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Academic Adjustment and Resilience in Mature Age and School Leaver University Students : A Review of the Literature & Differences in Resilience and University Adjustment Between School Leaver and Mature Age University Students

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Academic Adjustment and Resilience in Mature Age and School Leaver University Students: A Review of the Literature

Differences in Resilience and University Adjustment Between School Leaver and Mature Age University Students

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Declaration

I certify that this literature review does not incorporate, without acknowledgment, any material previously submitted for a degree or diploma in any institution of higher education and that, to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where due reference is made in the text.

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Date: 5/12/07

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Abstract

This paper reviews the literature related to the transition and adjustment of school leaver and mature age students to university. It is suggested that the transition to university is a major life transition and thus is a period of great stress (Larose, Bernier, & Tarabulsy, 2005). For mature age students and school leaver students, the impacts upon adjustment to university are varied during the transition to university study (Cantwell, Archer, & Bourke, 2001; Challis, 1976; Justice & Dornan, 2001). First this review defines who mature age and school leaver students are in the context of universities. Second, the resilience literature is reviewed with particular attention paid to academic resilience and its relationship to mode of study for students. Lastly the differences between school leaver and mature age students are discussed and reviewed in terms of the adversity faced when transitioning into university and how each type of student adjusts differently to the new academic context.

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Academic Adjustment and Resilience in Mature Age and School Leaver University Students: A Review of the Literature

Commencing study at university is in many respects designed to be somewhat of a challenge. There are, however, unintended challenges that most students face when transitioning into the university lifestyle and academia in general. Transitions of any type have been empirically shown to be times of increased stress (Cote, 2002; Hays & Oxley, 1986) and it has been shown that the transition to university or college is no exception (Gall, Evans, & Bellerose, 2000; Gerdes & Mallinckrodt, 1994; Parker, Hogan, Eastabrook, Oke, & Wood, 2006). One of the main measures used to determine the outcome of the transition to university is adjustment to university. Adjustment has been shown to be a dynamic process, which under normal circumstances increases over time (Gall et al., 2000). Mature age and school leaver students face some similar challenges when transitioning into university, but there are many experiences and contextual differences between the two groups of students that can make the experience of transitioning into university vastly different for members of each group (Cantwell, Archer, & Bourke, 2001; Challis, 1976; Justice & Dornan, 2001; Kasworm, 1990; Richardson & King, 1998). These contextual differences include, but are not limited to, having children (Quimby & O'Brien, 2006), perceived social support, financial strain, (Cantwell et al., 2001), and metacognitive differences in learning strategies (Justice & Dornan, 2001). It is no surprise then, that many students report these differences as being highly influential to their adjustment in this time of transition (Pancer, Hunsberger, Pratt, & Alisat, 2000). Resilience is an essential quality needed in overcoming the stress that is inherent in transition periods. Resilience is a topic that is receiving more and more attention within higher education research (e.g., Compas,

Wagner, Slavin, & Vannatta, 1986; Walker, Gleaves, & Grey, 2006). Resilience has been defined as, "manifested competence in the context of significant challenges to adaptation or development" (Masten & Coatsworth, 1998, p.207). In this review literature addressing definitions and an understanding of mature age and school leaver students at university is presented and reviewed, followed by a review of the literature surrounding the transition to university. Finally, psychological resilience literature relating to the adjustment and transition to university is explored.

Mature Age Versus School Leaver Students

Figures suggest that the composition of the university student body is changing in terms of mature age and school leaver student numbers. Statistics indicate that in 1980, 24% of full time students were over the age of 21 and this figure rose to 33% by 1996 (Merrill 1999, cited in Murphy & Roopchand, 2003). However recently this increase in mature age students has declined, and now only 13% of students enrolled at Edith Cowan University, Perth, WA, enrolled as mature age students (Edith Cowan University, 2007). It is argued that the experiences of school leaver university students are different to that of mature age entry university students. This was exhibited in a qualitative inquiry that aimed to understand the adjustments of students to university. The study found that the adjustments for students was first dependent upon the type of student they were, namely, being a school leaver or a mature age student (Urquhart & Pooley, in press). In particular it was determined that mature age students entered university with different experiences which set them apart from their school leaver counterparts. These experiences include: giving up full-time employment, supporting a family, and reintegrating into an academic context (Challis, 1976). School leavers on the other hand reported different difficulties. For example, they were not as clear in

communicating why they wanted a degree as the mature age students, and they also showed less enthusiasm in these communications. School leaver students did not see commencing study at university as presenting many difficulties, however any problems they did mention revolved around social pressures or other peoples' expectations (Challis, 1976). What was clear was that the problems expressed by both groups were primarily arising from the process of transitioning into tertiary study.

In looking to other studies what is apparent is that the differences between the experiences of mature age and school leaver students are complex, with no distinct answers as to what these differences are in the literature. In a study conducted by Cantwell, Archer and Bourke (2001), which compared the academic achievement and experiences of students entering university via traditional and non-traditional means, age, gender and prior qualifications were found to be predictive of academic achievement. The 'non-traditional' mode of entry in this study was defined as entry by any means other than from high-school, including the STAT test, two preparation courses offered by the University of Newcastle – one for mature age students, called the Open Foundation Course (OFC) and another for younger students who were disadvantaged throughout high school, called Newstep. Both of the University of Newcastle courses have an equity focus (Cantwell et al., 2001). The results showed that there is a marginal disadvantage in academic performance for students entering via non-traditional modes. However, there is a positive effect on adjustment and academic performance for mature age students. Specifically this effect was found for older females. The students most affected were those younger students entering via non-traditional modes. The authors argue that it is the nature of students who enter the OFC or Newstep program that comprises the significant variable, rather than the program or

mode of entry itself (Cantwell et al., 2001). OFC entry students who discontinued their undergraduate studies had slightly higher scores on academic achievement indices than those OFC students who remained. This suggests that external factors, rather than academic factors, may play a larger role in a student's choice to discontinue their studies. Age as a significant predictor of performance has also been shown in other studies (Hoskins, Newstead, & Dennis, 1997; Justice & Dornan, 2001).

In an examination of the meta-cognitive differences between mature age and school leaver students, Justice and Dornan (2001) found that mature age students use increased levels of metacognitive functions in their study strategies. These include greater levels of hyperprocessing and generation of constructive information. Christopoulous, Rohwer, and Thomas (1987) examined this phenomenon in high school students and found that there is a linear relationship between age and the use of the two metacognitive functions. This indicates that mature age students may use learning strategies that enable them to have a deeper understanding of the course material. In their research Justice and Dornan (2001) also found that mature age and school leaver students had markedly similar levels of memory ability and that there was no significant difference between age and gender in terms of academic performance. This supports some previous findings that the external demands associated with mature age study do not affect performance (e.g., Kasworm, 1990). School leaver students tend to use learning strategies, such as cognitive monitoring, more than mature age students do. However, school leaver students do use some of the same strategies that mature age students use and this increases over time (Justice & Dornan, 2001). This supports the notion of a linear relationship between age and the development/use of deep metacognitive learning strategies.

Another factor that also seems to have a differential impact on mature age and school leaver students is the study environment. Hampton (1991) showed that person-environment incongruence is greatest in a large environment for mature age students and greatest in a small environment for school leaver students. The research context for Hampton's study arose from the serendipitous effect of enrolment almost doubling from 2,622 students to 5,201 students at one university between the initial part of the study and the subsequent sampling time two years later. In researching the differences between small university and large university environments (i.e. total institution size) and the impact it has on students, Hampton found that school leavers experienced more cognitive anxiety than mature age students in both small and large settings. Positive affect was also measured and results indicate that school leavers experienced increased positive affect in the larger environment, but not in the small environment. Mature age students experienced less positive affect in the large university environment than in the small one, and had greater positive affect than school leavers in the small environment. Hampton concludes that the interaction of life stage and size of environment on person-environment incongruence suggests that small university environments are more suitable for mature age students than school leaver students. Many of the difficulties experienced by mature age students in the larger university environment stemmed from the lack of perceived support. This was especially the case as the university reportedly struggled to accommodate the increased number of students that enrolled and as a result became much more streamlined and rigid.

For mature age students, adjustment to university has also been linked to degree completion and attrition rates at university (Gerdes & Mallinckrodt, 1994). In their study Taniguchi and Kaufman (2005) looked at degree completion among non-

traditional college students and found that there are several factors that facilitate or deter mature age students from completing their undergraduate degrees. In contrast to Justice and Dornan's (2001) findings that strategies for learning increase with age, Taniguchi and Kaufman found that being relatively young facilitated college completion. Other factors they found that facilitated completion included the number of prior enrolments, having high cognitive ability, and a high-status occupational background, however these effects were observed for men more than for women. The authors suggest that the factors commonly associated with women's socio-economic status, such as being divorced and having young children, suppress completion. However, these effects were found for both genders indicating that they are just as important in influencing males' course completion.

Being responsible for young children decreased the likelihood of women completing their course, and also had a similar effect on men (Taniguchi & Kaufman, 2005). This suggests that there is less of a difference between the genders as previously thought. The reasons that having young children adversely affect course completion are at the moment unclear, however it is apparent that many parents find that there is a trade off between tertiary study and parenting. That is, attending university will, in the future, have many benefits for the family unit, including economic and psychological well-being. There are also social effects in that the parents feel like they are modelling positive values toward academic pursuits and that their children may become more motivated to attend university in the future (Kelly, 1982). However the need and desire to spend time with their children may be the pivotal factor in a parent's decision to discontinue undergraduate degrees. The authors suggest that given these issues, tertiary

institutions could enhance mature age students learning and family well-being by having low cost childcare programs easily available.

However, it has also been shown that part-time students receive less quality education in addition to the adversity faced with their lengthy enrolments and the financial disadvantage of being a long-term student (Taniguchi & Kaufman, 2005). This effect may be a result of less contact with lecturers and hands-on course material, and, of course, less opportunities for conversation and collaboration with peers. Part-time enrolment has a clear deterrent effect on course completion at university. Factors that may be thought to influence this are the length of time one has to take to complete a course and also the lack of financial support available. The authors controlled for these variables and still found that part-time students are significantly less likely than full-time students to complete their courses. This affects mature age students as they are over represented in part-time enrolment status (Taniguchi & Kaufman, 2005). For example, at Edith Cowan University in Perth Western Australia, 25 percent of mature age students are enrolled part-time as compared to only 13.5 percent of school leavers (Edith Cowan University, 2007). Tertiary institutions may overcome the barriers affecting part-time, and thus many mature age students, by having staff become more aware of part-time students and providing more support to them if it is evident support is needed. This type of intervention is not directly shown to help part-time students in completing their degree, however it does aid in encouraging them to persist with their studies, and persistence is shown to increase the likelihood of course completion (Brooks & DuBois, 1995). Despite the drawbacks of part-time enrolment, it is often the only option for mature age students given their limited resources and time, such as work, family and spousal commitments.

Taniguchi and Kaufman (2005) also found that marriage status of mature age students does not predict course completion. However, when divorced mature age students are compared to their married counterparts, it could be argued that marriage encourages course completion. It is suggested that marriage does not offer a lot of support in terms of attending university, however the major life event of a divorce leaves students with a loss of material and emotional resources, and places increased pressure on their time. Hence, divorced students are less likely to complete their degrees. The authors suggest that universities and workplaces that want to increase the number of mature age students graduating need to be aware of the problems faced by these students, in particular part-time status, academic preparedness and childcare. Not only do these institutions need to be aware of these problems, but a significant amount of resources need to be invested in order to increase the study load of mature age students so as to increase the likelihood of completion and a more educated and productive workforce.

Mature age students also bring with them many variations in their abilities and previous experiences. Each student has their own background and will thus have variations in the resources available to them, which of course can highly influence their university experience socially and academically. In terms of academic strengths, students with high-status vocational experience and increased cognitive ability are significantly more likely than those with low ability and low-status vocational experience to complete their academic pursuits. Differences in cognitive functioning significantly differentiate between mature age and school leaver students (Justice & Dornan, 2001) and on average mature age students scored lower on academic standardised tests (Taniguchi & Kaufman, 2005). The authors suggest that universities

should be aware of these differences and provide support to those groups of students who are known to generally have lower cognitive abilities.

The differences and hardships faced by school leaver and mature age students are many and varied. Martin (2002) suggests that resilience plays an important role in scholastic achievement. Resilience could be a factor that helps to mediate the adversities experienced in higher education contexts and may lead to greater academic success and adjustment for both mature age and school leaver students.

Resilience

Resilience has been a widely researched topic in the field of developmental psychology, and increasingly resilience research has been directed toward adolescent and adult populations (e.g. Beasley, Thompson, & Davidson, 2003; Campbell-Sills, Cohan, & Stein, 2006; Raphael, 1993). Resilience has many uses and definitions but can be broadly defined as the tendency to spring back, return to normal or recoil (Garmenzy, 1991). Psychological resilience is a construct in and of itself and can be defined as follows, "[psychological resilience] involves the capacity to respond and endure, or develop and master in spite of life stressors and adversity" (Mandleco & Peery, 2000, p.99). It has been noted that resilience is indicative of resources that guard against the development of psychiatric disturbances, and is an important influence in the healthy adjustment to life stresses (Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003). Werner (1990) also notes that resilient individuals easily adapt and adjust quickly to major life events.

Resilience is thought to be made up of several different domains, including work or school performance, behaviour adjustment, psychosocial adjustment, and physical health. These domains are shown to have a weak relationship between each other, thus a

single individual can easily vary in terms of their overall resilience, that is, an individual may be able to show high levels of psychosocial adjustment, such as having stable romantic relationships and friendships after being raised in an impoverished situation where academic performance was not fostered, and yet they may not be able to attain the levels of education that they aspire to. Thus, overall resilience seems to not be of great use in research or practice. It is suggested that a domain specific approach is more useful for these purposes. These domains are considered in terms of developmental and life stages. For instance, in the face of adversity resilience in children is measured by high performance in school and successful peer relationships, where adolescents who achieve higher than average career development, happiness, relationships and physical well-being are considered resilient. Resilience is shown to be evident in times of transition where there is a great deal of stress. In terms of the developmental and life stages mentioned above, some examples of high stress transitions are university commencement, parental avoidance during adolescence, and divorce. Unexpected transitions also can contribute a great deal of stress such as disaster, unemployment or family disruption. The individuals who experience these stressors but manage to overcome them to grow stronger and achieve above average levels of psychosocial functioning, academic success, career development and physical well-being are considered resilient (Tusaie & Dyer, 2004).

Gardynik and McDonald (2005) suggest that risk factors and protective factors are the main constituents of resilience. Protective factors are thought to buffer an individual's response to adversity, thus fostering resilience. It is suggested that a good understanding of these protective factors can help in increasing resilience through intervention. The protective factors that have been found in children include, but are not

limited to, positive temperamental characteristics that elicit positive responses from parents and caregivers, positive role models, good communication and problem-solving skills, an internal locus of control, and a positive self-concept. Children who were described as the more resilient exhibited hobbies that were considered of high value to the community (Garmenzy, 1991). Children's academic achievement is facilitated by high levels of support from parents and other adults, which fits with the notion that university students also adjust to university much better and achieve success academically when social support is available to them (Compas et al., 1986).

Beasley, Thompson, and Davidson (2003) examined direct effects and buffering models in relation to cognitive hardiness and coping for health and psychological functioning. In their study, mature age university students completed measures assessing life event stress and traumatic life experiences, cognitive hardiness and coping style, and general health, anxiety, and depression. Their results generally suggest that a direct effects model of the relationship between life stress and psychological health exists. Specifically, the authors suggest that cognitive hardiness, aspects of coping style and negative life events directly impacted measures of psychological and somatic distress. There was also support for a buffering model in which cognitive hardiness moderated the effects of emotional coping of adverse life events on psychological distress. This research conducted specifically using mature age students suggests that resilience has a large impact on this population and other findings in relation to resilience can be generalised to this population.

Further to this, Walker, Gleaves, and Grey (2006) argue for the importance of resilience in higher educational contexts when considering the enduring demands placed upon students entering university, namely increases in cognitive complexity,

comprehension of uncomfortable and unfamiliar ideas, and the questioning of accepted attitudes and behaviours. Walker et al. (2006) mention that in school aged children resilience seems to be linked to how specific incidents affect their cognitive and social development, which is then associated with familial traits and socially constructed understandings of the importance of learning success. Researchers debate the importance of resilience in higher education contexts. The authors believe this debate is due to the university experience being a choice, unlike primary and secondary school, thus there is no reason to develop resilience as there is little intrinsic or extrinsic motivation to do so. This may also stem from socially constructed understandings of the importance of learning success in university, meaning that university students realise they do not have to continue studying if they so wish, and thus do not have the necessary motivation to develop resilience. However, the concept of resilience in the university setting may be very different to the impact that pre-existing resilience may have on adaptation to university. Given the short amount of time that an individual has been associated with the university environment at the time of transition, it is apparent that pre-existing resilience would be more influential throughout this period, as the individual has not had the opportunity to develop resilience as a result of the transition to university. As Walker et al. (2006) suggest, individuals may never develop resilience as a function of their university experiences.

Walker et al. (2006) provide several conceptual differences in resilience in terms of university students in their academic pursuits. They mention that resilience is often associated with the capacity to persevere and continue in the face of seemingly overwhelming adversity. It is assumed that older people will inherently have the resources needed to maintain their course of action as they have had longer to develop

those resources (Feinstein & Hammond, 2004). Thus, adults have been through multiple counts of adversity before and have built up 'identity capital' to draw upon (Cote, 2002), thereby supporting the proposal that resilience is an individual quality stemming from the individual's reaction to external circumstances.

Another view that is expressed by Walker et al. (2006) is the 'adaptability' stance that suggests that resilience is a result of strategy building and cognitive behavioural processes that can be created and used to adjust to change in a constructive way. An example of how this view applies to the university context is that tertiary study is simply part of life and therefore choosing to leave is not a major lifelong disaster, but is rather a learning curve along which skills and understanding are attained. The final conceptual difference comes from Rutter (1990, cited in Walker et al., 2006) who suggests that resilience is the positive end of a continuum of developmental outcomes among individuals at high risk of psychological disturbance. Rutter suggests that risk is inherent in the context of university study and that resilience can be predicted if a satisfactory risk algorithm can be developed. It is this apparent ambiguity amongst the definitions of resilience that can lead to the perception that adults have certain qualities associated with resilience as a function of their age due to their life experiences. This can be a particular problem when staff in tertiary institutions do not recognise mature age students needs when they seem to be coping well, that is, they seem to be highly resilient.

Martin (2002) defines academic resilience as a student's ability to successfully cope with scholastic setbacks, stress and study pressure. This construct has received little attention in the research literature, and a lot of the research that has been conducted uses minority groups as the main focus (e.g., Gonzalez & Padilla, 1997; Sennett,

Finchilescu, Gibson, & Strauss, 2003). Martin suggests that educational institutions are ideal candidates for enhancing the academic resilience of young people. Studies tend to look at resilience in terms of mental health and well-being, and it is suggested that an increase in the protective factors associated with general resilience will enhance academic resilience. Martin (2002) provides a model and some guidelines as to how to do this in the academic context of the young person's classroom and through school counselling programmes. This model has meta-level guidelines designed to improve a student's approach to academic work, personal beliefs, attitudes towards learning and outcomes, personal study skills, and reasons for learning. This involves the instructors messages to students and their expectations for those students, construction of adequate and flexible learning structure and pace, adequate feedback, and finally meta-goals and assessment. This research is specifically designed to enhance primary and high school resilience, however many of the aspects mentioned by Martin are often alluded to in higher education literature as being important for successful adjustment to the university environment (e.g., Parker, Summerfeldt, Hogan, & Majeski, 2004; Perry, Hladkyj, Pekrun, & Pelletier, 2004; Walker et al., 2006). Therefore, one could argue it is throughout the time of transitioning into the university environment that successful adjustment is critical for individuals to attain academic success, mediated by resilience.

The Transition to University

Raphael (1993) suggests that entry to secondary school has been identified as a time of heightened stress due to the need to adapt to change. Transitions in schooling from primary to middle or high school have been shown to have significant effects on the psychological, social and intellectual welfare of students (Kagan & Neuman, 1998). Further, the transition to university has been shown to be a time of increased adversity

due to having to adjust to a new social and academic environment in a time where university staff, significant others, and parents expect students to be more independent in ensuring a good balance between their personal and academic life (Larose et al., 2005).

Pike, Cohen, and Pooley (in press) argue that in promoting the development of resilience in secondary school students it is important to recognise that a prerequisite for successful academic achievement is an individual's capacity to rebound from or adjust to adversity and in doing so cultivate social and emotional competence (NIFTeY Vision for Children in Western Australia, 2003). In line with this, the transition to university may also represent a time of difficulty for individuals. Entering university is an unfamiliar environment towards which many are pushed in order to achieve their academic goals. This unfamiliarity heightens the vulnerability students are exposed to as they try to regain some stability in the new environment by means of negotiation (Compas et al., 1986). In accordance with the definition of resilience used above, it can be thought to achieve stability or adjustment to university life, an individual must have a high level of resilience in order to overcome the obstacles Compas et al. (1986) refer to.

In their longitudinal study, Gall et al. (2000) argue that entry to university is a relatively acute stressor for most people. Gall et al. found that this acute stress was most evident in mature age females, despite them having the largest number of available resources. The study focused on students reporting on events they have experienced, their well-being, and their resources, four times over their first year of study. It was revealed that all the students in the sample improved their adjustment steadily across the measurement points suggesting that adjustment is a dynamic process that increases over time. This is in keeping with most definitions of adjustment (e.g., Brooks & DuBois,

1995). In choosing their measures, the authors cite Lazarus and Folkman (1984, cited in Gall et al., 2000) who suggest that adjustment to life events is mediated by the idiosyncratic processes of cognitive appraisal and coping behaviour. The quantity and kind of life transformations experienced and the size and helpfulness of student's social support systems have been found to have an influence on the adjustment process. It was also shown that the level of emotional stress was highest close to the event. In light of these results it is apparent that students face several obstacles when entering university, however, it is not clear as to what they are and whether they affect a particular student body, that is, mature age or school leavers.

In a study examining stressful life events, perceived social support and psychological symptoms in a sample of seniors at high school and then the same students during their first year at university, it was found that the time of most vulnerability was two weeks after commencing university study (Compas et al., 1986). Life events and social support were predictive of psychological symptoms. These associations involved major life events that were considered negative but not those that were neutral or positive, and social support involved satisfaction with support received rather than the number of support persons available. The results indicate that major life transitions such as commencing university studies is a time of increased vulnerability to life events. The authors suggest that these findings are important because 64 percent of the variance in psychological symptoms at the time of entrance to university could be accounted for by measures taken three months earlier during university orientation programmes. These disturbances include anxiety, depression, and somatic problems. It is shown that social support mediates these disturbances, however, the presence of these symptoms may interfere with the skills necessary to generate a new satisfying sense of

support in the university environment. This reciprocal relationship is one of the important findings from this study as it suggests that at-risk individuals can be detected before any psychological distress is experienced.

On entering university greater self-discipline is required in managing academic progress, taking initiative, and making decisions about the future (Lapsley & Edgerton, 2002; Larose et al., 2005). These tasks contribute to the instability of the university environment. Research shows a decline in social and emotional adjustment during the transition to university (Hays & Oxley, 1986) where students must deal with the first major separation from parents, changes in their network of friends, and perhaps painful separation from their significant others (Larose et al., 2005). Urquhart and Pooley (in press) posit that there are a number of equally important factors that contribute to successful adjustment to university for any student, including (a) social support, (b) personal/emotional support, (c) expectations, and (d) academic adjustment. These four factors have been consistently shown in the research literature to play a part in adjustment (Gerdes & Mallinckrodt, 1994; Schwitzer, Griffin, Ancis, & Thomas, 1999). Urquhart and Pooley suggest that there may be a difference in the experiences between mature age and school leaver students in their adjustment to university.

The difference in the experiences between mature age and school leaver students seems to stem mainly from age related difficulties. Quimby and O'Brien (2006) found that many mature age female students experience psychological distress related to balancing family and academic roles. However, they also found that many of the same type of students benefit from the necessity to manage several roles. The authors conclude that the differences between the two groups (i.e., those female mature age students that experienced distress and those that benefited) can be predicted and

explained by secure attachment, parent and student self-efficacy, and social support. These constructs predicted psychological distress (38%), self-esteem (54%), and life satisfaction (35%). The study looked at the transition to university for a sample of females (n = 209) and found that these predictive variables are particularly prominent at the time of transition into university for these students.

In addition to secure attachment, self-efficacy, and social support, emotional intelligence has been associated with adjustment and retention in university settings. Parker, Hogan, Eastabrook, Oke, and Wood (2006) examined the relationship between emotional intelligence and adjustment at university among students making the transition from high school to university. They suggest that almost half of the students entering university from high school will not continue into the second year of study. Results reveal that the students who stay at university show markedly better emotional and social competencies. Importantly, emotional competency has been shown to be associated with better performance at university and at secondary school.

The factors mentioned thus far that strongly influence adjustment to university are individual factors, however, environmental factors also play a part in adjustment. Brooks and DuBois (1995) conducted research into the individual and environmental predictors of adjustment during the first year of college. They found that although individual variables were related most strongly to adjustment, environmental variables made significant incremental contributions to the prediction of several adjustment indices. The significant individual predictors included emotional stability, intellect/surgency, and problem solving. A solid ability to engage in problem-focused coping, personality tendencies toward extroversion and intellect, and academic skills were found to be influential in facilitating the adaptation to university for first year

students. The authors suggest that the tasks involved in commencing study at a tertiary level include the establishment of greater autonomy, exploration of intimacy and the consolidation of a coherent sense of identity. It is also noted, as above, that for most adolescents the commencement of tertiary education is their first major life transition. Knowledge of the abilities and traits that lead to better adaptation has implications for counselling this group of students and ensuring adequate adaptation to the university setting.

Conclusion

The issues facing students in terms of transitioning to university are quite varied within student groups, namely mature age and school leavers. Mature age students face a number of difficulties in adjusting to the university environment, which are tied mainly to their age (Taniguchi & Kaufman, 2005), previous academic experience (Challis, 1976), family life (Quimby & O'Brien, 2006), and working background (Cantwell et al., 2001; Taniguchi & Kaufman, 2005). School leaver students face a host of adversity different to that of mature age students (Gerdes & Mallinckrodt, 1994), but interestingly enough seem to thrive in larger tertiary environments, seemingly needing less academic support than mature age students (Hampton, 1991). The perceived level of support has been shown to make more difference in adjustment than the actual level of support offered to mature age students (Cantwell et al., 2001; Hampton, 1991). Tertiary institutions can do well to be aware of the adversities that mature age students face different to that of traditional school leaver university students.

Resilience is an important construct in terms of individuals facing adversity (Beasley et al., 2003; Werner, 1990). The ability to spring back or recoil is advantageous in terms of retention in the academic environment (Walker et al., 2006).

The adversities that mature age students face particularly may be mediated by resilience, however this is yet to be shown in the research. Resilience has, however, been shown to have a positive effect on academic performance (Walker et al., 2006). How exactly resilience impacts higher education in terms of adjustment is not well understood. Any differences in this paradigm between mature age and school leaver students is important for institutions to understand so as psychological distress may be averted given appropriate detection, and also so as to increase the probability of academic success and degree completion.

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Differences in Resilience and University Adjustment Between School Leaver and Mature Age University Students

Brent Munro

Abstract

Research shows that mature age and school leaver students have vastly different experiences when transitioning to the university environment. It is suggested that the transition to university is a major life transition and thus is a period of great stress (Larose et al., 2005). For mature age students and school leaver students, the impacts upon adjustment to university are varied during the transition to university study (Cantwell et al., 2001). It has been proposed that for successful university adjustment, high levels of resilience are needed. Three hypotheses were tested with a sample of undergraduate students (N = 63). Hypothesis one, that there is a relationship between resilience and adjustment was supported. This indicates that 31.9 percent of the variance in adjustment can be accounted for by resilience. Hypothesis two, that there is a difference in university adjustment between school leaver and mature age students, and hypothesis three, that mature age students would exhibit higher levels of resilience than school leavers, were both not supported. These findings imply that individual differences are more important in adjustment to university than group differences, and have the implication that universities may be better off considering these individual differences when accommodating new students.

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It is thought that mature age and school leaver students both have very different experiences when embarking upon their academic careers at the university level. Figures suggest that the composition of the university student body is changing in terms of mature age and school leaver student numbers. Statistics indicate that in 1980, 24% of full time students were over the age of 21 and this figure rose to 33% by 1996 (Merrill, 1999, cited in Murphy & Roopchand, 2003). However, within specific university contexts (i.e., Sandstone universities or New Generation Universities) these figures vary. For example at Edith Cowan University (Western Australia), a new generation university, there are only 13% of students enrolled within the mature age students category (Edith Cowan University, 2007).

Mature age and school leaver students both have their own distinctive experiences and backgrounds, including work experience and previous academic pursuits, from which to draw upon when entering the university environment. Therefore, it is argued that the experiences of school leaver university students are different to that of mature age entry university students. This was exhibited recently in a qualitative inquiry that was designed to provide information regarding the adjustments of students to university. The study found that the adjustments for students were first dependent upon the type of student they were, namely, being a school leaver or a mature age student (Urquhart & Pooley, in press). In particular it was determined that mature age students entered university with different experiences which set them apart from their school leaver counterparts. These experiences include: giving up full-time employment, supporting a family, and reintegrating into an academic context (Challis,

1976). School leavers on the other hand reported different difficulties. For example, they were not as clear in communicating why they wanted a degree as the mature age students, and they also showed less enthusiasm in these communications. School leaver students did not see commencing study at university as presenting many difficulties, however any problems they did mention revolved around social pressures or other people's expectations (Challis, 1976). What was clear was that the issues and challenges expressed by both groups were primarily arising from the process of transitioning into tertiary study.

These findings concur with a previous study conducted by Cantwell, Archer and Bourke (2001) that compared the academic achievement and experiences of students entering university via traditional and non-traditional means. They found that age, gender and prior qualifications were predictive of academic achievement. The results indicate that there is a marginal disadvantage in academic performance for students entering via non-traditional modes. However, there is a positive effect on adjustment and academic performance for mature age students. Specifically this effect was found for older females. The students most affected by the adversities faced on entry to university were those younger students entering via non-traditional modes. The authors argue that the significant variable is not mode of entry itself, but rather the nature of non traditional students' differing abilities, such as individual motivational goals, self-regulatory behaviours, self efficacy and verbal abilities (Cantwell et al., 2001). However, mature age entry students who discontinued their undergraduate studies had slightly higher scores on academic achievement indices than those mature age entry students who remained. This suggests that external factors, along with academic factors, may also play a role in their choice to discontinue their studies.

It seems that the differences between school leaver and mature age students arise from both academic and social contexts. In an examination of the meta-cognitive differences between mature age and school leaver students, Justice and Dornan (2001) found that mature age students use increased levels of metacognitive functions in their study strategies. These include greater levels of hyperprocessing and generation of constructive information. Christopoulous, Rohwer, and Thomas (1987) examined this phenomenon in high school students and found evidence supporting the notion of a linear relationship between age and the development/use of deep metacognitive learning strategies.

For mature age students, adjustment to university has also been linked to degree completion and attrition rates at university (Gerdes & Mallinckrodt, 1994). In their study Taniguchi and Kaufman (2005) looked at degree completion among non-traditional college students and found that there are several factors that facilitate or deter mature age students from completing their undergraduate degrees. In contrast to Justice and Dornan's (2001) findings that strategies for learning increase with age, Taniguchi and Kaufman found that being relatively young facilitated college completion. Other factors they found that facilitated completion included the number of prior enrolments, having high cognitive ability, and a high-status occupational background, however these effects were observed for men more than for women. The authors suggest that the factors commonly associated with women's socio-economic status, such as being divorced and having young children, suppress completion. Marriage status does not affect adjustment, however, the major life event of a divorce has been shown to be obstructive to adjustment. The need and desire to spend time with children may be the pivotal factor in a mother's decision to discontinue undergraduate degrees. However,

these effects were found for both genders indicating that they are just as important in influencing males' course completion and that there is less of a difference between genders as previously thought.

Mature age students also bring with them many variations in their abilities and previous experiences. Each student has their own background and will thus have variations in the resources available to them, which of course can highly influence their university experience socially and academically. In terms of academic strengths, students with high-status vocational experience and increased cognitive ability are significantly more likely than those with low ability and low-status vocational experience to complete their academic pursuits (Taniguchi & Kaufman, 2005). Differences in cognitive functioning significantly differentiate between mature age and school leaver students (Justice & Dornan, 2001) and on average mature age students scored lower on standardised tests (Taniguchi & Kaufman, 2005).

The differences and hardships faced by school leaver and mature age students are many and varied. Martin (2002) suggests that resilience plays an important role in scholastic achievement. Resilience could be a factor that helps to mediate the adversities experienced in higher education contexts and may lead to greater academic success and adjustment for both mature age and school leaver students.

Resilience has been a widely researched topic in the field of developmental psychology, and increasingly toward adolescent and adult populations (e.g., Beasley et al., 2003; Campbell-Sills et al., 2006; Raphael, 1993). Resilience has many definitions but can be broadly defined as follows, "[psychological resilience] involves the capacity to respond and endure, or develop and master in spite of life stressors and adversity" (Mandleco & Peery, 2000, p.99). It has been noted that resilience is indicative of

resources that guard against the development of psychiatric disturbances, and is an important influence in the healthy adjustment to life stresses (Friborg et al., 2003). Werner (1990) also notes that resilient individuals easily adapt and adjust quickly to major life events.

Resilience is shown to be evident in times of transition where there is a great deal of stress. In terms of different developmental and life stages where resilience is evident, some examples of high stress transitions are parental avoidance during adolescence, divorce, and university commencement. Unexpected transitions also can contribute a great deal of stress such as disaster, unemployment or family disruption. The individuals who experience these stressors but manage to overcome them to grow stronger and achieve above average levels of psychosocial functioning, academic success, career development and physical well-being are considered resilient (Tusaie & Dyer, 2004). These four factors are inherently necessary, in varying levels, for studying at university.

Beasley, Thompson, and Davidson (2003) examined direct effects and buffering models in relation to cognitive hardiness and coping for health and psychological functioning. In their study, mature age university students completed measures assessing life event stress and traumatic life experiences, cognitive hardiness and coping style, and general health, anxiety, and depression. Their results generally suggest that a direct effects model of the relationship between life stress and psychological health exists. Specifically, the authors suggest that cognitive hardiness, aspects of coping style and negative life events directly impacted measures of psychological and somatic distress. There was also support for a buffering model in which cognitive hardiness moderated the effects of emotional coping of adverse life events on psychological

distress. This research conducted specifically using mature age students suggests that resilience has a large impact on this population and other findings in relation to resilience can be generalised to this population.

Further to this, Walker, Gleaves, and Grey (2006) argue for the importance of resilience in higher educational contexts when considering the enduring demands placed upon students entering university, namely, increases in cognitive complexity, comprehension of uncomfortable and unfamiliar ideas, and the questioning of accepted attitudes and behaviours. The importance of resilience in higher education contexts is debated. This may stem from socially constructed understandings of the importance of learning success in university, suggesting that university students realise they do not have to continue studying if they so wish, and thus do not have the necessary motivation to develop resilience. However, the concept of resilience in the university setting may be very different to the impact that pre-existing resilience may have on adaptation to university. Given the short amount of time that an individual has been associated with the university environment at the time of transition, it is apparent that pre-existing resilience would be more influential throughout this period, as the individual has not had the opportunity to develop resilience as a result of the transition to university. As Walker et al. (2006) suggest, individuals may never develop resilience as a function of their university experiences.

Walker et al. (2006) provide several conceptual differences in resilience in terms of university students in their academic pursuits. They mention that resilience is often associated with the capacity to persevere and continue in the face of seemingly overwhelming adversity. It is assumed that older people will inherently have the resources needed to maintain their course of action as they have had longer to develop

those resources (Feinstein & Hammond, 2004). Thus, adults have been through multiple counts of adversity before and have built up 'identity capital' to draw upon (Cote, 2002), thereby supporting the proposal that resilience is an individual quality stemming from the individual's reaction to external circumstances.

Another view expressed by Walker et al. (2006) is the 'adaptability' stance that suggests that resilience is a result of strategy building and cognitive behavioural processes that can be created and used to adjust to change in a constructive way. An example of how this view applies to the university context is that tertiary study is simply part of life and therefore choosing to leave is not a major lifelong disaster, but is rather a learning curve along which skills and understanding are attained. The final conceptual difference comes from Rutter (1990, cited in Walker et al., 2006) who suggests that resilience is the positive end of a continuum of developmental outcomes among individuals at high risk of psychological disturbance. Rutter suggests that risk is inherent in the context of university study and that resilience can be predicted if a satisfactory risk algorithm can be developed. It is this apparent ambiguity amongst the definitions of resilience that can lead to the perception that adults have certain qualities associated with resilience as a function of their age due to their life experiences. This paper seeks to determine if mature age students do in fact have higher levels of resilience.

Martin (2002) defines academic resilience as a student's ability to successfully cope with scholastic setbacks, stress and study pressure. This construct has received little attention in the research literature, and a lot of the research that has been conducted uses minority groups as the main focus (e.g., Gonzalez & Padilla, 1997; Sennett et al., 2003). Studies tend to look at resilience in terms of mental health and well-being, and it

is suggested that an increase in the protective factors associated with general resilience will enhance academic resilience. This research is specifically designed to enhance primary and high school resilience, however many of the aspects mentioned by Martin, such as improvements in the student's approach to academic work, personal beliefs, attitudes towards learning and outcomes, personal study skills, and reasons for learning, are often alluded to in higher education literature as being important for successful adjustment to the university environment (e.g., Gardynik & McDonald, 2005; Parker et al., 2004; Perry et al., 2004; Walker et al., 2006). Therefore, one could argue it is throughout the time of transitioning into the university environment that successful adjustment is critical for individuals to attain academic success, and, as suggested by Martin (2002), successful adjustment is somewhat mediated by resilience.

On entering university greater self-discipline is required in managing academic progress, taking initiative, and making decisions about the future (Lapsley & Edgerton, 2002; Larose et al., 2005). These tasks contribute to the instability of the university environment. Research shows a decline in social and emotional adjustment for students during the transition to university (Hays & Oxley, 1986) where students must deal with the first major separation from parents, changes in their network of friends, and perhaps painful separation from their significant others (Larose et al., 2005). Urquhart and Pooley (in press) posit that there are a number of equally important factors that contribute to successful adjustment to university for any student, including (a) social support, (b) personal/emotional support, (c) expectations, and (d) academic adjustment. These four factors have been consistently shown in the research literature to play a part in adjustment (Gerdes & Mallinckrodt, 1994; Schwitzer et al., 1999). Urquhart and

Pooley suggest that there may be a difference in the experiences between mature age and school leaver students in their adjustment to university.

Pike, Cohen, and Pooley (in press) argue that in promoting the development of resilience in secondary school students it is important to recognise that a prerequisite for successful academic achievement is an individual's capacity to rebound from or adjust to adversity and in doing so cultivate social and emotional competence (NIFTeY Vision for Children in Western Australia, 2003). In line with this is the notion that the transition to university represents a time of difficulty for individuals. Entering university is an unfamiliar environment towards which many are pushed in order to achieve their academic goals. This unfamiliarity heightens the vulnerability students are exposed to as they try to regain some stability in the new environment by means of negotiation (Compas et al., 1986). It has been shown in longitudinal research that acute stress is particularly prominent in this period for mature age females (Gall et al., 2000). In accordance with the definition of resilience used above, to achieve stability or adjustment to university life, an individual must have a high level of resilience in order to overcome the obstacles present in this transition period.

In a study examining stressful life events, perceived social support and psychological symptoms in a sample of seniors at high school and then the same students during their first year at university, it was found that the time of most vulnerability was two weeks after commencing university study (Compas et al., 1986). It is also suggested that adjustment is a dynamic process, improving over time (Gall et al., 2000). Gall et al. (2000) also suggest the quantity and kind of life transformations experienced and the size and helpfulness of student's social support systems have been found to have an influence on the adjustment process. Life events and social support

were predictive of psychological symptoms in the Compas et al. (1986) study too. Compas et al. (1986) suggest that these findings are important because 64 percent of the variance in psychological symptoms at the time of entrance to university could be accounted for by measures taken three months earlier during university orientation programmes. These disturbances include anxiety, depression, and somatic problems. It is shown that social support mediates these disturbances, however, the presence of these symptoms may interfere with the skills necessary to generate a new satisfying sense of support in the university environment. Differences between school leaver and mature age students may be partially explained by the quantity and kind of life transformations experienced and the size and helpfulness of student's social support systems.

The factors mentioned thus far that strongly influence adjustment to university have been at the individual level, however, environmental factors also play a part in adjustment. Brooks and DuBois (1995) conducted research into the individual and environmental predictors of adjustment during the first year of college. They found that although individual variables were related most strongly to adjustment, environmental variables made significant incremental contributions to the prediction of several adjustment indices. The significant individual predictors included emotional stability, intellect/surgency, and problem solving. The ability to engage in problem-focused coping, personality tendencies toward extroversion and intellect, and academic skills were found to be influential in facilitating the adaptation to university for first year students. It is also noted by Brooks and Dubois (1995) that for most adolescents the commencement of tertiary education is their first major life transition. Knowledge of the abilities and traits that lead to better adaptation has implications for counselling this group of students and ensuring adequate adaptation to the university setting.

It was therefore the purpose of the present study to examine the role of resilience in mature age and school leaver students in terms of their adjustment to university. Specifically it was hypothesised that there would be a relationship between resilience and university adjustment. Second, it was hypothesised that there would be a difference in university adjustment between school leaver and mature age students, and third, that mature age students would exhibit higher levels of resilience than school leavers.

Method

Participants

Participants (N = 63) were sought from the Joondalup campus of Edith Cowan University, who self identified as a school leaver or mature age student. In this study mature age students were defined as those who have used alternate pathways to gain entry into university (for example the STAT test or TAFE qualifications) and were over 20 years of age. School leaver students were defined as those who gained entry into university by means of the Tertiary Entrance Examinations (TEE). This condition included participants who gained entry to university through the TEE system and deferred no more than one year before undertaking their studies. Thus, on admission into university, the participants were no more than 20 years old.

Materials

The questionnaire administered for this study contained 2 scales. These scales were the Resilience Scale for Adults (RSA) (Friborg et al., 2003) and the Student Adaptation to College Questionnaire (SACQ) (Baker & Siryk, 1984).

In validation studies Friborg et al. (2003) noted that the RSA comprises 33 items covering five dimensions: personal competence, social competence, family coherence, social support and personal structure. The respective dimensions had Cronbach's alphas

of 0.90, 0.83, 0.87, 0.83 and 0.67, and four-month test-retest correlations of 0.79, 0.84, 0.77, 0.69 and 0.74 (Friborg et al., 2003). Construct validity was confirmed with positive correlations with the Sense of Coherence scale (SOC) (Antonovsky, 1993) and negative correlations with the Hopkins Symptom Checklist (HSCL) (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974). The RSA distinguished patients from healthy control subjects. Discriminant validity was indicated by differential positive correlations between RSA subscales and the SOC (Friborg et al., 2003). The end score is obtained by summing the total score of the numeric answers given on the likert scale. Some questions are reversed scored. The higher the total score, the higher the individuals' resilience.

The instrument used to measure adjustment to university was the Student Adaptation to College Questionnaire (SACQ) developed by Baker and Siryk (1984). This is a likert type self-rating instrument with 67 items that measure the different facets of the experience of adjusting to college, and the participant is instructed to assess how well they are coping with the facet in question out of a score of 9 (i.e., –4 to +4) with lower scores indicating lower levels of coping. There are four subscales of the SACQ. These are academic, social, personal-emotional, and goal commitment - institutional attachment. An example question from the academic adjustment subscale is, "Recently I have been having trouble concentrating when I study" (reverse scored). "I am very involved with social activities at college", is an example from the social adjustment subscale. From the personal-emotional adjustment scale, "I have been feeling tense and nervous lately" is an example, and finally from the goal commitment – institutional attachment subscale an example is, "I feel I fit in well as part of the…environment", (Kalsner & Pistole, 2003). The coefficient alpha for the full scale is between .93 and

.95. For the subscales the coefficient alphas range between .84 and .88 for the academic adjustment subscale, between .90 and .91 for the social adjustment subscale, between .81 and .85 for the personal/emotional adjustment subscale, and between .90 and .91 for the attachment subscale. This data comes from three different samples in two colleges as investigated by Baker, McNeil and Siryk (1985). Scoring for the SACQ is the same as for the RSA. That is, scores are calculated by summing each item's score, including those that are reversed. This leads to higher scores equalling higher adaptation to college.

Procedure

Participants were obtained from a participant register, and from the wider university environment, on a Western Australian university campus. Both questionnaires were administered to participants consenting to take part in the study together, and participants were instructed to complete the demographic questions on the SACQ, including their self-reported student type (i.e., mature age or school leaver). The definitions of mature age and school leaver students were explained to participants to ensure they assigned themselves to the correct group. Participants were then instructed to record a participant number on both the RSA and SACQ so as these could be matched in analysis.

Ethics

Ethics approval was obtained from the Faculty of Computing, Health and Science. Informed consent was obtained from participants, and participant numbers were assigned, rather than using names, to ensure anonymity and confidentiality.

Results

In order to address the research questions data analysis proceeded in 2 stages. Statistics were computed to determine if there was a difference between student types on both adjustment and resilience scores. This procedure was a multivariate analysis of variance (MANOVA). To determine if there was a relationship between resilience and adjustment, irrespective of student type, the correlation between scores on the RSA and SACQ was computed.

The first hypothesis was that there is a relationship between adjustment and resilience; this is irrespective of student type. This relationship was tested using Pearson's correlation coefficient to determine if scores on the SACQ ($M = 463.59$, $SD = 58.86$) and RSA ($M = 183.41$, $SD = 26.03$) were correlated. This was significant, $r(63) = 0.565$, $p < 0.001$, indicating a moderate positive relationship between the SACQ and RSA scores. The coefficient of determination, $R^2 = 0.319$, indicates that 31.9% of the variance in SACQ scores can be accounted for by scores on the RSA. Post hoc power analysis indicated that this test had very high power ($r = 0.565$, *power (1-β)* = 0.9987), suggesting a high chance that the analysis would detect this correlation.

Both the second hypothesis, that there would be a difference in university adjustment between school leaver and mature age students, and the third hypothesis, that mature age students would exhibit higher levels of resilience than school leavers, were tested together. This was by means of a Multivariate Analysis of Variance (MANOVA), so as to limit the effects of familywise error. Data was screened to test the assumptions of MANOVA, and all assumptions were met.

MANOVA was conducted to determine if there was a difference between mature age and school leaver students on the RSA and SACQ. The MANOVA was non

significant, Pillai's Trace = 0.009, $F(2, 60) = 0.99$, $p = 0.774$, indicating no difference between school leaver students and mature age students on both RSA and SACQ scores. However, post hoc power analysis suggests that power for this MANOVA was quite low ($\eta^2 = 0.009$, *power* = 0.09).

Discussion

Hypothesis one, that there would be a relationship between resilience and university adjustment, was supported by the moderate positive correlation between scores on the SACQ and RSA. This positive correlation indicates that 31.9 percent of the variance in each of the scales is accounted for by the other. Considering the research examining the RSA, it is not surprising that this effect was shown in the current study when in their definition of resilience Friborg et al. (2003) note that resilience is an important influence in the healthy adjustment to life stresses. Tusaie and Dyer (2004) further noted that individuals who manage to overcome adversity, such as that experienced in the transition to university, and become academically successful and well adjusted are considered resilient. This is well documented elsewhere in the literature (e.g., Compas et al., 1986; Gall et al., 2000; Pike et al., in press). This relationship fits with the theory informing the development of both scales. When looking at the subscales of the two measures this becomes clearer. SACQ subscales include: academic, social, personal-emotional, and goal commitment/institutional attachment. RSA subscales include personal competence, social competence, family coherence, social support and personal structure. That is, both scales measure factors regarding social support, personal adjustment and structure, and have measures of competence ingratiated throughout. Though very different, the two scales are shown by the current study to be somewhat related.

The findings that Compas et al. (1986) reported, that the time of most vulnerability when transitioning to university is 2 weeks after commencing study, may explain why there is only a moderate correlation between the two scales. In the present study participants were drawn from a sample of students at varying stages of their undergraduate studies. It may be that resilience has a greater impact on adjustment to university throughout these initial 2 weeks than the current findings suggest. However, Compas et al. (1986) also show that 64 percent of the variance in psychological problems on entry to university could be predicted 3 months prior, suggesting that adjustment, although fluid, is relatively constant. Follow up research may compare the correlation between SACQ and RSA scores from students throughout this 2 week period with the results from the current study. This would allow conclusions to be drawn about the impact that resilience has on adjustment for new students, and whether applications of the findings from the current study may be applied to the cohort of new students.

The second hypothesis, that there is a difference between school leaver and mature age students' adjustment to university, was not supported. This indicates that there may not be as much of a difference between these two student groups as research has previously suggested (e.g., Cantwell et al., 2001; Justice & Dornan, 2001; Taniguchi & Kaufman, 2005), particularly in terms of adjusting to the university environment. It may also mean that the adversities experienced by both groups do not affect the specific construct of adjustment, or that their varying adversities lead to similar levels of adjustment. It is likely that school leaver students are increasingly finding it necessary to find employment to support themselves whilst studying. This cohort of students may be experiencing time constraints similar to those of mature age students.

However, some other possible explanations for the finding that there is no difference between school leaver and mature age students adjustments to university come from existing research. Urquhart and Pooley (in press) mention that there are differences between mature age and school leavers' experiences in terms of adjustment to university, however, they also mention that there are many individual differences. In this sample the individual differences outweigh the group differences. Cantwell et al. (2001) say that there is a marginal disadvantage for non-traditional students (i.e., mature age students) studying at university in terms of achievement and adjustment, however, there is a positive effect on adjustment for older non-traditional students, particularly females. This may help explain the current findings, as age was relatively unaccounted for in analysis. Older mature age students may have positively skewed the results, and younger mature age entry students may in fact be less adjusted than the general university population.

Brooks and DuBois (1995) suggest in their research that in comparison to environmental variables, individual variables were related most strongly to adjustment. It is these individual differences that seem to explain why there is little difference shown between school leavers and mature age students in the current sample. This lack of differences between groups is further exhibited by Taniguchi and Kaufman's (2005) research, suggesting that being young facilitates academic adjustment and success, which contradicts the findings from Cantwell et al. (2001) who suggest there is a positive effect on adjustment for older non-traditional students. Taniguchi and Kaufman (2005) suggest that more important variables than mode of entry facilitate adjustment, such as the number of prior enrolments and high status vocational background. It is these types of individual differences that seem to shape one's adjustment to university.

The non-significant MANOVA also shows that hypothesis three, that mature age students would exhibit higher levels of resilience than school leavers, was not supported. This suggests that the particular experiences that set mature age students apart from their school leaver counterparts, including: giving up full-time employment, supporting a family, and reintegrating into an academic context (Challis, 1976), do not impact resilience. That is, mature age students who are currently attending university do not seem to require higher levels of resilience than school leaver students to overcome the adversities experienced by this cohort, such as supporting a family, to adapt to the university environment. Feinstein and Hammond (2004) suggested that higher levels of resilience occur as a function of age, because older people have the necessary resources needed to maintain their course of action as they have had longer to develop those resources. Although age was not specifically analysed in the current study, it can be taken that mature age students are, by definition, 20 years old or over upon entry, and school leavers are under 20 years old on entry. The present study contradicts Feinstein and Hammond's (2004) findings to a degree as it was found that there was no difference between these groups. It is likely that the results from Feinstein and Hammond (2004) support the idea that the university environment in which the sample was obtained is particularly well equipped for non-traditional students of diverse backgrounds (Pooley, Young, Haunold, Pike, & O'Donnell, 2000) and thus diverse levels of resilience.

Further to this, Beasley et al. (2003) suggest that resilience predominantly has a large impact on mature age students. The current study supports the notion that resilience does have a large impact on mature age students adjustment to university, however, it does not suggest that resilience predominantly affects mature age students over school leaver students. The current research is not suggesting that mature age

students and school leaver students have the same experiences in transitioning to university, but rather, the two groups face different adversities that may culminate in a similar need for resilience to adjust to the university environment.

The SACQ is American specific, particularly two items that ask about on-campus living (which are to be omitted if the participant does not reside on campus), which is the main limitation of using the SACQ. Living on campus is quite common amongst the American population, but is not so common amongst Australian universities, particularly at the new age university where participants were sought. Future research may focus on standardisation of this instrument in an Australian population. However, as the norms of the SACQ were not necessary to compare the two groups of students, the two questions were omitted for every participant. After post hoc analysis it was shown that there was also not adequate power of the MANOVA to detect a significant effect. Given the more time and access to participants, future studies may look at using an increased number of participants to increase this power.

An implication arising from this research is that there may not be as much necessity to cater for these two specific groups in their transition to university as previously thought. Rather, a more individual approach, both practically – in university settings, and theoretically – in research, may be of greater value. It is likely, though, that the current findings arise from a well established and evaluated peer mentor program operating at the university where the sample was obtained. A further implication is that resilience does have an impact on adjustment, and this may have practical use in predicting those students who are at risk of not becoming successfully adjusted to university. The Resilience Scale for Adults could possibly be employed as a valuable

screening tool for those students who are offered a university place so that individual needs could possibly be pre-empted and met by the university.

Future research conducted using a sample of students in their first 2 weeks of study would allow for an examination of whether resilience and adjustment are more related throughout this time. This is mainly due to the findings that it is throughout these 2 weeks that an individual is most vulnerable to the adversities of entering the university context such as losing friends, giving up fulltime work, and adjusting to a new social and academic environment (Compas et al., 1986). Resilience may impact adjustment more throughout this time, and previous life experiences may lead to differences between mature age and school leaver students throughout this period. A variable of interest to include in follow up study, which was beyond the scope of this research, is academic success. Academic success has been tied in with adjustment (Baker & Siryk, 1986), and it may be of interest to determine to what extent this is so. It would also be interesting to find whether resilience has any impact on academic success as academic success or at least course completion is, naturally, most students end goal of studying at university.

The most pertinent point arising from the findings suggesting a lack of differences between school leaver and mature age students in terms of adjustment and resilience is that students need to be considered on an individual rather than a group basis. This ties in with findings from Urquhart and Pooley (in press) suggesting that university adjustment is dependent on a number of individual factors, and is supported by Gall et al. (2000) who express that the quantity and kind of life transformations experienced and the size and helpfulness of student's social support systems influence the adjustment process. Different people experience many different life transformations

and these factors are highly individual, thus necessitating the need for an individual approach to helping students of any type adjust to the university environment.

The positive relationship between resilience and adjustment has several practical implications and the RSA may be a valuable tool in screening for those students who may be at risk of not becoming properly adjusted to the university environment. This is especially so as the RSA is freely available, reliable, and has substantial levels of internal and external validity.

It is surprising that mature age students and school leaver students do not differ in their levels of resilience and adaptation, however, it is not unlikely that this is truly the case. These two cohorts are increasingly put under various, and probably equal pressures when embarking on, and throughout, their university studies. Given the disparity in previous research indicating differences between these two groups (e.g., Compas et al., 1986; Feinstein & Hammond, 2004; Justice & Dornan, 2001; Taniguchi & Kaufman, 2005) it seems it is even more likely that there is no difference between the two groups. However, the findings that adjustment and resilience are related is encouraging, especially in terms of the practical implication of detecting those at risk of not adjusting successfully to university when embarking upon an undergraduate course of study.

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