest is parental descriptive norms to financial behaviors, through parental injunctive norms (bootstrapped standardized coefficient for the indirect effect = .185 (95% C.I.: .140-.272), p = .003). Through parental injunctive norms, for every one standard deviation improvement in parental descriptive norms, there was an associated one-fifth of one standard deviation improvement in financial behavior. Students’ financial behavior is associated with their perceptions of parental financial modeling only when accounting for perceived parental expectations of their own behavior. This was not the case for employed young adults, whose financial behavior was directly predicted by perception of financial modeling.

**Discussion**

Overall, the results show that financial socialization does differ for young adults on different pathways. The pattern of results for student young adults was generally consistent with Shim and colleagues’ (2010) model of financial socialization; however, the pattern of results was different for employed young adults. Parental descriptive norms were stronger direct predictors of healthier financial behavior for working young adults compared to student young adults. Parental injunctive norms, though, were more strongly associated with healthy financial behavior for students, compared to working, young adults. Together, these results indicate that parents’ own financial behaviors more strongly correlate with healthy financial behaviors in employed young adults, whereas student young adults’ financial behaviors are more strongly predicted by parental expectations, over and above how they perceive their parents to behave. Because employed young adults are likely to be more actively engaged in developing
financial independence compared to students, it is logical that employed young adults may be influenced less by parental expectations, but continue to be influenced by what they have seen their parents do in the past. These findings build upon recent research that has modeled the financial socialization process for student young adults (Shim et al. 2010; Shim et al. 2015), offering insight into how this process may differ for young adults who are not on a university pathway.

The presence of the indirect pathway from parental descriptive norms to financial behavior through parental injunctive norms for students, but not for employed young adults, strengthens the interpretation that employed young adults are actively exploring their financial identity. The development of healthy financial behaviors among working young adults may be more aligned to the modeling of behavior, rather than conforming to parental expectations. Students’ financial behavior, however, is strongly associated with their parents’ behavior indirectly through perceived parental expectations. For students only, parental injunctive norms mediated the association between parental descriptive norms and financial behavior. Healthy financial modeling by parents predicted students’ own financial behavior when they perceived that their parents expected them to engage in healthy financial behaviors. For students who are not working full-time, parents may be providing financial support, and so those students may feel constrained to behave according to expectations, and thus, have their financial autonomy restricted. Working young adults may be less beholden to parents and therefore more apt to disregard their parents’ expectations. Alternatively, parents may be less likely to express financial behavior expectations if they perceive their child to be more financially autonomous. These findings reflect a less active, and perhaps more norm-led approach to financial behavior development for young adults who are studying. Further, these findings support young adult developmental theory, which posits that financial independence is deferred in young adults who pursue an education.
and expands upon theory by providing an explanation as to part of the process of independence being delayed (Arnett 2005; Cobb-Clark 2008).

Peer descriptive norms did not predict healthy financial behavior significantly differently for student young adults compared to working young adults. For all respondents, healthy financial modeling by peers was significantly associated with healthier financial behavior. This may indicate that young adults are more likely to engage in healthier financial behaviors when they perceive their peers to be engaging in healthy financial behaviors. However, the converse causal direction is also possible. Young adults, regardless of instrumental role, may choose to socialise with other young adults whose financial behavior is similar to their own. The association between peer norms and financial behaviour was smaller than the associations between parental norms and financial behavior, and reinforces the importance of parents, or rather, more financially mature and experienced referent groups, for behaviors key to certain developmental paths. While research into socially desirable and risky behaviors illustrates the importance of peers as socializing agents (Berndt 1979; Youniss and Smollar 1985), the influence of peers in financial behavior is secondary to that of parents, even for young adults who are delaying their financial independence in order to continue studying (Arnett 2001).

The data show that independent living does account for part of the variation in financial socialization for young adults. Specifically, living independently predicted perceived norms differently for student and working young adults. Students living independently reported lower parent and peer healthy financial modeling, but not a lower level of parental healthy financial expectations compared to students who lived with their parents. This finding may suggest that students attend to money management more when they live with the parents compared to when they live away from the
parents. For employed young adults, living independently was associated with perceiving greater healthy financial expectations, but not higher parental or peer healthy financial modeling compared to employed young adults living with their parents. Parents may expect more financially responsible behavior for employed young adults living outside of the parental home.

Together, these findings may be explained by the need for a mature financial behavior set in young adults who are following different instrumental pathways. For students, the development of a healthy financial skillset is often delayed (Arnett 2001), and in particular, for students who are not living at home, parental financial modeling may be less salient in their lives because financial agency is less relevant. Further supporting this interpretation, regardless of where students were living, their perceptions of parental expectations to engage in healthy financial behaviors were not significantly different; this may be because students’ financial agency and independence is restricted, and thus, they may be more likely to be led by their parents regardless of where they live.

**Implications.** While the findings do show primacy of the parental referent group over the peer referent group in the prediction of financial behaviors, the most significant contribution to knowledge here is that divergent instrumental pathways account for differences in financial socialization and behavior, and the differences in the strengths of the associations. Employed young adults draw upon their prior financial socialization experiences to guide their financial decisions and develop greater financial independence. Their behavior is less reliant upon the expectations they perceive from their parents, and, in turn, they begin to exercise greater autonomy in financial decision-making by allowing their circumstances to inform their behavior. Students’ financial behavior is more contingent upon what they perceive their parents to be expecting them
to do, which may be indicative of a more passive financial process, consistent with deferring financial independence during tertiary study.

Further to this point, although supportive of research that demonstrates greater financial knowledge in employed young adults compared to student young adults (Danes and Brewton 2014), the finding that employed young adults reported engaging more frequently in healthy financial behaviors may be explained by access and necessity. Employed young adults may commence development of healthy financial behaviors and exploration of their financial identity earlier than student young adults because their access to resources widens. In turn, financial commitments are also likely to increase as they begin to realize that the acquisition of desired products and experiences is no longer out of reach. Out of necessity, and guided by both prior and current financial socialization, healthier behaviors must be engaged in for both successful acquisition and navigation of financial independence.

**Strengths.** A number of methodological strengths in this study enhance the contribution of the findings. This paper builds upon previous research investigating how young people’s social networks play an important role in the development of their behavior (Shim et al. 2010; Shim et al. 2015). Although both the normative influence and financial socialization literatures are well-developed, investigations are fewer regarding who in a social network is most influential for financial behaviors and how the difference in developmental experiences amongst young adults can impact upon this association. Although comparisons between the strength of parent and peer norms have been reported extensively, this study is the first to look at the pattern of these differences for young adults traveling along different developmental paths. Despite the similar association between peer financial norms and financial behavior between the two groups, the differences within parental financial norms between pathways is most
telling. These individual differences may elucidate what the process of delaying financial independence, as theorized by young adult developmental frameworks, actually looks like. Understanding how different pathways taken during young adulthood influence the development of autonomy and financial independence is useful knowledge that highlights the socializing mechanisms underpinning young adult trajectories during a formative phase.

The characteristics of the analyzed sample are also a methodological strength. Although young adulthood theoretically spans 18 to 25 years of age, this paper captures the experience of these young adults in their most formative years immediately following high school. This sample is transitioning from a period marked by strong peer influence, to a period where establishing autonomy and independence is a key marker of developmental success. Further still, the sample comprises not just college students, but also employed young adults, which is uncommon in the financial socialization literature. This paper shows that for student young adults, the pathways they choose may yield significant short-term consequences for the development of a financial behaviour skillset during the young adult phase, which may yield longer-term consequences when they do transition to full adulthood.

**Limitations and future research.** The associations tested in this paper are cross-sectional and directionality has been hypothesized using past research. In order to imply causality, a longitudinal design should be applied to replicate these findings. Specifically, tracking adolescents’ financial behavior and the comparative influence of socializing agents through young adulthood and into adulthood would map the development and maturation of young adults’ financial behavior both between and within instrumental pathways.
This sample with representation only from the earlier range of young adulthood may capture the experiences unique during the formative phase of this period and therefore, extrapolation of these findings should be restricted to young adults who are only a few years out of high school. As they navigate new experiences and the consequences of critical choices they have made, they are likely to be undergoing a highly dynamic developmental period, where directions and circumstances tend to change frequently in response to feedback they receive. In future, greater representation of the full range of young adulthood should be targeted. This will help identify unique variance in the early young adult phase versus the later young adult phase, and to establish whether or not the differences reported in this study are also found as students and workers become adults. In Australia, unlike other countries, few students combine full-time study and full-time employment and those who do are more likely to be mature-age students (ABS 2001, 2015). This combination of roles was not reported by any young adult in this study and therefore the findings do not generalise to young people who occupy both roles. Caution is needed in considering the implications of these findings for North American and UK Students who are more likely to combine full-time study with full-time work (Bexley et al. 2013).

Conclusion

Young adults progress towards full adulthood at different rates. The variation in pathways taken by young adults after high school contributes to the rate at which they progress. As a key marker of adulthood, the development of financial independence is often delayed for students, compared to employed young adults, and these findings show that the financial socialization process is different for young adults who choose study versus those who choose full-time work. Working young adults appear to actively engage in the development of a more mature financial skillset, reflecting on the
financial behaviors modeled by those around them and displaying greater financial independence by being less tied to expectations. Student young adults appear to be less engaged in the development of their financial skillset, instead allowing the expectations of their parents to guide their financial behaviors, perhaps resulting in restricted financial autonomy and a delay in their financial independence.
References

Comparing the influence of parents and peers on the choice to use drugs: A meta-
analytic summary of the literature. *Criminal Justice And Behavior, 30*(2), 163-
186. doi:10.1177/0093854802251002

family money management patterns and coalitions, and attitudes toward money
doi:10.1007/s10834-006-9048-1


doi:10.1037//0003-066X.55.5.469

Arnett, J. J. (2001). Conceptions of the transition to adulthood: Perspectives from
adolescence through midlife. *Journal of Adult Development, 8*(2), 133-143. doi:
1068-0667/01/0400-0133

In J. J. Arnett & J. L. Tanner (Eds.), *Emerging Adults in America: Coming of Age
in the 21st Century* (pp. 3-19). Washington, DC: American Psychological
Association.

behavior: The influence of parents and peers. *Behaviour Research and Therapy,

180
Retrieved from
http://www.abs.gov.au/AUSSTATS/abs@.nsf/2f762f95845417aeeca25706c00834ef9c8a3db350700054ca2570ec000c6b0d!OpenDocument


6. **CHAPTER SIX: General Discussion**

Financial hardship strains the lives of many young adults. In fact, young people report financial strain is their primary source of stress (Bexley, Daroesman, James, & Arkoudis, 2013; Casey, 2013). University students, in particular, have limited access to financial resources. Such limited financial resources can lead students to engage in intensive economising practices, and can also lead to financial strain and compromised psychological health. However, the empirical studies presented in Chapters 3, 4 and 5 demonstrate that these associations differ depending on markers of adult transition and post-high school instrumental roles. For some students, delaying independence by remaining in the parental home appears to provide some protection against financial hardship and strain. Yet the delay may also be associated with limitations on students’ exploration of autonomy, perhaps restricting development of financial independence.

The primary focus of this dissertation was to describe young adults’ financial experiences while at university and to test the extent to which transition markers of adulthood were associated with financial and psychological experience. In addition, differences in financial socialisation (normative influences) on the development of healthy financial behaviours were examined for young adults in different instrumental roles: full-time student or full-time employment. The results contribute to the young adult and student financial hardship literature by exploring the impact of transition markers of adulthood and post-high school instrumental roles in the dynamics between financial socialisation and behaviours, experiences of financial hardship and strain, and psychological well-being.

Australian young adults at university engage in widespread economising practices, are financially strained and report low psychological well-being (Chapter 3 and 4). However, students’ experience of financial hardship and strain varied by
whether or not they lived with their parents and by whether or not they perceived adequate financial support from their parents (Chapter 4). Finally, the associations between parental financial norms and young adults’ own financial behaviour were different for students versus full-time employed (Chapter 5). Taken together, these results have implications for conceptualising how financial hardship, strain and psychological well-being are experienced by students during the transition from adolescence to adulthood. Further, these results demonstrate the usefulness of examining financial experiences across different markers of adult transition and post-high school instrumental roles. Broadly, these results afford an opportunity to speculate about the forces at work in young adulthood that may combine to delay the development of financial independence, as noted by a number of scholars focused on young adulthood (Arnett, 2001; Räikkönen, Kokko, Chen, & Pulkkinen, 2012; Räikkönen, Kokko & Rantanen, 2011; Shanahan, 2000).

Review of Aims and Key Findings

This section reviews the key findings from each chapter as they relate to the three aims of the dissertation. Following this brief overview of how the three studies have addressed the aims set forth in Chapter 1, the key contributions made by this dissertation are presented and explored in detail. The first aim was to clarify the role of perceived financial strain in relation to economising practices and well-being for young adults at university within a transactional theory of stress and coping framework. The second aim was to examine the protective role of parental support on students’ financial hardship and strain, and determine whether this protection was different for young adults who had moved out of home compared to those who had not. The third aim was to determine the extent to which different post-high school instrumental roles
undertaken by young adults account for differences in their financial socialisation and associated behaviour.

Chapters 3 and 4 address the first aim, which was to test student experiences of financial hardship and strain using a stress and coping framework. The results from studies 1 and 2 provide support for the notion that the financial situation and associated psychological experiences of students are a transactional process. Contrary to the direct effects focus that is predominant in the student finance literature, objective financial experiences are associated with subjective experiences of financial strain, and in turn, perceptions of financial strain are associated with psychological well-being. Students who economise in many areas of their lives perceive higher levels of financial strain compared to those who economise in fewer areas, and in turn, report more depressed mood and lower satisfaction with their lives. The direct effects model ignores the greater complexity inherent in the association between behaviour, stress and coping. Support for the indirect effects model in Chapters 3 and 4 provides evidence that the appraisal process is a central psychological mechanism in the link between objective behaviour and subjective well-being. Further, the benefit of applying the transactional model to student financial hardship is the utility of a well-established framework that identifies where and when support and other resources can provide protection. Of course, longitudinal research is needed to test the temporal nature of the transactional model of financial hardship and strain – this and other limitations of the research are discussed in more detail later in this chapter.

In Chapter 4, the second study addressed the second aim, testing the utility of parental support as protective in the transactional model of financial hardship and strain. The results demonstrate that student perceptions of strain and well-being can be buffered by the support provided by parents. Both measures of parental support – the
parental home and the perceived adequacy of parental financial support – were found to be protective for students; however, there were differences in the strength of direct paths in the model that were associated with the interaction between the two types of support. Interestingly, economising more broadly across a range of cutbacks was associated with higher perceptions of financial strain for students who perceived adequate parental financial support. This result suggests that the combination of broadly cutting back whilst also relying on parents for support is associated with higher levels of financial concerns. Living in the parental home is protective for students’ well-being when perceptions of financial strain are high. For students who live independently and perceive inadequate parental financial support, the association between perceived financial strain and psychological well-being was the strongest, and their average psychological well-being scores were the least healthy of all groups.

In Chapter 5, the third study focused on the third aim of the dissertation, which was to determine whether the associations between parental and peer financial norms and financial behaviour were different for young adults undertaking different post-high school instrumental roles. The results demonstrate that the post-high school instrumental roles that young adults undertake are associated with different patterns of financial normative socialisation. Employed young adults, compared to student young adults, reported higher financial expectations from their parents if they had moved out of the parental home. Students, compared to employed young adults, reported that their parents modelled less healthy financial behaviours when they had moved out of the parental home. Further, the association between parental financial expectations and young adult financial behaviour was stronger for students, compared to those who were working full-time. Conversely, the association between parental financial modelling and young adult financial behaviour was stronger for young adults working full-time, compared to students. Parent financial norms were a stronger predictor of financial
behaviour than peer norms were for both those who were employed full time and those who were students.

Taken together, this dissertation makes four key contributions to current knowledge by examining the financial and psychological experiences faced by university students and by exploring how differences in circumstances during young adulthood are associated with different financial experiences. First, the results are consistent with previous research that has documented tertiary students’ experiences with financial hardship, particularly for those studying in Australia (Bexley et al., 2013; Halliday-Wynes & Nguyen, 2014; Muir, Mullan, Powell, Flaxman, Thompson, & Griffith, 2009). However, these results extend previous findings by examining the role played in financial experience by one of the key markers of adulthood transition: independent living. Second, the results provide support for the notion that student young adults experience financial hardship as a transactional process of stress and coping (Lazarus & Folkman, 1984). Specifically, student appraisal of threat holds one key to understanding the link between financial behaviour and psychological well-being. Third, although research has shown that social support from parents can come in many forms (Cohen & Wills, 1984), these results extend current knowledge by examining the interaction between two specific types of support for student young adults. The interplay between the support provided by living in the parental home and the provision of financial support by parents is associated with different patterns of protection for student financial and psychological well-being. Fourth, previous research investigating the financial socialisation of young adults during university has demonstrated the importance of parental financial expectations in shaping student financial behaviour. The results in this dissertation contribute to current knowledge by comparing student financial normative socialisation with employed young adult socialisation. The next
section will present and discuss these four key contributions in greater detail, specifically demonstrating how they extend current knowledge.

Key Contributions to Current Literature

Financial hardship during university study and impact of independent living. For most student young adults, the decision to undertake university study is associated with restrictions on earning and spending habits (Bexley et al., 2013). Income of students as a proportion of the income of full-time employed adults ranges between one-fifteenth to one-half (Muir et al., 2009). Results from Chapter 3 show that the sacrifice of a full-time income for most students during university is associated with foregoing some basic needs and a desired lifestyle. This result is consistent with prior investigations that have highlighted Australian university students’ experience of significant and sustained financial hardship (Bexley et al., 2013; Halliday-Wynes & Nguyen, 2014; James, Bexley, Devlin, &Marginson, 2007; Muir et al., 2009). Collectively, these findings highlight the considerable financial challenges that students at university experience.

Financial economising and hardship are not uncommon in the broader Australian adult population. A government report released in 2014 showed that between ten and 15 per cent of poor non-elderly single adults and one-parent with child/ren households reported going without meals because of a cash flow shortage (Cassells, Dockery, & Duncan, 2014). Financial hardship in the AusPLUS sample is considerably more prevalent; three-quarters of students described in Chapters 3 and 4 reported changing shopping and eating habits. The substantially larger prevalence reported by students indicates the normative nature of financial hardship for university students (Bexley et al., 2013; Halliday-Wynes & Nguyen, 2014). As a normative experience, the effect of financial hardship and strain for students is likely reduced compared to impoverished
non-student adults. However, when student financial hardship and strain is severe, results in Chapter 3 show clear links to lower well-being, which is consistent with research showing financial issues are the highest source of stress for young adults. Despite the surge of research in the last 10 years describing Australian students’ financial hardship, the research presented in this dissertation is the first to describe this range of economising by students and to account specifically for differences associated with markers of adult transition and support resources together.

The results presented in Chapters 3 and 4 demonstrate the widespread financial economising by student young adults in order to cope with limited financial resources. For students living with their parents, between half and three-quarters reported cutting back on food shopping and eating habits, personal care, and social and entertainment expenses. Slightly less prevalent, one-third of students living with their parents reported postponing medical or dental care in order to cope. Living out of the parental home was associated with greater prevalence of economising behaviours. Almost nine in ten students who had moved out reported cutting back their spending on food shopping and eating habits, personal care, and social and entertainment expenses. Half of students who lived outside of the parental home reported postponing medical or dental care. Even though moving out of the parental home is considered a key marker of adulthood (Arnett, 2001; Shanahan, 2000), students who move out of the parental home are exposing themselves to higher levels of financial hardship and strain and their well-being is vulnerable due to the strong, positive indirect association between economising and poor psychological well-being through perceived financial strain. Some economising behaviours may be associated with greater risk for students living away from the parental home compared to students living in the parental home. Spending less money on food and socialising may not pose as much of a risk to well-being for students who live with parents because of the safety net parents may provide in terms of
subsidised food and socialisation. Conversely, for students living outside of the parental home and not afforded the benefits of shared resources, cutting back on food shopping and social experiences may indicate poorer nutrition and social isolation.

In addition to independent living, parental financial support contributes to differences in the extent to which a student economises. Results from Chapter 4 demonstrate that students’ economising not only differs between whether or not they live with their parents but is also associated with perceptions of adequate parental financial support. Students who are living independently and perceive inadequate support from parents experience the most severe financial hardship. Of the seven areas of economising presented to students in the AusPLUS survey, students living independently who perceived inadequate support reported cutting back in almost five areas of their lives. In contrast, students still living at home who perceived adequate parental support reported an average of three economising areas. Although economising is a practical strategy to cope with a restricted income, some economising behaviour can be risky, such as not seeing a doctor when necessary. These risky economising behaviours are employed most by those students with fewest supports. Students who live independently without parental support also report the highest depressed mood and lowest satisfaction with life. Thus, these students face the toughest financial experiences while at university, placing their well-being at risk due to their levels of economising and perceived inadequate parental financial support.

The timing of adulthood transitions has been linked to long-term psychological health and adjustment (Räikkönen et al., 2012). Although some research has suggested that young adulthood is a time when well-being in general is strengthened (Arnett, 2007), for some, this period is associated with challenges and hardship. In particular, moving out of the parental home may put student well-being at risk, even if it meets a
developmental need for autonomy. Specifically, results presented in this dissertation suggest that students who live outside of the parental home place themselves at greater risk because living independently means more widespread economising. Therefore, young adults who initiate progression to adulthood by moving out of the parental home during university are exposing themselves to riskier financial experiences than if they remained in the parental home. It may be that some young adult developmental tasks, such as moving away from the family home, are better suited to later timing, after completion of tertiary education in the Western context.

Results of the third study show that students’ financial behaviour is strongly influenced by parental financial norms. Students who reported more positive financial behaviour, such as saving money for the future, budgeting and spending within a budget, indicated that their parents modelled healthy financial behaviours and perceived that their parents expected them to engage in these healthy financial behaviours. Thus, parents who model and communicate the importance of healthy financial behaviours are setting a foundation for mature financial behaviour and the development of a healthy financial capability set (Serido, Shim & Tang, 2013). This foundation may protect students against some of the risks of financial hardship because they have developed a degree of agency with respect to money management. During challenging financial circumstances, students socialised to be responsible with money may make fewer impulsive financial decisions, and be in healthier monetary circumstances than those without such socialisation. Interventions promoting healthy financial behaviours often target only the students’ attitudes, knowledge and behaviour and not parents’ financial attitudes, knowledge and behaviour (Borden, Lee, Serido & Collins, 2008; Johnson & Sherraden, 2007). Educational programs promoting financial discussions between parents and their children may be useful in establishing and developing healthy practices and skills that may be protective during fiscally strained times. Specifically,
such programs should highlight the importance of proactive financial behaviours during periods of limited earning, such as paying bills on time, avoiding impulse buys, limiting use of credit cards and saving money for the future.

The transactional nature of student financial hardship and well-being. Based on the transactional theory of stress and coping (Lazarus and Folkman, 1984), a process model of associations between both objective and subjective indicators of financial stress and well-being was tested in Chapter 3. This process model was then compared to a model based on the literature, testing only the direct effects between both economising behaviour and perceived financial strain on psychological well-being. For instance, previous research examining financial stress has often considered objective and subjective markers of financial stress as either independent of one other or else as conditional, in which the relation between an objective measure and a dependent variable is, for instance, conditional on a subjective measure (e.g. Bradley, 2006; Metcalf, 2003; Taylor 1998; Watts & Pickering, 2000). Notably, a substantial portion of the literature has chosen to restrict their models to the inclusion of either objective or subjective indicators, or the co-varied effect of both. To date, research has largely ignored the underlying psychological complexities of financial hardship and strain. By using the transaction model, perceived financial strain is considered the underlying psychological mechanism accounting for the link between objective financial behaviour and subjective well-being.

In Chapter 3, the results showed that the mediational model better represented the relations among these variables, compared to the prevailing direct effects model in the literature. This finding contributes to knowledge by supporting the notion that the impact of negative financial experience is, in fact, a transactional process. That is, certain financial behaviours and experiences are indirectly associated with well-being.
through the appraisal of behaviours and experiences as threatening. Although this model has previously been supported empirically using an elderly adult population (Chou, Chi & Chow, 2004) and a general adult population (Gerrans, Speelman, & Campitelli, 2013), this is the first time the model has been tested with student young adults. This model, as a whole, demonstrates that financial hardship – in this case, economising practices – relates to a student’s well-being through appraisal of the experience as either positive or negative. In other words, the event itself bears little or no direct emotional consequences for student well-being. Rather, student well-being is associated with economising only through appraisals of financial strain.

The cascade of threats to well-being created by the link between economising and financial strain was evident in Chapters 3 and 4. These chapters demonstrate that students who reported the highest levels of economising were reporting high-risk methods of coping in order to survive while at university. These riskier coping behaviours included cutting back on food and personal care, and not seeking medical consultation when necessary. Consistent with previous research conducted with Australian tertiary students (Bexley et al., 2014; Halliday-Wynes & Nguyen, 2014; James et al., 2006) the findings presented here highlight the stressful financial experiences of many students in Australia.

The transactional nature of financial hardship and strain suggests that economising, and other negative financial experiences, can potentially be appraised across contexts as financially threatening. Perceptions of financial strain, then, provide the psychological mechanism through which the emotional experience of a person can be measured in reaction to financial adversity. For students with little control over their financial situation, their living arrangements and their access to support, the constant appraisal of their financial experiences as strained may cumulatively impact their well-
being. The negative effects of this prolonged stress on general health has been empirically supported (Kahn & Pearlin 2006). More specifically, the negative effects of chronic financial adversity on health and general functioning have been demonstrated in the general population (CEDA, 2015; WHO, 2011). Thus, for students who economise heavily throughout their tertiary studies, the risk of cumulative perceived strain is high, and potentially problematic to their health and general functioning.

The utility of parental support for students experiencing financial hardship.

A benefit of applying the transactional model of stress and coping to student financial experiences is the identification of protective resources such as social support. As a buffer between stress and well-being (Cohen & Wills, 1984), social support, operationalised as parental financial support in this dissertation, was tested as a protective factor against negative outcomes from financial hardship and strain. That is, the transactional theory of stress and coping (Lazarus & Folkman, 1984) suggests that individual circumstances and the provision of support can intervene prior to the appraisal process to effectively buffer against negative outcomes created by stress. This process allows for reappraisal of the stressful situation as potentially benign, consistent with the buffering hypothesis for social support. In the case of student financial stress, students who appraise their financial situation as potentially threatening and stressful may be able to seek support from family, reducing perceptions of strain and improving psychological well-being. With adequate support, students may reappraise challenging financial experiences as less threatening, producing lower financial strain, and providing a buffer between the experience and their well-being.

Using this transactional framework and examining the protective role of parents, Chapter 4 identified student young adults whose psychological well-being was most at-risk due to financial hardship and strain: they were students who had moved out of the
parental home and perceived inadequate support from parents. For these students, perceptions of financial strain were most strongly associated with low mood and a less satisfying life. This was the case even though their economising was not strongly associated with perceptions of strain, compared to those students living at home reporting better parental support. The choice to remain in the family home is becoming more prevalent amongst young adults, many of whom choose to delay independent living in pursuit of further education (Arnett, 2000; Cobb-Clarke, 2008). Despite delaying this marker of adult transition, the parental home provides protection from financial hardship and strain. However, not all young adults have the option nor may wish to remain in the family home. Thus, for those who do leave the family home, and in particular, who also do not perceive parental support, financial strain can yield negative consequences for psychological health. That being said, for students who had moved out of the parental home and experienced financial strain, perceiving parental financial support provided protection for well-being.

In the post-script to Chapter 4, indirect paths of the transactional model were tested for each of the four groups that were examined in Chapter 4: home without support, home with support, away without support, and away with support. For three groups, these indirect pathways were significant, consistent with the results for the whole sample presented in Chapter 3. The indirect pathways between economising behaviour and depressed mood, and economising behaviour and life satisfaction, through perceived financial strain, were not significant for student young adults in the home without support group. These findings suggest that appraisal of behaviours as threatening explains the association between economising and depression and between economising and life satisfaction for student young adults living away from home regardless of support, and for students at home who perceive adequate support.
These results suggest the indirect pathways are conditionally indirect: meaning the indirect pathway is moderated by students’ living arrangements and perceptions of adequacy of financial support provided by their parents. Consistent with previous research, results support the idea that remaining in the parental home during university provides financial protection in the form of non-monetary resources (Bexley et al., 2013; Cobb-Clarke, 2008). For students who remain in the parental home and do not receive the financial support they want from their parents, the parental home may still provide a protective environment in which they can gain a sense of financial independence. This interpretation is consistent with research demonstrating that young adults who receive financial assistance perceive themselves as less financially independent (Xiao, Chatterjee & Kim, 2014). Although economising behaviours were associated with significant financial strain for students in the home without support group, appraisal of economising as stressful was not associated with mood or life satisfaction. Overall, the role of parents as supportive resources to students at university has been demonstrated in this dissertation. Importantly, living with parents while studying can be the circuit breaker in the indirect effect between economising behaviour and psychological well-being through perceived financial strain.

Financial socialisation and different life circumstances. Financial socialisation processes during adolescence and young adulthood are important because they are associated with differences in healthy financial behaviours in later adulthood (Kim et al., 2011; Shim, Barber, Card, Xiao, & Serido, 2010; Shim, Serido, Tang, & Card, 2015; Webley & Nyhus, 2006). Further, financial socialisation and the resulting healthy behaviours are related to experiences of financial hardship, strain and psychological well-being (Shim et al., 2010; Serido, Shim, Mishra & Tang, 2010; Shim et al., 2015). Results presented in Chapter 5 demonstrate that different post-high school instrumental roles are associated with different patterns of financial normative socialisation. Thus,
the pathways undertaken by a young adult after high school are associated with variations in financial socialisation, behaviour and ultimately, well-being.

The results presented in Chapter 5 demonstrate that the association between parental descriptive financial norms and young adults’ behaviour was significant for full-time employed young adults, but this association was not significant for student young adults. Thus, only for employed young adults, financial behaviour was directly linked to the financial behaviours modelled by their parents. This finding may be reflective of a more critical engagement in the development of financial behaviour, where employed young adults are reflecting on how their parents behave, and then trialling these financial behaviours. In contrast, Chapter 5 highlighted that the association between parental injunctive financial norms and young adults’ behaviour was significant and positive for full-time student young adults, but this association was not significant for employed young adults. For student young adults, behaviour was directly linked to perceptions of parents’ financial expectations, which is consistent with previous research (Serido, Shim & Tang, 2013). This finding may indicate that student young adults are taking a more passive, parent-led approach to their finances, allowing perceived parental directives to inform their financial behaviour. The contrasting association of parent financial norms on financial behaviour between post-high school instrumental roles extends the current literature beyond financial socialisation for young adults at university.

Serido et al. (2013) argue that financial behaviour is a developmental process, positing that as healthy financial behaviours are acquired, health and well-being improves. Serido and colleagues also argue that the development of a healthy financial capability set should be considered a “process marker” within the transition to adulthood. In other words, the association between the financial socialisation process
and the development of healthy financial behaviours can be considered a developmental process leading to increased financial independence and an indicator of a successful transition to adulthood. The implication for students is that those who acquire earlier transition to adulthood by moving out of home, compromise the development of healthy financial capabilities during a time when parental expectations are an important influence. Thus, not only can independent living yield short-term implications for students’ development of healthy financial behaviours and psychological well-being, there are also potential long-term implications for lacking financial capabilities in adulthood. For some, this may manifest in missed socialising opportunities, yielding potential negative implications for long-term financial hardship and strain, and low psychological well-being.

This pattern of results, together with the disparity in income between employed and student young adults (Muir et al., 2009), explains why financial independence is a more probable goal for young adults working full-time, compared to students. Although the notion that university students delay their transition to adulthood has been commonly described in theory and research for the last two decades (Arnett, 1998; Arnett, 2000; Räikkönen et al., 2012), this dissertation makes an important empirical contribution to the literature in describing the experience of this delay as it relates to financial independence. For example, limited income and a greater likelihood of remaining in the parental home (Cobb-Clarke, 2008; Muir et al., 2009) restrict the opportunities for student young adults to experience adult financial decision-making. Students focus more on keeping afloat financially during their studies (Bexley et al., 2013; Halliday-Wynes & Nguyen, 2014) and as a result, they tend to rely on their parents’ expectations to guide their financial behaviour. On the other hand, a full-time income provides employed young adults with opportunities to develop financial independence (Muir et al., 2009; Xiao et al., 2014). For instance, opportunities to
mortgage a home and purchase a car become available when young adults are earning an income that allows greater financial self-sufficiency. This self-sufficiency generates opportunities to demonstrate newfound autonomy in making financial decisions. Because employed young adults’ focus is on developing financial autonomy and independence, and they do not rely on parents so much for financial support, they are able to choose how to behave rather than do what parents expect. Those choices, though, may be guided by years of observing how parents managed finances, and those with more positive role models likely understand the importance of healthy financial behaviours.

In addition to testing the links between key socialiser norms and behaviours, Chapter 5 also examined differences in the average levels of positive norms across the groups. This dissertation makes a key contribution to the literature by examining differences in the perception of parental normative socialisation by independent versus dependent living students. Young adults living with parents compared to those not living with parents also differed in their perception of parents’ and peers’ healthy financial behaviour modelling and parents’ financial expectations. For student young adults, living away from the parental home was associated with perceptions of less responsible parental financial modelling, relative to students who remained in the parental home. From these results, it cannot be deduced whether students who move out have parents who are less financially responsible. Nor can it be determined from these results whether students who move out are less observant of their parents’ behaviour and therefore, parental financial behaviour is less salient in their lives. It could be inferred, however, that students who have moved out of home are less able to observe their parents’ financial behaviours, limiting their opportunities to learn from parents; however, this may be advantageous if parents are not financially responsible role models. Further, for employed young adults, living independently was associated with
higher parental injunctive norms. For some employed young adults who have moved out of the parental home, parents may be providing more financial guidance. Alternatively, these employed young adults who are living independently may be primed to be more aware of their parents’ financial expectations because they are earning a full-time income and they may perceive greater autonomy and responsibility.

**Limitations**

This dissertation has made several contributions as noted in the previous section; however, the empirical studies are not without their limitations. First, data used for all three studies were cross-sectional, which restricts interpretations of causality in any of the models. Despite this limitation, the conceptual models in all chapters were carefully specified in the context of the relevant literature. Further the comparison of a mediational model with a non-nested alternate model bolstered support for the transactional nature of financial hardship, financial strain and psychological well-being. That being said, the cross-sectional nature of these data does have specific implications for the application of a transactional model with temporal assumptions (see Lazarus & Folkman, 1984), which are provided in further detail in Chapter 3.

Another limitation of the research presented in this dissertation is that the transactional model of financial hardship and strain on well-being did not apply to all young adults. In the post-script to Chapters 3 and 4, the indirect pathway between economising behaviour and well-being, through financial strain, was not significant for students who were living at home and perceived inadequate financial support from parents. In addition, this group of students reported the lowest levels of economising and financial strain, and the healthiest levels of well-being compared to all other students. These findings suggest that the perception of financial strain does not provide an explanatory psychological mechanism for all student young adults, and that attention
is due to circumstances under which young adults are coping with financial challenges. It would be worthwhile for future research to test the transactional model of financial hardship and strain on young adults undertaking other roles, such as those in full-time employment, those who are unemployed, or those who are married and parenting, and on young adults who have deferred their progression by taking a gap year to travel. In all these groups, testing the importance of a range of parental and other supports might yield promising targets for intervening to reduce financial stress and its resulting threat to well-being.

This research was also limited by consideration of only a narrow range of indicators of well-being. For example, considering the impact of financial strain on stress and related physical indicators of health is crucial because of the potential long-term consequences that chronic stress and physical ill-health can produce. It would also be useful to apply this model to other outcomes of direct relevance to this development period, such as academic performance and achievement, and social connectedness. Such a model could test whether markers of adult transition and support factors interact to produce further divergent emotional and educational experience for students.

Further, individual differences may contribute to variation in financial experience. Constructs such as resilience and personality dispositions may provide further insight into the financial experiences of young adulthood. Understanding the extent of the impact of these factors on student financial and psychological well-being is crucial in order to extend knowledge regarding how this period shapes the lifespan.

**Conclusion**

The central aims of this thesis were to examine the financial experiences of university students during young adulthood and to understand how experiences differed depending on the ecological contexts in which young people were embedded. More
explicitly, it has focused on how differences in markers of adult transition, parental support and post-high school instrumental roles are associated with financial hardship and strain. The empirical research presented in this dissertation demonstrates that different roles undertaken by young adults are associated with a range of experiences of financial hardship and socialisation. Further, these results highlight the lengths students sometimes go to in order to cope with limited financial resources.

These limited resources may partly account for the theorised delay in student young adults’ progression to adulthood (Arnett, 2001). After high school, there are a number of different roles that can be undertaken in the progression to adulthood. These roles contribute both positively and negatively to differences in young adults’ experiences. For students, low income limits their ability to develop financial autonomy and perpetuates financial dependence on parents. However, by leaving the parental home during university, young adults may place their psychological health at risk of serious financial strain. Students who have moved out of the parental home are going without in more areas of their lives compared to those who live with their parents. They are economising heavily in order to cope with limited resources and a lack of parental support. These students are amongst the most depressed and least satisfied with their lives. This result suggests that striving towards some adulthood transition markers, such as independent living, while studying at university may contribute to potentially harmful financial experiences.

Despite the prevalence of students’ economising behaviours, which are then associated with significant strain and compromised well-being, when parents provide support, perceptions of strain can be eased and well-being may be protected. For those who are afforded the choice, delaying the move out of home while at university is advantageous to health and well-being. When experiences of financial hardship and
strain are high, independent living is strongly associated with low mood and dissatisfaction with life. During the transition to adulthood, living with parents may offer a safeguard against the psychological experiences of financial hardship and strain. Even for those who perceive inadequate financial support from parents, there can be other vital benefits provided by remaining in the parental home.
References


Appendix A: Australian Pathways to Life Success for University Students

(AusPLUS) Survey

Student Number (as identification)

About Me

1. I am in…
   1. 1st year
   2. 2nd year
   3. 3rd year
   4. 4th year
   5. A postgraduate program
2. I am a…
   1. Part-time student
   2. Full-time student
3. I am a…
   1. WA/Local student
   2. Interstate student
   3. International student
4. I currently live…
   1. in student housing
   2. in a rental property
   3. in my own house
   4. at home with my parents
   5. other (please specify) ___________
5. I am in the school of…
   1. Biological Sciences and Biotechnology
   2. Business
   3. Chemical and Mathematical Sciences
   4. Chiropractic and Sports Science
   5. Education
   6. Engineering and Energy
   7. Environmental Science
   8. Information Technology
   9. Law
   10. Media Communication and Culture
   11. Nursing
   12. Pharmacy
   13. Psychology
   14. Social Sciences and Humanities
   15. Sustainability
   16. Veterinary and Biomedical Sciences
6. I am a…
   1. Male
   2. Female
7. I am ________ years old.
8. What is your country of birth? ____________________
9. My primary racial/ethnic background is…
   1. Australian
   2. Australian Aboriginal
   3. Torres Strait Islander
   4. Asian
   5. British
   6. American
   7. African
   8. Middle Eastern
   9. Other: ____________

10. The primary language spoken in my home is…
    1. English
    2. Other ____________

11. My marital status is…
    1. Never married
    2. Married
    3. De facto
    4. Living together but not in a committed relationship
    5. Divorced
    6. Separated
    7. Widowed

12. I have ________ children

13. My average grade for the past semester is…
    1. N
    2. P
    3. C-
    4. C
    5. C+
    6. D-
    7. D
    8. D+
    9. HD-
    10. HD
    11. HD+
    12. N/A

14. I am financially independent from my parents.
    1. Yes
    2. No

15. What suburb do you currently live in? ________________

16. The postal code of my current address is ________ (enter postal code)

About My Current Finances

17. How are you funding your university education? (Click all that apply)
    1. Commonwealth assistance (e.g., HECS)
    2. Other scholarships/fellowships/grants
    3. Overseas government payments
    4. Government assistance (e.g., Austudy, Youth Allowance)
    5. Money from parents/other family members
6. Money from my partner/spouse
7. Money from work
8. Savings and investments under my name
9. Other (Please specify: __________)

18. Do you own a car?
   1. Yes
   2. No
   A. If 'Yes' to Question 18, are you financially responsible for it?
      1. Yes
      2. No

19. On average, indicate the number of hours you spend each week for each of the following:

   1. Doing university assignments or studying
   __________ hrs/wk

   2. Working
   __________ hrs/wk

   3. Managing personal finances (tracking my expenses, paying bills, online banking)
   __________ hrs/wk

   4. Exercising or playing sports
   __________ hrs/wk

   5. Socialising with friends and going out
   __________ hrs/wk

   6. Social networking on the internet (e.g. MySpace, Facebook, MSN Messenger, other chat)
   __________ hrs/wk

20. How many jobs do you currently hold? ________ job/s

21. What is your occupation title in that/those job/s? Please specify all.

22. If you work, on average, what is YOUR fortnightly net income? $________/fortnight

23. If you are employed during the semester, what kind of effect does it have on your studies?

<table>
<thead>
<tr>
<th>An extremely negative effect</th>
<th>A moderately negative effect</th>
<th>No effect</th>
<th>An moderately positive effect</th>
<th>An extremely positive effect</th>
</tr>
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<tr>
<td>1</td>
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</table>

24. If you are employed during the semester, how often do you miss classes due to work commitments?
   1. Never
   2. On occasion (e.g., once a month, but not continually)
   3. Once a week
   4. Twice a week
   5. More than twice a week
   6. N/A

About My Current Well-Being
25. How would you rate your overall **physical** health?

<table>
<thead>
<tr>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
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<td>1</td>
<td>2</td>
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</table>

26. How would you rate your overall **well-being**?

<table>
<thead>
<tr>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
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<td>1</td>
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<td>5</td>
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</table>

27. How satisfied are you with your…

<table>
<thead>
<tr>
<th>Very Dissatisfied</th>
<th>Dissatisfied</th>
<th>Neutral</th>
<th>Satisfied</th>
<th>Very Satisfied</th>
</tr>
</thead>
<tbody>
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<td>4</td>
<td>5</td>
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</tbody>
</table>

1. Academic performance in general?
2. Progress towards graduation?

28. Indicate to what extent you agree with the following statements:

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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</tr>
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</table>

1. In most ways, my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

29. How often do you…

<table>
<thead>
<tr>
<th>Never</th>
<th>Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

1. feel sure of who you are (what kind of person you
2. act without stopping to think?  
3. feel you are good at learning from your mistakes?  
4. worry that you will not get a good job in the future?  
5. feel you are very good at bouncing back quickly from bad experiences?  
6. feel unhappy, sad, or depressed?  
7. feel good about yourself?  
8. feel that difficulties are piling up so high you can’t overcome them?  
9. feel capable of coping with most of your problems?  
10. feel tired out all of the time?  
11. worry that you may not have enough money to pay for things?  
12. feel very satisfied with your life the way it is?  
13. feel discouraged about the future?  
14. feel satisfied with yourself they way you are?  
15. lose your appetite or eat a lot when you get upset?  
16. keep a cool head in emergencies?  
17. give in to your impulses?  
18. feel you have nothing to look forward to?  
19. see the humour in life even when things are not going well?  

30. Please read each of the following statements concerning satisfaction with your current financial status and indicate to what degree it reflects your own thoughts and feelings.  
1 = Strongly Disagree; 5 = Strongly Agree  

1. I am satisfied with my current financial status.  
2. I have difficulty paying for things.  
3. I am constantly worried about money.
About My Parents

31. How would you rate your overall relationship with your parent(s)?

<table>
<thead>
<tr>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
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<tbody>
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<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

32. What is your parents’ marital status?

1. Never Married
2. Married
3. De Facto
4. Divorced
5. Separated
6. Mother Widowed
7. Father Widowed
8. None of the above, both parents are both deceased
9. Other

33. If your parents are divorced or separated, how old were you when your parents divorced/legally separated?

____ years old

34. In what country was your father born? ____________________

35. In what country was your mother born? ____________________

36. What is/was your father’s level of education?

1. Primary school only
2. Some high school
3. High school graduate
4. TAFE graduate
5. Undergraduate university degree (B.A., B.S.)
6. Postgraduate university degree (M.A., M.B.A., Ph.D.)

37. If your father is currently living, which best describes what he does?

1. Home duties
2. Retired
3. Student
4. Aged pensioner
5. Other pensioner
6. A wage or salary earner
7. Conducting own business but not employing others
8. Conducting business and employing others
9. Other employed
10. Unemployed and looking for work
11. Unemployed but not looking for work
12. Self funded retiree/Superannuant
13. Other (please specify) ____________________
14. Don’t know

38. If your father is currently employed, what is his occupation title in that job?
____________________

39. What is/was your mother’s level of education?
   1. Primary school only
   2. Some high school
   3. High school graduate
   4. TAFE graduate
   5. Undergraduate university degree (B.A., B.S.)
   6. Postgraduate university degree (M.A., M.B.A., Ph.D.)

40. If your mother is currently living, which best describes what she does?
   1. Home duties
   2. Retired
   3. Student
   4. Aged pensioner
   5. Other pensioner
   6. A wage or salary earner
   7. Conducting own business but not employing others
   8. Conducting business and employing others
   9. Other employed
   10. Unemployed and looking for work
   11. Unemployed but not looking for work
   12. Self funded retiree/Superannuant
   13. Other (please specify) ____________________
   14. Don’t know

41. If your mother is currently employed, what is her occupation title in that job?
____________________

If you haven’t talked to your parents in the past semester, please go to Question 45

42. Indicate the extent to which you agree or disagree with the following statements:
   1 = Strongly Disagree; 5 = Strongly Agree

   1. Since coming to university, my parent(s) often talk to me about the importance of financial security for my later life.
   2. My parent(s) do not set a good example for being financially responsible.
3. I make financial decisions based on what my parent(s) have done in similar situations.
4. When it comes to managing money, I look to my parent(s) as role models.
5. Since coming to college, my parent(s) often review my budgeting and spending patterns.
6. My parent(s) have carefully explained to me how to establish a credit rating.
7. When it comes to financial decisions, I avoid doing what my parent(s) have done.
8. Since coming to university, my relationship with my parent(s) is not good because of money issues.
9. My parent(s) are role models for me about how to manage financial matters.
10. Since coming to university, my parent(s) do not approve of my spending patterns in general.
11. My parent(s) have a positive influence on me when it comes to managing money.
12. My parent(s) frequently monitor how I use my credit card(s).
13. Since coming to university, I argue a lot with my parent(s) about money matters.

43. Indicate the extent to which you agree or disagree with the following statements:
1 = Strongly Disagree; 5 = Strongly Agree

My parent(s) think I should:

1. Track monthly expenses
2. Spend within the budget
3. Pay credit card balances in full each month
4. Save money each month for the future
5. Invest for long-term financial goals regularly
6. Learn about money management regularly (e.g., via internet, seminars, books and classes)

44. When it comes to money matters, to what degree do you think your own behaviours are influenced by your parents?
1. Not influenced at all
2. Slightly influenced
3. Moderately influenced
4. Somewhat strongly influenced
5. Strongly influenced

45. Please rate the following statements concerning your family.
1. My family members make me feel capable and confident in what I do
   Much less than I would like 1 2 3 4 5
   As much as I would like

2. I have family members whom I can rely on for non-monetary financial aid (e.g. meals, clothing, textbooks, other necessities)
   Much less than I would like 1 2 3 4 5
   As much as I would like

3. I have family members whom I can trust with my personal financial problems
   Much less than I would like 1 2 3 4 5
   As much as I would like

4. I have family members whom I can rely on for love and affection
   Much less than I would like 1 2 3 4 5
   As much as I would like

5. I have family members who will help me financially through university when I cannot afford it
   Much less than I would like 1 2 3 4 5
   As much as I would like

6. I have family members who are easily accessible when I want to talk about my financial situation
   Much less than I would like 1 2 3 4 5
   As much as I would like

7. I enjoy the time that I spend with my family members
   Much less than I would like 1 2 3 4 5
   As much as I would like

8. I have family members who will help me pay bills when I cannot afford to pay them (automotive, mobile, mortgage, etc.)
   Much less than I would like 1 2 3 4 5
   As much as I would like

9. I have family members who give me useful advice concerning my financial situations
   Much less than I would like 1 2 3 4 5
   As much as I would like

46. How satisfied are you with the current social support that you receive from your family?

   Extremely dissatisfied 1
   Somewhat dissatisfied 2
   Neither dissatisfied nor satisfied 3
   Somewhat satisfied 4
   Extremely satisfied 5

About My Life When I Was Growing Up
47. While growing up at home, indicate to what degree you think your parents did the following:

1 = Strongly Disagree; 5 = Strongly Agree

My parent(s)

1. Discussed family financial matters with me.
2. Spoke to me about the importance of saving.
3. Taught me how to be a smart shopper.
4. Taught me how to use a credit card appropriately.
5. Discussed how to establish a good credit rating.
6. Discussed how to finance my college education with me.

About My Friends

48. How would you rate your overall personal relationships with your close friend(s)?

<table>
<thead>
<tr>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
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</table>

49. When it comes to money matters, to what degree do you think your own behaviours are influenced by your close friend(s):

1. Not influenced at all
2. Slightly influenced
3. Moderately influenced
4. Somewhat strongly influenced
5. Strongly influenced

50. To what degree can you rely on your friend(s) for cash assistance during times of personal economic struggle?

1. Not at all
2. Rarely
3. Occasionally
4. More than occasionally
5. All of the time

51. How would you compare yourself to your close friends regarding your overall knowledge of various financial topics (e.g., university financing, credit card fees, debt
management, credit scores, loans, savings, compound interest, mortgaging, stocks, investment, and superannuation)?

<table>
<thead>
<tr>
<th>Much less knowledgeable</th>
<th>Somewhat less knowledgeable</th>
<th>About the same</th>
<th>Somewhat more knowledgeable</th>
<th>Much more knowledgeable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

52. Please rate the following statements concerning your friend(s).

<table>
<thead>
<tr>
<th>Statement</th>
<th>Much less than I would like</th>
<th>As much as I would like</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My friends make me feel capable and confident in what I do</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. I have friends that I can rely on for non-monetary financial aid (e.g. meals, clothing, textbooks, other necessities)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3. I have friends that I can trust with my personal financial problems</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4. I have friends that I can spend quality time with</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5. I have friends who will give me money to purchase necessities when I cannot afford to buy them</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6. I have friends who are easily accessible when I want to talk about my financial situation</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7. I enjoy the time that I spend with my friends</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8. I have friends who will help me pay bills when I cannot afford to pay them (automotive, mobile, mortgage, etc.)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9. I have friends who give me useful advice concerning my financial situations</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

53. How satisfied are you with the current social support that you receive from your friends?

<table>
<thead>
<tr>
<th>Satisfied with current social support</th>
<th>Extremely</th>
<th>Somewhat</th>
<th>Neither</th>
<th>Somewhat</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Dissatisfied  dissatisfied nor satisfied satisfied satisfied
1  2  3  4  5

About My Life Right Now

54. The following is a list of qualities that most people hope to gain from life. Some may be more important to you than others. Therefore, please rate how important each item is in your daily life as compared to other items in the list.

<table>
<thead>
<tr>
<th>Item</th>
<th>Not important at all</th>
<th>Least important</th>
<th>Less important</th>
<th>More important</th>
<th>Most important</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sense of belonging</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Excitement</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Warm relationships</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>with others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Self-fulfilment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Being well-respected</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Fun and enjoyment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>of life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Security</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Self-respect</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. A sense of accomplishment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

55. How would you rate your overall understanding of personal-finance and money-management concepts and practices?

<table>
<thead>
<tr>
<th>Rating</th>
<th>Very low</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>Very high</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

56. How confident do you feel about your ability to manage your own finances?

<table>
<thead>
<tr>
<th>Confidence</th>
<th>Not sure at all</th>
<th>Not very sure</th>
<th>Somewhat sure</th>
<th>Fairly sure</th>
<th>Very sure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

57. Indicate how often you have engaged in the following activities within the past six months:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budgeted on a regular basis</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>2</td>
<td>Tracked monthly expenses</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Spent within the budget</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Paid bills on time each month</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Paid for everything I bought with credit cards</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Borrowed money from credit cards</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Paid off my credit card balance in full every month</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Checked credit reports</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>Maxed out credit card limit</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Saved money each month for the future</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>Saved for emergencies</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>Contributed to an investment or retirement account</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>Invested for long-term financial goals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>Learned about financial management</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

58. Indicate how favourably or unfavourably you feel toward each of the following activities:

1 = Very unfavourably; 5 = Very favourably

1. Tracking monthly expenses
2. Spending within the budget  
3. Paying credit card balances in full each month  
4. Saving money each month for the future  
5. Investing for long-term financial goals regularly  
6. Learn about money management regularly (e.g., via internet, seminars, books and classes)  

About My Financial Management Style  

59. Please read each of the following statements about attitudes towards money management and indicate to what degree it reflects your own thoughts and feelings. If a statement has more than one part, please indicate your reaction to the statement as a whole.  

1 = Strongly Disagree; 5 = Strongly Agree  

1. I haven’t really thought much about a money management style. I’m not too concerned about credit ratings or paying bills.  
2. There are so many different ways to manage money. I haven’t decided which to follow but I’m trying to figure it out.  
3. I have tried different ways to manage my personal finances and now I have a clear idea what makes sense for me.  
4. My parents know what’s best for me in terms of how I should take care of my finances.  
5. I’ve spent time thinking about financial goals, credit cards, and spending habits, and I’ve decided on a money management method that will work best for me.  
6. I really don’t know what kind of financial management style is best for me. I’m still trying to figure out what sort of savings and spending patterns feel right to me.  
7. I make decisions about credit cards and bank accounts only if my parents would approve.  
8. I’ve never really questioned my views about saving and spending. If it’s right for my parents, it must be right for me.  
9. Based on past experiences, I’ve chosen the type of money management style I want for now.  
10. I don’t think about money much. I just kind of take it as it comes.  
11. I’m still trying to decide how capable I am as a person and what financial goals will be right for me.
12. I haven’t really considered whether I am more of a saver or a spender. Finances just don’t interest me much.

60. Please read each item and indicate to what degree it reflects your own thoughts and feelings.

1 = Strongly Disagree; 5 = Strongly Agree

1. I am satisfied with the way I pay bills.
2. I feel good about my money management abilities.
3. I wish I were better at saving money.
4. Sometimes I don’t like the way I manage my finances.

61. How many credit cards (including store credit cards) do you have in your name? _____

(If “0” or “none,” skip to Q.62)

62. How frequently do you use your credit card(s)?
   1. almost daily
   2. a few times a week
   3. a few times a month
   4. rarely
   5. emergency only

And Now For My Monthly Expenses

63. Indicate how much you spend per month on average for the following items (if you know the amount by semester, divide it by 6 months to calculate a monthly expense rounded up to the nearest 10’s).

1. Housing (rent, mortgage, utilities) $________ per month
2. Vehicle expenses and transportation costs (car payment, insurance, repair, registration, petrol, bus fare, airfare) $________ per month
3. Mobile phones/Internet service $________ per month
4. Food (groceries, eating out) $________ per month

64. Indicate whether you have engaged in the following activity within the past 6 months because you didn’t have enough money.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Changed food shopping or eating habits to save money.</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2. Cut back on social and entertainment expenses (e.g., recreational, going out, movies, etc.).</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
3. Cut back on communication bills (e.g., Internet, petrol, transportation, mobile phone, etc.).
4. Cut back on spending on personal care (e.g., clothing, hair, shopping).
5. Reduced your number of classes to work more.
6. Used one credit card to pay off another.
7. Postponed medical or dental care because you didn’t have the money to pay for it.
8. Withdrewn from university or deferred one or more semesters to work more.

65. Approximately what is the total amount owed on all credit cards (including store-specific credit cards) that will not be paid in full this month (i.e. credit card balance carried forward rounded up to the nearest 100’s)? $________

66. If you currently incur debt, what is its purpose? (Check all that apply)
   1. Education expenses
   2. General living expenses
   3. Payment on car
   4. Payment on holiday
   5. Other (please specify) ____________________

About My Knowledge of Personal Finance

67. Indicate whether each of the following statements is True or False.

1. If you expect to carry a balance on your credit card, the APR is the most important thing to look at when comparing credit card offers.  
   True  False

2. If the interest rate on an adjustable-rate mortgage loan goes up, your monthly mortgage payments will also go up.  
   True  False

3. If you buy certificates of deposit, saving bonds, or Treasury Notes, you can earn higher returns than you can earn on a savings account, with little or no added risk.  
   True  False

4. You could save thousands of dollars in interest costs by choosing a 15-year mortgage rather than a 30-year mortgage.  
   True  False

5. Making late payments on your bills can make taking out a loan more difficult.  
   True  False

6. With compound interest, you earn interest on your interest as well as on your principal.  
   True  False

7. Your credit rating is not affected by how much you charge on your credit cards.  
   True  False

8. A stock mutual fund combines the money of many investors to buy a
variety of stocks.

9. Over the long term, stocks have the highest rate of return on money invested. T F

10. Using extra money in a bank savings account to pay off a high-interest-rate credit card debt is a good idea. T F

68. Below there is a set of 9 choices between two lotteries, lottery A and lottery B. For the first choice, most people prefer lottery A to lottery B. For the 9th choice, most people prefer lottery B to lottery A. We would like to know where in this set of 9 choices your preference would switch from lottery A to lottery B. For example, if you prefer lottery A for 1 and 2, but lottery B afterwards, you should write ‘3’. Or if you prefer lottery A down as far as 7, and lottery B afterwards, you should write ‘8’.

<table>
<thead>
<tr>
<th>Lottery A</th>
<th>Lottery B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 10% chance of $100; 90% chance of $80 OR 10% chance of $200; 90% chance of $5</td>
<td></td>
</tr>
<tr>
<td>2. 20% chance of $100; 80% chance of $80 OR 20% chance of $200; 80% chance of $5</td>
<td></td>
</tr>
<tr>
<td>3. 30% chance of $100; 70% chance of $80 OR 30% chance of $200; 70% chance of $5</td>
<td></td>
</tr>
<tr>
<td>4. 40% chance of $100; 60% chance of $80 OR 40% chance of $200; 60% chance of $5</td>
<td></td>
</tr>
<tr>
<td>5. 50% chance of $100; 50% chance of $80 OR 50% chance of $200; 50% chance of $5</td>
<td></td>
</tr>
<tr>
<td>6. 60% chance of $100; 40% chance of $80 OR 60% chance of $200; 40% chance of $5</td>
<td></td>
</tr>
<tr>
<td>7. 70% chance of $100; 30% chance of $80 OR 70% chance of $200; 30% chance of $5</td>
<td></td>
</tr>
<tr>
<td>8. 80% chance of $100; 20% chance of $80 OR 80% chance of $200; 20% chance of $5</td>
<td></td>
</tr>
<tr>
<td>9. 90% chance of $100; 10% chance of $80 OR 90% chance of $200; 10% chance of $5</td>
<td></td>
</tr>
</tbody>
</table>

About My Future Plans

69. Indicate how likely or unlikely you are to engage in the following activities within the next 12 months:

1 = very unlikely; 5 = Very likely

1. Tracking monthly expenses
2. Spending within the budget
3. Paying credit card balances in full each month
4. Saving money each month for the future
5. Investing for long-term financial goals regularly
6. Learning about money management regularly (e.g., via the Internet, seminars, books and classes)
70. How likely do you think it is that you will return to Murdoch University next year to continue your university education?

<table>
<thead>
<tr>
<th>Very unlikely</th>
<th>Unlikely</th>
<th>Neutral</th>
<th>Likely</th>
<th>Very likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

71. How likely do you think it is that you will complete a bachelor’s degree?

<table>
<thead>
<tr>
<th>Very unlikely</th>
<th>Unlikely</th>
<th>Neutral</th>
<th>Likely</th>
<th>Very likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

72. How likely do you think it is that you will pursue a master’s or professional degree?

<table>
<thead>
<tr>
<th>Very unlikely</th>
<th>Unlikely</th>
<th>Neutral</th>
<th>Likely</th>
<th>Very likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Thank you for choosing to participate in this survey. As the survey is completely confidential please try and answer all the questions as openly and honestly as you can. If you do not feel comfortable answering any of the questions please feel free to leave them blank.

ID Number  
What is your date of birth? (dd/mm/yy) 
What is your gender?  
What suburb/town do you live in? 
What is your Post Code: 

Please tick the box that best describes your living arrangements:
- Living at home with parent(s) / guardian(s);  
- (Pay board / don’t pay board)
☐ Rental property; *Circle which applies to you* (on your own / with friends or flatmates / with your partner)

☐ Student housing

☐ Other *(please specify)* _______________________________

---

## Section A – Time Use

**If you participate in any of the following activities, please tell us how many hours per week you spend in each activity.**

<table>
<thead>
<tr>
<th>How many hours per week do you spend in each of these activities?</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading for fun</td>
<td></td>
</tr>
<tr>
<td>Watching Television</td>
<td></td>
</tr>
<tr>
<td><strong>Home chores</strong> <em>(doing dishes, cleaning, gardening etc)</em></td>
<td></td>
</tr>
<tr>
<td>Taking care of younger family members</td>
<td></td>
</tr>
</tbody>
</table>
| **Practicing or playing a musical instrument**
  Please specify instrument                                   |               |
| ☺ _____________________________                               |               |
| **Hobbies** *(fishing, scrapbooking etc)*
  What hobbies do you do the most?                            |               |
| ☺ _____________________________                               |               |
| **Going to bars, pubs, nightclubs, raves, festivals or house parties** |               |
| **Working out or physical activity** *(on your own or at the gym, not as a part of an organised sports activity)*
  Please Specify                                             |               |
| ☺ _____________________________                               |               |
| **Computer Console Gaming** *(Playstation, X-Box etc)*
  Which game do you play the most?                            |               |
| ☺ _____________________________                               |               |
| **Internet Gaming** *(online games)*
  Which one do you play the most?                             |               |
<p>| ☺ _____________________________                               |               |</p>
<table>
<thead>
<tr>
<th>Internet Usage – Social Networking (Facebook, Webchat, MySpace)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Which one do you use the most?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Internet Usage – Social Media (e.g. Twitter, Tumblr, Pinterest)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Which one do you use the most?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Internet Usage – Other (downloading music, ebay)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Please specify</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Section B - Social Media

Have you ever created your own profile online that others can see or follow (e.g., on a social networking site like Facebook or Myspace)? *(Does not include MSN/Yahoo chat)*

- [ ] No  
  - [ ] skip questions below; go to **Section C (Page 6)**.
- [ ] Yes  
  - [ ] answer the questions below.

**On which websites have you created a profile?** *(Check all that apply)*

- [ ] Facebook  
  - Number of friends/followers? ___
- [ ] Flickr  
  - Number of friends/followers? ___
- [ ] Google+  
  - Number of friends/followers? ___
- [ ] Instagram  
  - Number of friends/followers? ___
- [ ] MySpace  
  - Number of friends/followers? ___
- [ ] Pinterest  
  - Number of friends/followers? ___
- [ ] Twitter  
  - Number of friends/followers? ___

What is the profile you use, or update most often?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To access your profile(s), which do you use the most?  
- [ ] Computer  
- [ ] Mobile

Answer the following questions about the profile (e.g., Facebook/Myspace) you use the most often. Please tick the applicable answer.

**How long have you had your profile?**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**How often do you check your social networking site?**

- [ ] Never  
- [ ] Less than once a month
How often do you visit your profile?

☐ Never
☐ Less than once a month
☐ Every few weeks
☐ 1-2 days a week
☐ 3-5 days a week
☐ About once a day
☐ Several times a day

How often do you change your profile (e.g., change status, change personal information, add photos)?

☐ Never
☐ Less than once a month
☐ Every few weeks
☐ 1-2 days a week
☐ 3-5 days a week
☐ About once a day
☐ Several times a day

How important is it to you to have a lot of friends on your network?

Not at all important
Not at all important
Not at all important
Not at all important
Not at all important
Not at all important
Very

How many friends do you have on your profile? ☐

Compared to other people your age with a profile, how many friends do you have?

☐ A lot less than others
☐ A little less than others
☐ About the same as others
☐ A bit more than others
☐ A lot more than others

How much do you agree/disagree with the following statements?

Facebook/Myspace has become part of my daily routine.
I feel out of touch when I haven’t logged on to Facebook/Myspace.

I use Facebook/Myspace as a way of making me feel good.

I get into arguments with other people about the amount of time I spend on Facebook/Myspace.

I prefer to spend time on Facebook/Myspace rather than attend social activities/events.

If I can’t access Facebook/Myspace I feel moody and irritable.

I think that there is social pressure on my social networking site to post pictures, updates, or wall posts that talk about drinking and show me drinking alcohol.

About how often in the last 6 months has someone used put-downs or told lies about you using the Internet (email, instant messaging, text messaging, or websites)? (Circle one answer)
About how often in the last 6 months have your friends posted pictures, updates, or wall posts that showed or talked about them drinking alcohol.

<table>
<thead>
<tr>
<th>never</th>
<th>once</th>
<th>2-3 times</th>
<th>4-6 times</th>
<th>7-10 times</th>
<th>11-20 times</th>
<th>21-30 times</th>
<th>31 or more times</th>
</tr>
</thead>
</table>

**Section C - Your Friends**

What proportion of your friends ...

*(Circle one number)*

Are enrolled full time at university?

| None | 1 | Half | 2 | All | 3 | 4 | 5 |

Have a full-time job?

| None | 1 | Half | 2 | All | 3 | 4 | 5 |

Are unemployed and not studying?

| None | 1 | Half | 2 | All | 3 | 4 | 5 |

Regularly drink alcohol?

| None | 1 | Half | 2 | All | 3 | 4 | 5 |

Regularly get drunk?

| None | 1 | Half | 2 | All | 3 | 4 | 5 |
Regularly use illegal drugs?

None 1 2 Half 3 4 All 5

Are likely to skip class / work?

None 1 2 Half 3 4 All 5

**Tick the box which best describes your relationship status:**

- Single (not in a steady relationship)
- Steadily dating (but not living together)
- Living with a partner
- Engaged or married
- Other

**Indicate to what extent you think your friends engage in the following behaviours:**

Track monthly expenses

| Strongly disagree | 1 | 2 | 3 | 4 | 5 |
| Strongly agree |

Spend within the budget

| Strongly disagree | 1 | 2 | 3 | 4 | 5 |
| Strongly agree |

Save money each month for the future

| Strongly disagree | 1 | 2 | 3 | 4 | 5 |
| Strongly agree |

---

**Section D – Your Sleep**

Please give the one answer that best describes the way your sleep has been in the last two weeks. List ONE time, not a range.

These questions are to do with your usual schedule.

What time do you usually go to bed on week days? ______________

What time do you usually wake up on week days? ______________
What time do you **usually** go to bed on **weekends**? ____________

What time do you **usually** wake up on **weekends**? ____________

On **week days**, after you go to bed at night, about how long does it **usually** take you to fall asleep? ____________ minutes.

**In the last two weeks, how often have you.....**

Felt satisfied with your sleep?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once</th>
<th>Twice</th>
<th>Several Times</th>
<th>Every day/night</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Arrived late to class or work because you overslept?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once</th>
<th>Twice</th>
<th>Several Times</th>
<th>Every day/night</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Fallen asleep in a morning class or at work?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once</th>
<th>Twice</th>
<th>Several Times</th>
<th>Every day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Stayed up until at least 3am?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once</th>
<th>Twice</th>
<th>Several Times</th>
<th>Every day/night</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**In the last two weeks, how often have you.....**

Needed more than one reminder to get up in the morning?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once</th>
<th>Twice</th>
<th>Several Times</th>
<th>Every day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Had an extremely hard time falling asleep?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once</th>
<th>Twice</th>
<th>Several Times</th>
<th>Every day/night</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Felt tired or sleepy during the day?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once</th>
<th>Twice</th>
<th>Several Times</th>
<th>Every day/night</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Had a good night’s sleep?

<table>
<thead>
<tr>
<th>Never</th>
<th>Once</th>
<th>Twice</th>
<th>Several Times</th>
<th>Every day/night</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Section E – Mobile Phone**

**Do you have a mobile phone?**
- [ ] No  
  skip questions below; go to **Section F (page 10).**
- [ ] Yes  
  answer the questions below

**Does your mobile phone have internet access?**
- [ ] No
- [ ] Yes

*Over the past month* how often have you sent or received *text messages* and/or *phone calls* after you went to bed on week nights?

- [ ] Never
- [ ] Less than once per week
- [ ] 1-2 week nights per week
- [ ] 3-4 week nights per week
- [ ] Every week night

*Over the past month* how often have you sent or received *text messages* and/or *phone calls* after you went to bed on weekend nights?
At what time of night do you usually send or receive messages and/or phone calls?
Please tick all the boxes that apply to you.

- Never text or phone after you go to bed
- Immediately after you go to bed
- 10pm – 11pm
- 11pm – 12am (midnight)
- 12am – 1am
- 1am – 2am
- 2am - 6am
- At any time of the night

Section F - Internet

Do you have access to the Internet in your bedroom on your computer, tablet or phone?

- No  skip questions below; go to Section G (page 11).
- Yes  answer the questions below.

Over the past month how often have you accessed your internet after you go to bed on week nights?

- Never
- Less than once per week
- 1-2 week nights per week
- 3-4 week nights per week
- Every week night

Over the past month how often have you accessed the internet after you go to bed on weekend nights?

- Never
- Less than once per weekend
- 1 night per weekend
- Both weekend nights
At what time of night do you usually access the Internet in your bedroom? Please tick all the boxes that apply to you.

- □ Never access the internet after you go to bed
- □ Immediately after you go to bed
- □ 10pm – 11pm
- □ 11pm – 12am (midnight)
- □ 12am – 1am
- □ 1am – 2am
- □ 2am - 6am
- □ At any time of the night

Section G – Energy Drinks

During the last two weeks, how often did you drink high caffeine energy drinks (e.g. Red Bull, Mother; not including coffee)?

- □ Never
- □ Less than once per day
- □ Once a day
- □ 2 times a day
- □ 3 times or more a day

During the last two weeks, how often did you drink 3 or more small cans of high caffeine energy drinks on one occasion (e.g. 250ml can of Mother, Red Bull or a total volume of around 750ml)

- □ Never
- □ Less than once
- □ Once
- □ 2 times
- □ 3 or more times

Section H - You and Study
If you sat for your TEE / WACE exams, what was your TER / ATAR Score? ________________

If you have NEVER enrolled at university, how likely is it that you will go to university?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Extremely Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
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<tr>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

If you are NOT currently a student, please skip the following questions and go to Section I: YOU & WORK (page 13)

Were/are you enrolled to study (e.g., at a university or TAFE)? (Tick as many as apply).

☐ in 2010
☐ in 2011
☐ in 2012

If you have been enrolled at University/TAFE, please list how many of the following grades you got in:

<table>
<thead>
<tr>
<th>2011</th>
<th>Below 50%</th>
<th>50-59%</th>
<th>60-69%</th>
<th>70-79%</th>
<th>80-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2012</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please tick any box(es) that apply to your STUDY situation (please specify):

☐ Studying at University (which University? ___________________________); Course enrolled in? ___________________________

☐ Studying at TAFE; Course enrolled in? ___________________________
☐ Other study

Course enrolled in? ____________________________________________

How many hours per week do you spend in class? ________ (hours)

How many hours per week do you spend studying or doing assignments? ______ (hours)

Please read the following statements and rate how true each statement is for you. (Circle one number)

If I don’t understand something, I know I am capable of learning it

<table>
<thead>
<tr>
<th>Not at all true for me</th>
<th>Very true for me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

If I work really hard, I could be one of the best students in my course.

<table>
<thead>
<tr>
<th>Not at all true for me</th>
<th>Very true for me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

I have the ability to be good at most subjects if I try.

<table>
<thead>
<tr>
<th>Not at all true for me</th>
<th>Very true for me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

It is important to me to do well in my classes.

<table>
<thead>
<tr>
<th>Not at all true for me</th>
<th>Very true for me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

How likely do you think it is that you will complete a university degree?

<table>
<thead>
<tr>
<th>Very unlikely</th>
<th>Very Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>
Please answer the following questions about your employment situation at the present time:

Please tick any box(es) that apply to your current WORK situation:

☐ Apprenticeship/Traineeship (please specify)

☐ Working full time: What is your full time job?

☐ Working part time/casual: What are your part time job(s)? - list all:

☐ Unemployed but looking for work

☐ Unemployed but NOT looking for work

☐ Other (please specify) ____________________________

If you are currently unemployed, please skip the following questions and go directly to Section J (page 16)

How many positions of paid employment do you currently hold? __________

How many hours on average per week do you work? _________________

If you work, what is your (approx) fortnightly net income (after tax)? $________

If you work, please tick the box that best describes your work situation?

☐ It is a short-term job of little relevance to your future career

☐ The job is a step on a career path

☐ The job is a long-term career

How satisfied are you with your current employment?

Very Dissatisfied 1 2 3 4 5 Very Satisfied

Please answer the following questions about your current job:

My job allows me to use my skills and abilities

Never 1 2 3 4 5 6 7 All the time
I have a lot of freedom to make important decisions about what I do at work and how I do it

Never 1 2 3 4 5 6 7

I have a flexible work schedule in this job

Never 1 2 3 4 5 6 7

My job matches what I like to do

Never 1 2 3 4 5 6 7

In this work I am my own boss

Never 1 2 3 4 5 6 7

This job gives me the amount of independence I like

Never 1 2 3 4 5 6 7

My job gives me a chance to learn a lot of new things

Never 1 2 3 4 5 6 7

Most of my interests are centred around my job

Never 1 2 3 4 5 6 7

How much confidence do you have in your ability to...

Develop cooperative working relationships?

No confidence at all 1 2 3 4 5

Complete confidence
Motivate others to follow your vision?

No confidence at all Complete confidence
1 2 3 4 5

Be in charge of arrangements for a significant event (e.g., a family reunion)?

No confidence at all Complete confidence
1 2 3 4 5

Schedule and coordinate work to be done on a project?

No confidence at all Complete confidence
1 2 3 4 5

Work out a creative solution to a problem?

No confidence at all Complete confidence
1 2 3 4 5

Learn a new skill (e.g. how to use a new computer package)?

No confidence at all Complete confidence
1 2 3 4 5

Give clear instructions to a group of people?

No confidence at all Complete confidence
1 2 3 4 5

Keep trying at a task if you do it badly the first time?

No confidence at all Complete confidence
1 2 3 4 5

Focus on one task at a time when you have lots of things to do?

No confidence at all Complete confidence
1 2 3 4 5
Section J - You and Money

Please answer the following questions about your financial situation at the present time:

Are you financially independent of your parents / guardians?

☐ Yes
☐ No

Please rate the following statements concerning your financial situation:

I am satisfied with my current financial situation

Strongly agree 1 2 3 4 Strongly disagree 5

My income allows me to socialise as often as I like

Never 1 2 3 4 Always 5

I have enough money to buy treats for myself

Never 1 2 3 4 Always 5

My income allows me to do the things I want

Never 1 2 3 4 Always 5

My income restricts me from living as well as my friends

Never 1 2 3 4 Always 5

Indicate how often you have engaged in the following activities within the past six months:

Tracked monthly expenses

Never 1 2 3 4 Very often 5

Spent within the budget
Have you participated in any of the following organised sports in the past calendar year? (Please circle all the sports you do and indicate how many hours per week you participate in each of the sports you have selected).

If you don’t participate in any organised sports please go to Section L (page 22).

**Example:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Approx hrs/week</th>
</tr>
</thead>
</table>
Organised Sports

<table>
<thead>
<tr>
<th>Activity</th>
<th>Approx hrs/wk</th>
<th>Activity</th>
<th>Approx hrs/wk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SPORTS</strong></td>
<td></td>
<td><strong>SPORTS</strong></td>
<td></td>
</tr>
<tr>
<td>Athletics</td>
<td></td>
<td>Horse riding</td>
<td></td>
</tr>
<tr>
<td>Baseball</td>
<td></td>
<td>Karate/Taekwondo</td>
<td></td>
</tr>
<tr>
<td>Basketball</td>
<td></td>
<td>Netball</td>
<td></td>
</tr>
<tr>
<td>Boxing</td>
<td></td>
<td>Rugby</td>
<td></td>
</tr>
<tr>
<td>Cricket</td>
<td></td>
<td>Soccer</td>
<td></td>
</tr>
<tr>
<td>Cycling</td>
<td></td>
<td>Squash</td>
<td></td>
</tr>
<tr>
<td>Football (AFL)</td>
<td></td>
<td>Swimming/Diving</td>
<td></td>
</tr>
<tr>
<td>Golf</td>
<td></td>
<td>Tennis</td>
<td></td>
</tr>
<tr>
<td>Gymnastics</td>
<td></td>
<td>Touch Rugby</td>
<td></td>
</tr>
<tr>
<td>Hockey</td>
<td></td>
<td>Volleyball</td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td>Other (please specify)</td>
<td></td>
</tr>
</tbody>
</table>

Answer the next set of questions on about the sport you spend the most time in.

Please specify which sport you spend the most time in
(If you do not participate in any sports please go to section L on page 20)

How many hours per week do you spend in this sport?

__________________________ Hours
How many months / years have you been participating in this sport?

☐ _____________ Years ☑ ___________ Months

Is this sport linked to a club (e.g. community club, University team)

☐ Yes ☑ No

If yes, which club? _________________________________

Do you participate in this sport at an elite level?

☐ No

☐ Yes ☑ Compete at an international level (represent Australia)

☐ Compete against participants from other States (represent W.A.)

Do you coach, mentor or umpire in this sport

☐ No

☐ Yes ☑ answer the question below

If yes, do you get paid? ☑ Yes

☐ No

Section L - Activity Participation

Have you participated in any of the following organised activities or clubs in the past calendar year? (Please circle all the activities you do and indicate how many hours per week you participate in each of the activities you have selected).

If you don't participate in any activities, please go to Section M (page 22).

Example:
<table>
<thead>
<tr>
<th>Activity</th>
<th>Approx hrs/wk</th>
<th>Activity</th>
<th>Approx hrs/wk</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>2.5 hrs per week</td>
<td>adet</td>
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</table>

**Organised Activities & Clubs**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Approx hrs/wk</th>
<th>Activity</th>
<th>Approx hrs/wk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arts and Performing Arts</strong></td>
<td></td>
<td><strong>Arts and Performing Arts</strong></td>
<td></td>
</tr>
<tr>
<td>Community Band/Orchestra</td>
<td></td>
<td>Dance Club/Competitions/ or Lessons</td>
<td></td>
</tr>
<tr>
<td>Private Band</td>
<td></td>
<td>Music Lesson (Please specify)</td>
<td></td>
</tr>
<tr>
<td>Drama Club</td>
<td></td>
<td>Other (Please Specify)</td>
<td></td>
</tr>
<tr>
<td><strong>Recreational Clubs</strong></td>
<td></td>
<td><strong>Recreational Clubs</strong></td>
<td></td>
</tr>
<tr>
<td>Computer Gaming/ Networking</td>
<td></td>
<td>Other (Please specify)</td>
<td></td>
</tr>
<tr>
<td><strong>Service Clubs</strong></td>
<td></td>
<td><strong>Service Clubs</strong></td>
<td></td>
</tr>
<tr>
<td>Cadets / Scouts</td>
<td></td>
<td>Surf Life Saving</td>
<td></td>
</tr>
<tr>
<td>Church/Youth Groups</td>
<td></td>
<td>Volunteer/Service Work (Please Specify)</td>
<td></td>
</tr>
<tr>
<td>Army Reserves</td>
<td></td>
<td>Other (Please Specify)</td>
<td></td>
</tr>
<tr>
<td><strong>Other (Please Specify)</strong></td>
<td></td>
<td><strong>Other (Please Specify)</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Answer the next set of questions about the activity/club you spend the most time in.**

*If you have circled any activities or clubs please tell us which one you spend the most time in.*

*(If you do not participate in any activities/clubs please go to Section M on page 22)*
How many hours per week do you spend in this activity?

_________________________ Hours

How many months/years have you been participating in this activity?

_________________________ Years  __________________ Months

Is this activity linked to a club (e.g. community club, University club)

☐ Yes  ☐ No

If yes, which club? ____________________________________________

Do you compete/participate in this activity at an elite level?

☐ No  ☐ Yes  ☐ Compete/participate at an international level (represent Australia)

☐ Compete/participate against participants from other States (represent W.A.)

Do you have a leadership role in this activity (e.g., Tutoring, Mentoring)?

☐ No  ☐ Yes  ☐ answer the question below

If yes, do you get paid?  ☐ Yes  ☐ No

Section M – About You

Please read the following statements and rate how true each statement is for you. (Circle one number)
I am very good at making friends

Not at all  true for me  Very true for me
1  2  3  4  5  6

I am able to do most things very well

Not at all  true for me  Very true for me
1  2  3  4  5  6

I am always comfortable talking to other people my age

Not at all  true for me  Very true for me
1  2  3  4  5  6

A lot of things about me are good

Not at all  true for me  Very true for me
1  2  3  4  5  6

If I really try I can be good at almost anything I want to

Not at all  true for me  Very true for me
1  2  3  4  5  6

I have a lot to be proud of

Not at all  true for me  Very true for me
1  2  3  4  5  6

I always feel like I am part of a group of friends

Not at all  true for me  Very true for me
1  2  3  4  5  6

How often are the following statements true for you?

I like the way things are going for me.

Never  Almost always
1  2  3  4  5  6
My life is going well.

Never 1 2 3 4 5 6

I would like to change many things about my life.

Never 1 2 3 4 5 6

I have a good life.

Never 1 2 3 4 5 6

I feel good about what’s happening to me.

Never 1 2 3 4 5 6

How often do you….. (Circle one number)

Feel good about yourself?

Never 1 2 3 4 5 6

Lose your appetite or eat a lot when you get upset?

Never 1 2 3 4 5 6

Feel that difficulties are piling up so high that you can't overcome them?

Never 1 2 3 4 5 6

Feel satisfied with who you are?

Never 1 2 3 4 5 6

Feel that you are capable of coping with most of your problems?

Never 1 2 3 4 5 6

Feel lonely?
Never 2 3 4 5 6 Daily

Keep a cool head in emergencies?

Never 2 3 4 5 6 Daily

Feel sure about yourself?

Never 2 3 4 5 6 Daily

Feel unhappy, sad or depressed?

Never 2 3 4 5 6 Daily

Feel there is nothing nice you can look forward to?

Never 2 3 4 5 6 Daily

What job would you MOST like to have when you are 30? ________________

How likely do you think it is that you will actually end up in the job you most want to have at age 30?

Very unlikely 2 3 4 5 6 Very likely

If you think you may not get the job you want most, what job do you think you will actually have when you are 30?

____________________________________________________________________

____________________________________________________________________
The following questions ask you about behaviours that may be considered risky, if you are uncomfortable answering any of the questions feel free to leave them blank.

About how often in the last 6 months have you drunk alcohol?  (Circle one answer)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Never</th>
<th>Once</th>
<th>2-3 times</th>
<th>4-6 times</th>
<th>7-10 times</th>
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About how often in the last 6 months have you had more than 5 standard alcoholic drinks on one occasion? (1 standard drink = 1 middy of full-strength beer, or a 100ml glass of wine, or a nip of spirits)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Never</th>
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About how often in the last 6 months have you been drunk?

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<th>Frequency</th>
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<th>2-3 times</th>
<th>4-6 times</th>
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About how often in the last 6 months have you had alcohol combined with an energy drink (such as ‘Red Bull’) or a pre-mixed alcohol-energy drink (such as ‘Pulse’)?

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About how often in the last 6 months have you used illegal drugs?

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<th>2-3 times</th>
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About how often in the last 6 months have you done something you knew was dangerous just for the thrill of it?

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<th>Once</th>
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About how often in the last 6 months have you damaged public property?

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<thead>
<tr>
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<th>Once</th>
<th>2-3 times</th>
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About how often in the last 6 months have you had contact with police for something you did or something they thought you did?

<table>
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About how often in the last 6 months have you done some pretty risky things because you thought it was a kick?

<table>
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<th>Never</th>
<th>Once</th>
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</tbody>
</table>
About how often in the last 6 months have you gotten in a physical fight with another person?

<table>
<thead>
<tr>
<th>never</th>
<th>once</th>
<th>2-3 times</th>
<th>4-6 times</th>
<th>7-10 times</th>
<th>11-20 times</th>
<th>21-30 times</th>
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</table>

About how often in the last 6 months have you used put-downs or told lies about your peers using the Internet (email, instant messaging, text messaging, or websites)?

<table>
<thead>
<tr>
<th>never</th>
<th>once</th>
<th>2-3 times</th>
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</table>

About how often in the last 6 months have you cheated on an exam, or copied someone else’s work?

<table>
<thead>
<tr>
<th>never</th>
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<th>2-3 times</th>
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<th>7-10 times</th>
<th>11-20 times</th>
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</tr>
</thead>
</table>

About how often in the last 6 months have you taken something from a store without paying for it?

<table>
<thead>
<tr>
<th>never</th>
<th>once</th>
<th>2-3 times</th>
<th>4-6 times</th>
<th>7-10 times</th>
<th>11-20 times</th>
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</thead>
</table>

About how often in the last 6 months have you taken money from home that was not your own without asking?

<table>
<thead>
<tr>
<th>never</th>
<th>once</th>
<th>2-3 times</th>
<th>4-6 times</th>
<th>7-10 times</th>
<th>11-20 times</th>
<th>21-30 times</th>
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</tr>
</thead>
</table>

About how often in the last 6 months have you not used your seatbelt in a car?

<table>
<thead>
<tr>
<th>never</th>
<th>once</th>
<th>2-3 times</th>
<th>4-6 times</th>
<th>7-10 times</th>
<th>11-20 times</th>
<th>21-30 times</th>
<th>31 or more times</th>
</tr>
</thead>
</table>

About how often in the last 6 months have you driven a car whilst over the blood alcohol limit or high on drugs?

<table>
<thead>
<tr>
<th>never</th>
<th>once</th>
<th>2-3 times</th>
<th>4-6 times</th>
<th>7-10 times</th>
<th>11-20 times</th>
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</tr>
</thead>
</table>

About how often in the last 6 months have you been a passenger in a car when the driver was over the blood alcohol limit or high on drugs?

<table>
<thead>
<tr>
<th>never</th>
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<th>2-3 times</th>
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<th>11-20 times</th>
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</thead>
</table>

About how often in the last 6 months have you taken caffeine tablets (e.g. Alert, No-Doz)?

<table>
<thead>
<tr>
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<th>2-3 times</th>
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256
When you drink alcohol, how many standard drinks do you usually have?

☐ I don’t drink
☐ 1 drink
☐ 2 drinks
☐ 3 drinks
☐ 4 drinks
☐ 5 or more drinks

Have you ever been unable to remember events that took place after drinking?

☐ Never
☐ Once
☐ Twice
☐ 3 or more times

Section P - Your Background

How would you describe your family background?  *(Tick all that apply)*

☐ Caucasian (Anglo-Australian, European or American)
☐ Aboriginal/Torres Strait Islander
☐ Asian
☐ Middle Eastern
☐ African
☐ Other (please specify) _______________________

Are your parents?

☐ Married and living together all the time
☐ Divorced
☐ Married and living together but one works away a lot of the time (fly in-fly out)
☐ Single/ sole parent (never married)
☐ Living together in a marriage-like relationship
☐ Widowed/widower (parent(s) passed away)
☐ Separated
☐ Other *(please specify)* __________

What education has your father completed?  *(Please tick the highest qualification)*

Did not finish High School ☐
Finished High School ☐
Finished University ☐
Do not know ☐

Does your father work for pay?  ☐ Yes  ☐ No
If your father is currently employed, what does he do in his job? ☐

What education has your mother completed?
(Please tick the highest qualification)

Did not finish High School ☐
Finished High School ☐
Finished University ☐
Do not know ☐

Does your mother work for pay? ☐ Yes ☐ No

If your mother is currently employed, what does she do in her job? ☐

Indicate to what degree you agree with the following statements:

My parents think I should:

Track monthly expenses

Strongly disagree ☐
Agree ☐

Spend within the budget

Strongly disagree ☐
Agree ☐

Save money each month for the future

Strongly disagree ☐
Agree ☐

Indicate to what extent you think your parent(s) engage in the following behaviours:

Track monthly expenses

Strongly disagree ☐
Agree ☐

Spend within the budget

Strongly disagree ☐
Agree ☐

Save money each month for the future
😊 End of Survey - Thank you for your participation😊