



Factors Influencing University Students' Academic Experience: An International Study

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Abstract

Retention and attrition are issues of concern in universities worldwide. Researchers have noted that students' satisfaction with academic experience and psychological adjustment on campus play an important role in student retention. The current study examined the mediating role that perceived social support and feeling of connectedness have on the relationship between psychological distress or satisfaction with academic experience among university students. A sample of 211 university students aged from 18-59 years ($M = 22.11$, $SD = 5.5$) enrolled at universities from Australia, the United States of America, and Hong Kong voluntarily participated in the study. The results indicated that perceived social support and the feeling of connectedness on campus mediated the relationship between psychological distress and satisfaction with academic experience. These results support the idea that universities should develop strategies to increase students social support and campus connectedness in order to enhance psychological well-being and satisfaction with academic experience.

Keywords: campus connectedness, perceived social support, psychological distress, and satisfaction with academic experience.

Retention and attrition rates have been a major concern to universities internationally for many years (Matrix Knowledge, 2014; Tinto, 2006). Within the current competitive and globalised higher education market, the reputational fallout of low student retention and high student attrition can be damaging for universities (Rausch & Hamilton, 2006; Tinto, 2006). A high level of attrition can be perceived as an indicator of poor performance, resulting in a negative reputation and financial implications for the university (Crosling, Thomas, & Heagney, 2008). Student attrition also affects the individual student through reduced career prospects and can have a substantial effect on society through the loss of potential skills and knowledge (Cotton, Dollard, & De Jonge, 2002; Yorke & Longden, 2004). Enhancing student's satisfaction with

their academic experience is emerging as a fundamental strategy for improving student retention and success (Pascarella & Terenzini, 2005; Roberts & Styron, 2010).

The Happy Productive Student Theory conceptualises the psychosocial dynamics, which contribute to student's satisfaction with their academic experience (Cotton et al., 2002). Stress and satisfaction are, significantly, connected to retention: when university students are faced with multiple stressors, their academic performance, progress, and satisfaction are negatively affected, and students with higher levels of psychological distress are more likely to discontinue their education (Cotton et al., 2002). Key factors found to be associated with student satisfaction and its connection to academic experience and the desire to continue have been shown to include perceived social support and connectedness (Duru, 2007; Serin, Serin, & Ozbas, 2010).

Key findings of previous studies suggest that high levels of psychological distress and low levels of perceived social support and connectedness decrease the satisfaction with academic experience among university students (Duru, 2007; Mahmoud, Staten, Hall, & Lennie, 2012; Roffey, 2011). Studies have incorporated many challenges that can contribute to the development of psychological distress (Stallman, 2010), showing that it is difficult for university students to find a satisfactory balance in life as they have to deal with academic demands and heavy workloads associated with pursuing higher education, as well as a myriad of personal, academic and social challenges (Stallman, 2010). Exploring the connections between the "other" experiences and "academic" success, studies have shown how perceived social support and connectedness can help predict university student retention (Dwyer & Cummings, 2001; Eldeleklioglu, 2006). Studies focusing on students' transition into university in particular have shown how that process can be stressful, and social support and connectedness are fundamentally important to students adjusting to a university environment (Duru, 2007; Dwyer & Cummings, 2001; Roffey, 2011). However, when emotional, social, and academic factors are integrated, questions concerning how they affect one another are not yet well understood.

This study defines students' academic satisfaction as the level of contentment students have with positive overall experiences including in the classroom, of support by staff, and about the level of preparedness for future career prospects (Nora, 2004). We adopt the definition of psychological distress as an emotional state that is related to depression, anxiety, and frustration (Crawford & Henry, 2005). Perceived social support refers to the appraisal of support from family, friends and others (Day & Livingstone, 2003). Lastly, we use connectedness to describe the experience of feeling connected to others (Lee, Keough, & Sexton, 2002).

The purpose of this study was to expand on the body of knowledge by exploring the relationship of perceived social support, connectedness, psychological distress and student satisfaction with the academic experience. We sought to examine the direct and indirect associations between psychological distress and satisfaction with academic experience by conducting a mediation analysis. Accordingly, we hypothesised that the psychosocial factors of perceived social support and campus connectedness would mediate the relationship between psychological distress and satisfaction on the one hand with the academic experience on the other among university students.

Method

Sample

Our sample had a broad scope, with 211 university students from Bond University Australia, the University of Hong Kong, and the University of Florida, including 47 males

(22.3%) and 164 females (77.7%) ranging from 18 years to 59 years ($M = 22.11$, $SD = 5.51$). Scores were standardised to reduce significant differences between samples.

Procedure

Ethical approval was obtained from the Bond University Ethics Committee prior to data collection. An online questionnaire was created through a secure site to allow participants to complete the questionnaire anonymously regardless of their destination. The questionnaire was advertised throughout the three university locations. Data collection was completed over a six-month period. Questionnaire completion took approximately 30 minutes. Prior to completing the questionnaire, participants were required to indicate that they agreed to participate by accepting the agreement form on the questionnaire. Participation was voluntary.

Measures

Selecting the most reliable and current measures, we used the Satisfaction with Academic Experience Scale, the Depression, Anxiety, Stress Scale, the Multidimensional Scale of Perceived Social Support and the Campus Connectedness Scale for gathering data for this study.

The Satisfaction with Academic Experience Subscale (SAES; Nora, 2004) is a self-report measure of satisfaction with academic experience among university students. The SAES consisted of 5 items scored on a 5-point Likert Scale ranging from $1 = \textit{strongly agree}$ to $5 = \textit{strongly disagree}$. Previous research has confirmed the SAES to have adequate internal consistency reliability $\alpha = .78$, in addition to construct and content validity (Nora, 2004).

The Depression Anxiety Stress Scale-21 (DASS-21; Lovibond & Lovibond, 1995) is a self-report measure of psychological distress along three axes of depression, anxiety and stress. The DASS-21 consisted of 21 items scored on a 4 point Likert Scale ranging from $0 = \textit{did not apply to me at all}$ to $3 = \textit{applied to me very much}$. Previous research confirmed the DASS-21 to have strong internal consistency reliability $\alpha = .93$, in addition to adequate construct and content validity (Crawford & Henry, 2005).

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988) is a self-report measure of perceived social support from family, friends, significant others and global perceived support. The MSPSS consisted of 12 items scored on a 7-point Likert Scale ranging from $1 = \textit{very strongly disagree}$ to $7 = \textit{very strongly agree}$. Research has found the MSPSS to have adequate internal consistency reliability $\alpha = .88$, as well as strong construct and content validity (Zimet et al., 1988; Zimet, Powell, Farley, Werkman, & Berkoff, 1990).

The Campus Connectedness Scale (CCS; Lee & Robbins, 1995) is a self-report measure of campus connectedness, assessing the degree of belongingness students feel in the campus environment. The CSS consists of 14 items scored on a 6-point Likert Scale ranging from $1 = \textit{strongly disagree}$ to $6 = \textit{strongly agree}$. Research has confirmed the CCS to have strong internal consistency reliability $\alpha = .92$, in addition to adequate construct and content validity (Lee & Davis, 2000).

Results

Standard multiple regression analysis

A Standard Multiple Regression was performed predicting satisfaction with the academic experience from psychological distress, perceived social support, and campus connectedness.

Results revealed that the model significantly accounted for the relationship, with 12.8% of variance attributed to satisfaction about academic experience $R = .36$, $\Delta R^2 = .13$, $F(3, 199) = 9.71$, $p < .001$.

Mediation Analysis

Baron and Kenny's (1986) mediation model was followed to test mediations. Two simple mediations were run, conducted through regression and Sobel tests (Preacher & Leonardelli, 2010). The contributions of the predictors (psychological distress, perceived social support and campus connectedness) on the criterion (satisfaction with academic experience) was also analysed through mediations.

The following mediation analysis investigated perceived social support as a mediator between psychological distress and satisfaction with academic experience, as well as the contribution that psychological distress and perceived social support had on satisfaction with academic experience. To examine pathway *a*, a regression analysis was performed, and it revealed that psychological distress accounted for significant variance in perceived social support $F(1, 201) = 8.72$, $p = .004$. Moreover, the coefficient for psychological distress was significant: $\beta = -.20$, $p = .004$.

A regression analysis was performed with psychological distress entered at step 1, and perceived social support entered at step 2. As seen in Table 1, regression analysis revealed at step 1, psychological distress significantly accounted for 3.4% of the variance attributed to satisfaction with academic experience: $F(1, 201) = 7.03$, $p = .009$. Additionally, the coefficient for psychological distress was significant. After the effects of psychological distress were controlled, at step 2 perceived social support was found to significantly account for an additional 5.7% of the variance attributed to satisfaction with academic experience $\Delta F(1, 200) = 12.58$, $p < .001$, at this step the model was significant $F(2, 200) = 10.01$, $p < .001$. The coefficient for perceived social support was significant. Furthermore, when perceived social support was entered at step 2, the coefficient for psychological distress markedly decreased and was non-significant.

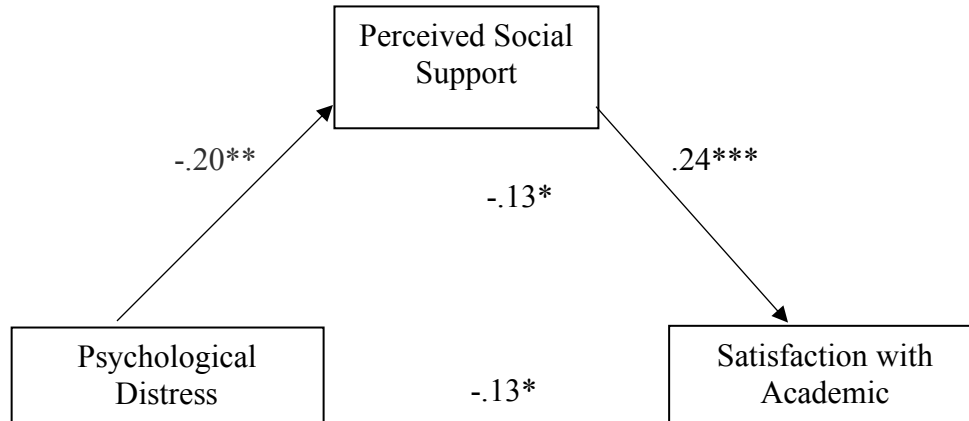
Table 1
Regression Analysis ($N = 211$)

| Variable | <i>R</i> | ΔR^2 | <i>B</i> | <i>B</i> | <i>SE B</i> | 95% <i>CI</i> for <i>B</i> |
|--------------------------|----------|--------------|----------|----------|-------------|----------------------------|
| Step 1 | .18** | .03 | | | | |
| Constant | | | | 24.12*** | 1.91 | [20.35, 27.89] |
| Psychological-distress | | | -.18 | -0.19** | 0.07 | [-0.33, -0.05] |
| Step 2 | .30*** | .06 | | | | |
| Constant | | | | 6.06 | 5.42 | [-4.63, 16.74] |
| Psychological-distress | | | -.13 | -0.14 | 0.07 | [-0.28, 0.00] |
| Perceived social-support | | | .24 | 0.24*** | 0.07 | [0.11, 0.38] |

Note. CI = confidence interval. * $p < .05$. ** $p < .01$. *** $p < .001$.

A Sobel test (Preacher & Leonardelli, 2010) was conducted in order to determine whether the decrease in the coefficient for psychological distress was significant. Sobel's test revealed mediation ($z = -2.24$, $p = .025$). Perceived social support significantly mediated the relationship between psychological distress and satisfaction with academic experience.

Figure 1 displays the unmediated and mediated pathways for the model tested.



Note. * $p < .05$. ** $p < .01$. *** $p < .001$

Figure 1. Mediated pathway.

The following mediation analysis investigated campus connectedness as a mediator between psychological distress and satisfaction with academic experience, as well as the contribution that psychological distress and campus connectedness had on satisfaction with academic experience. To examine pathway *a*, a regression analysis was performed and revealed psychological distress accounted for significant variance in campus connectedness $F(1, 209) = 53.71, p < .001$. Moreover, the coefficient for psychological distress was significant $\beta = -.45, p < .001$.

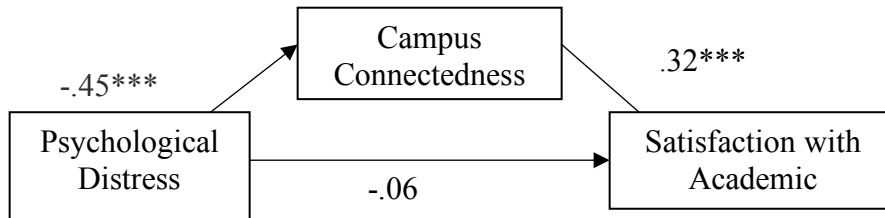
A regression analysis was performed with psychological distress entered at step 1, and campus connectedness entered at step 2. As seen in Table 2, regression analysis revealed at step 1, psychological distress significantly accounted for 4.3% of the variance attributed to satisfaction with academic experience, $F(1, 209) = 9.48, p = .002$. Additionally, the coefficient for psychological distress was significant. After the effects of psychological distress were controlled for, at step 2 campus connectedness was found to significantly account for an additional 8.2% of the variance attributed to satisfaction with academic experience $\Delta F(1, 208) = 19.43, p < .001$, at this step the model was significant $F(2, 208) = 14.87, p < .001$. Additionally, the coefficient for campus connectedness was significant. Furthermore, when campus connectedness was entered at step 2, the coefficient for psychological distress markedly decreased and was non-significant.

Table 2
Regression Analysis ($N = 211$)

| Variable | <i>R</i> | ΔR^2 | β | <i>B</i> | <i>SE B</i> | 95% <i>CI</i> for <i>B</i> |
|-------------------------|----------|--------------|---------|----------|-------------|----------------------------|
| Step 1 | .21** | .04 | | | | |
| Constant | | | | 24.65*** | 1.82 | [21.07, 28.24] |
| Psychological- distress | | | -.21 | -0.21** | 0.07 | [-0.34, -0.08] |
| Step 2 | .35*** | .08 | | | | |
| Constant | | | | 1.35 | 5.67 | [-9.62, 12.33] |
| Psychological-distress | | | -.06 | -0.06 | 0.07 | [-0.21, 0.08] |
| Campus-connectedness | | | .32 | 0.32*** | 0.07 | [0.18, 0.46] |

Note. CI = confidence interval. * $p < .05$. ** $p < .01$. *** $p < .001$

A Sobel test (Preacher & Leonardelli, 2010) was conducted in order to determine whether the decrease in the coefficient for psychological distress was significant. Sobel's test revealed complete mediation ($z = -3.77, p < .001$). Campus connectedness significantly mediated the relationship between psychological distress and satisfaction with academic experience. Figure 2 displays the unmediated and mediated pathways for the model tested.



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 2. Mediated pathways.

Discussion

Our study focused on testing a mediational model in order to determine if perceived social support and campus connectedness mediated the relationship between psychological distress and satisfaction with academic experience. The results suggested that both perceived social support and campus connectedness may represent important mediating mechanisms by which low psychological distress is associated with increased satisfaction with academic experience.

Results further indicated perceived social support and campus connectedness mediated the relationship between psychological distress and satisfaction with academic experience. Explicitly, the relationship between psychological distress and satisfaction with academic experience became non-significant when perceived social support or campus connectedness was partialled out from the relationship. Therefore, university students who experience low levels of psychological distress do not necessarily experience high levels of satisfaction with academic experience unless they experience high levels of perceived social support or campus connectedness.

that the results show that “perceived” social support and campus connectedness in particular play an important role in student satisfaction with academic experience. These findings have significant implications for designing effective retention programs that not just focus on traditional academic factors to identify students at risk of dropping out but also take an integrated approach to incorporate both academic and non-academic factors, thereby creating a socially inclusive and supportive academic environment that addresses the social, emotional, and academic needs of students in integrated manners.

One limitation of this study is the use of a cross-sectional research design, which limits the ability to draw causal inferences from the findings. A better understanding of the causal relations among measures of psychological distress, mediating psychosocial variables, and satisfaction with academic experience outcomes could be gained through a prospective design. In addition, the sample collected in this study was limited across three international universities. In order to enhance generalizability, future studies should use a larger international sample.

The results of this study enrich the understanding of factors that may be central to enhancing student satisfaction with academic experience and psychological adjustment among students. Given the significant effects of perceived social support and campus connectedness on

student satisfaction with academic experience and psychological distress, these results suggests that targeting these mediating variables in retention programs have the potential to increase students' satisfaction with academic experiences and serve to improve retention rates at universities.

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