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

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Research shows that mature entry 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. For mature entry students and school leaver students, the impacts upon adjustment to university are varied during the transition to university study. 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 entry students, and hypothesis three, that mature entry 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.

It is thought that mature entry 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 entry and school leaver student numbers. Statistics indicate that in 1980, 24 percent of full time students were over the age of 21 and this figure rose to 33 percent by 1996 (Merril, 1999). However, within specific university contexts (i.e., 'Sandstone' universities or New Generation Universities) these figures vary. For example, in a new generation Western Australian university, only 13 percent of students enrolled were within the mature entry students category (Edith Cowan University, 2007).

Mature entry 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 entry university students. This was recently shown 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 entry student (Urquhart & Pooley, 2007). In particular it was determined that mature entry students entered university with different experiences which set them apart from their school leaver counterparts, these include: giving up full-time employment, supporting a family, and reintegrating into an academic context (Urquhart & Pooley, 2007). School leavers were not as clear in communicating why they wanted a degree as the mature entry students were, 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. What was clear from Urquhart and Pooley's (2007) research was that

the issues and challenges expressed by both groups were primarily arising from the process of change as a function of transitioning into tertiary study.

The findings from Urquhart and Pooley (2007) concur with a study conducted by Cantwell, Archer and Bourke (2001) comparing 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 as indicated by Grade Point Average (GPA) for students entering via non-traditional modes such as open foundation courses. However, there is a positive effect on adjustment and academic performance as measured by GPA for mature entry students, specifically, female mature entry students. 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, rather it is the nature of non-traditional students' differing abilities, such as individual motivational goals, selfregulatory behaviours, self efficacy and verbal abilities (Cantwell et al., 2001). However, mature entry students who discontinued their undergraduate studies had slightly higher scores on academic achievement indices than those mature entry students who remained. This suggests that it is not only academic factors that influence mature entry students' attrition from university courses. Mature entry students may be discontinuing their studies due to external factors, more than school leaver students.

Further to this, for mature entry 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 entry 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 a student had, having high cognitive ability, and a high-status occupational background, though these factors were observed for men more than for women. The authors suggest that the gender difference occurs as a function of factors commonly associated with women's socio-economic status, such as being divorced and having young children. Marital 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 her children may be the pivotal factor in a mother's decision to discontinue her undergraduate degrees. Indeed, 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 entry 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 entry and school leaver students (Justice & Dornan, 2001) and on average mature entry students scored lower on standardised tests (Taniguchi & Kaufman, 2005). The differences and hardships faced by school leaver and mature

entry 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 entry and school leaver students.

Resilience has been a widely researched topic in developmental psychology and this research is increasingly shifting toward adolescent and adult populations (Beasley, Thompson, & Davidson, 2003; Campbell-Sills, Cohan, & Stein, 2006; Raphael, 1993). Resilience can be broadly defined as, "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 shown to be evident in times of transition where there is a great deal of stress (Beasley et al., 2003). 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 (Campbell-Sills et al., 2006; Tusaie & Dyer, 2004; Urquhart & Pooley, 2007). Unexpected transitions also can contribute a great deal of stress such as disaster, unemployment or family disruption. The individuals who experience these stressors and manage to overcome them reportedly 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 important, 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 entry 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 entry students suggests that resilience has a large impact on 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 (Gardynik & McDonald, 2005; Gonzalez & Padilla, 1997; Raphael, 1993; Tusaie & Dyer, 2004).

Walker et al. (2006) provide several conceptual differences in resilience in terms of university students in their academic pursuits. They argue that resilience is often associated with the capacity to persevere and continue in the face of seemingly overwhelming adversity. It is assumed that older adults 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 individuals 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 these apparent ambiguities amongst the definitions of resilience that can lead to the perception that adults have certain qualities associated with resilience as a function of their chronological age due to their life experiences.

Martin (2002) defines academic resilience as a student's ability to successfully cope with scholastic setbacks, stress and study pressures. 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). 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 students 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, 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, and, as suggested by Martin (2002), successful adjustment is somewhat mediated by resilience.

On entering university greater selfdiscipline is required in managing academic progress, taking initiative, and making decisions about the future (Lapsley & Edgerton, 2002; Larose, Bernier, & Tarabulsy, 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). Urguhart and Pooley (2007) 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 entry and school leaver students in their adjustment to university.

Pike, Cohen, and Pooley (2008) 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. The unfamiliarity in university settings heightens the vulnerability students are exposed to as they try to regain some stability in the new environment by means of negotiation (Compas, Wagner, Slavin, & Vannatta, 1986). Longitudinal research has shown that acute stress is particularly prominent in this period for mature entry females (Gall, Evans, & Bellerose, 2000). In accordance with the definition of resilience used above, to achieve some stability or to adjust 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 suggested that adjustment is a dynamic process (Gall et al., 2000). It is also suggested that 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 (Gall et al., 2000). Life events and social support were predictive of psychological symptoms in the Compas et al. (1986) study. 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 entry 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 may also have a role 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, and problem solving. The ability to engage in problemfocused 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 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.

The purpose of the present study was to examine the role of resilience in mature entry 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 entry students, and third, that mature entry students would exhibit higher levels of resilience than school leavers.

Method

Participants

Participants (n = 63) were sought from a Western Australian university, and self-

identified as a school leaver or mature entry student. In this study mature entry students were defined as those who have used alternate pathways to gain entry into university (e.g., the Special Tertiary Admissions Test (STAT; Australian Council for Educational Research. n.d.) test or TAFE qualifications) and were over 20 years of age on entry to university. 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, were no more than 20 years old.

Materials

The questionnaire administered for this study contained two 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). 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 a Likert scale. Some questions are reversed scored. The higher the total score, the higher the individual's 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). There are four subscales of the SACO. 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 personalemotional 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", (Baker & Sirvk, 1984). 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 entry or school leaver). The definitions of mature entry 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.

Results

In order to address the research questions data analysis proceeded in two 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 (mature entry or school leaver). 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, r(63) = 0.565, p <0.001. This was significant, indicating a moderate positive relationship between the SACQ and RSA scores. The coefficient of determination, $R^2 = 0.319$, indicates that 31.9 percent of the variance in SACO 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-b) = 0.9987),suggesting this correlation reflects a true relationship.

Both the second hypothesis, that there would be a difference in university adjustment between school leaver and mature entry students, and the third hypothesis, that mature entry students would exhibit higher levels of resilience than school leavers, were analysed using 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 entry 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 entry students on both RSA and SACQ scores. However, post hoc power analysis suggests that power for this MANOVA was quite low ($h^2 = 0.009$, power = 0.09).

Discussion

This study supported the hypothesis that there would be a relationship between resilience and university adjustment, shown 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 (Friborg et al., 2003), 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., 2008). This relationship fits with the theory informing the development of both scales. Upon examination of the subscales of the two measures this becomes clearer. SACO 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.

An explanation of the moderate correlation between the SACO and the RSA may be explained by the findings of Compas et al. (1986), that the time of most vulnerability when transitioning to university is two weeks after commencing study. 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 two 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 three 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 two 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 subsequent students.

The second hypothesis, that there is a difference between school leaver and mature entry 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 previously suggested (Cantwell et al., 2001; Justice & Dornan, 2001; Taniguchi & Kaufman, 2005), particularly in terms of adjusting to the university environment. These findings may also suggest 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 whist studying. This cohort of students may be experiencing time constraints similar to those of mature entry students.

However, some other possible

explanations for the finding that there is no difference between school leaver and mature entry students' adjustments to university come from existing research. Urquhart and Pooley (2007) argue that there are differences between mature entry and school leavers experiences in terms of adjustment to university, however, they also highlight 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 entry students) studying at university in terms of achievement and adjustment, though there is a positive effect on adjustment for older non-traditional students, particularly females. This may help explain the current findings as chronological age was not the focus in this study. Those mature entry students that are chronologically older may have positively skewed the results, and the younger aged mature 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. Therefore the individual variables may seem to explain why there is little difference shown between school leavers and mature entry students in the current sample. This lack of differences between groups is further supported 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 influence one's adjustment to university.

The non support for hypothesis three, that mature entry students would exhibit higher levels of resilience than school leavers, suggests

that the particular experiences that set mature entry 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 entry students who are currently attending university are not exhibiting greater levels of resilience than school leaver students in adapting to the university environment. Feinstein and Hammond (2004) suggested that higher levels of resilience occur as a function of age, because older adults 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 must be highlighted that mature entry students are, by definition, 20 years old or over upon entry, and school leavers are under 20 years old on entry. Therefore although the current study contradicts Feinstein and Hammond's (2004) findings, 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 entry students. The current study supports the notion that resilience does have a large impact on mature entry students' adjustment to university; however, it does not suggest that resilience predominantly affects mature entry students over school leaver students. The current research is not suggesting that mature entry 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 Americanised in that two

items in particular ask about on-campus living (which are to be omitted if the participant does not reside on campus). Living on campus is quite common within American university populations and is less common within the Australian universities, particularly at the new age university where participants were sought for the current study. Future research may focus on adjusting the instrument for an Australian context. Finally, research using larger samples would also increase the statistical power of these types of studies.

Future research may look at being conducted within the first two weeks of study to examine whether resilience and adjustment are important earlier in the transition process. An important variable to include in follow up studies 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 well. Academic success or at least course completion is, naturally, most students end goal of studying at university.

Conclusion

The most pertinent point arising from the findings suggesting a lack of differences between school leaver and mature entry students in terms of adjustment and resilience is that students need to be considered on an individual rather than a group basis. It is surprising that mature entry 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. This ties in with findings from Urquhart

and Pooley (2007) 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 students' 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.

However, the finding 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.

References

- Antonovsky, A. (1993). The structure and properties of the sense of coherence scale. *Social Science & Medicine*, *36*, 725-733.
- Australian Council for Educational Research. (n.d.). Special tertiary admissions test. Retrieved January 6, 2009, from http://www.acer.edu.au/stat/index.html
- Baker, R. W., McNeil, O. V., & Siryk, B. (1985). Expectation and reality in freshman adjustment to college. *Journal of Counseling Psychology*, *32*, 94-103.
- Baker, R. W., & Siryk, B. (1984). Measuring adjustment to college. *Journal of Counseling Psychology*, *31*, 179-189.
- Baker, R. W., & Siryk, B. (1986). Exploratory intervention with a scale measuring adjustment to college. *Journal of Counseling Psychology*, 33, 31-38.
- Beasley, M., Thompson, T., & Davidson, J. (2003). Resilience in response to life stress: The effects of coping style and cognitive hardiness. *Personality and Individual Differences*, 34, 77-95.
- Brooks, J. H., & DuBois, D. L. (1995). Individual and environmental predictors of adjustment during the first year of college. *Journal of College Student Development*, *36*, 347-360.

- Campbell-Sills, L., Cohan, S. L., & Stein, M. B. (2006). Relationship of resilience to personality, coping, and psychiatric symptoms in young adults. *Behaviour Research and Therapy*, 44, 585-599.
- Cantwell, R., Archer, J., & Bourke, S. (2001). A comparison of the academic experiences and achievement of university students entering by traditional and non-traditional means.

 Assessment & Evaluation in Higher Education, 26, 221-234.
- Challis, R. (1976). The experience of mature students. *Studies in Higher Education, 1*, 209-222.
- Compas, B. E., Wagner, B. M., Slavin, L. A., & Vannatta, K. (1986). A prospective study of life events, social support, and psychological symptomatology during the transition from high school to college. *American Journal of Community Psychology*, 14, 241-257.
- Cote, J. E. (2002). The role of identity capital in the transition to adulthood: The individualisation thesis examined. *Journal of Youth Studies*, *5*, 117-134.
- Derogatis, L. R., Lipman, R., Rickels, K., Uhlenhuth, E. H., & Covi, L. (1974). The Hopkins Symptom Checklist (HSCL): A self-report symptom inventory. *Behavioural Science*, 19, 1-15.
- Edith Cowan University. (2007). Strategic information services student statistics: First semester 2007. Retrieved June 20, 2007, from Restricted Access http://www.ecu.edu.au:80/IRS/ecuonly/official_data/2007s1.zip
- Feinstein, L., & Hammond, C. (2004). The contribution of adult learning to health and social capital. *Oxford Review of Education*, *30*, 199-221.
- Friborg, O., Hjemdal, O., Rosenvinge, J. H., & Martinussen, M. (2003). A new rating scale for adult resilience: What are the central protective resources behind healthy adjustment? *International Journal of Methods in Psychiatric Research*, 12, 65-76.
- Gall, T. R., Evans, D. R., & Bellerose, S. (2000). Transition to first-year university: Patterns of

change in adjustment across life domains and time. *Journal of Social and Clinical Psychology*, 19, 544-567.

- Gardynik, U. M., & McDonald, L. (2005). Implications of risk and resilience in the life of the individual who is gifted/learning disabled. *Roeper Review*, 27, 206-214.
- Gerdes, H., & Mallinckrodt, B. (1994).

 Emotional, social and academic adjustment of college students: A longitudinal study of retention. *Journal of Counseling and Development*, 72, 281-288.
- Gonzalez, R., & Padilla, A. M. (1997). The academic resilience of Mexican American high school students. *Hispanic Journal of Behavioral Sciences*, 19, 301-317.
- Hays, R. B., & Oxley, P. (1986). Social network development and functioning during a life transition. *Journal of Personality and Social Psychology*, *50*, 305-313.
- Justice, E. M., & Dornan, T. M. (2001). Metacognitive differences between traditional-age and nontraditional-age college students. *Adult Education Quarterly*, 2001(51), 236-249.
- Lapsley, D. K., & Edgerton, J. (2002).

 Separation-individuation, adult attachment style, and college adjustment. *Journal of Counseling and Development*, 80, 484-492.
- Larose, S., Bernier, A., & Tarabulsy, G. M. (2005). Attachment state of mind, learning dispositions, and academic performance during the college transition.

 *Developmental Psychology, 41, 281-289.
- Mandleco, B. L., & Peery, J. C. (2000). An organizational framework for conceptualizing resilience in children. Journal of Child and Adolescent Psychiatric Nursing, 13, 99-111.
- Martin, A. (2002). Motivation and academic resilience: Developing a model for student enhancement. *Australian Journal of Education*, 46, 34-49.
- Merril, B. (1999). *Gender, change and identity: Mature women students in universities.*Aldershot, United Kingdom: Ashgate.
 NIFTeY Vision for Children in Western

- Australia. (2003). National investment for the early years. Retrieved June 20, 2007, from http://www.niftey.cyh.com
- Parker, J. D. A., Summerfeldt, L. J., Hogan, M. J., & Majeski, S. (2004). Emotional intelligence and academic success: Examining the transition from high school to university. *Personality and Individual Differences*, *36*, 163-172.
- Perry, R. P., Hladkyj, S., Pekrun, R. H., & Pelletier, S. T. (2004). Academic control and action control in the achievement of college students: A longitudinal field study. *Journal of Educational Psychology*, *93*, 776-789.
- Pike, L. T., Cohen, L., & Pooley, J. A. (2008). Australian approaches to understanding and building resilience in at risk populations. In L. Liebenberg & M. Unger (Eds.), *Resilience in Action* (pp. 264-285): University of Toronto Press.
- Pooley, J. A., Young, A., Haunold, S., Pike, L. T., & O'Donnell, J. (2000). Peer mentoring program manual: 10 steps to helping students successfully adjust to university. Perth, Australia: Edith Cowan University.
- Raphael, B. (1993). Adolescent resilience: The potential impact of personal development in schools. *Journal of Paediatrics and Child Health*, 29, S31-S36.
- Schwitzer, A. M., Griffin, O. T., Ancis, J. R., & Thomas, C. R. (1999). Social adjustment experiences of African American college students. *Journal of Counseling and Development*, 77, 189-197.
- Sennett, J., Finchilescu, G., Gibson, K., & Strauss, R. (2003). Adjustment of black students at a historically white South African university. *Educational Psychology*, 23, 107-116.
- Taniguchi, H., & Kaufman, G. (2005). Degree completion among nontraditional college students. Social Science Quarterly, 86, 912-927.
- Tusaie, K., & Dyer, J. (2004). Resilience: A historical review of the construct. *Holistic Nursing Practice*, *18*, 3-10.
- Urquhart, B., & Pooley, J. A. (2007). The transition experience of Australian students to

university: The importance of social support. *Australian Community Psychologist*, 19(2), 78-91.

- Walker, C., Gleaves, A., & Grey, J. (2006). Can students within higher education learn to be resilient and, educationally speaking, does it matter? *Educational Studies*, *32*(3), 251-264.
- Werner, E. E. (1990). Protective factors and individual resilience. In S. J. Meisels & J.
 P. Shonkoff (Eds.), *Handbook of early intervention: Theory, practice and analysis* (pp. 97-116). Cambridge, England: Cambridge University Press.

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