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Khawaja, Nigar G., Chan, Sabrina, & Stein, Georgia
(2017)
The relationship between second language anxiety and international nursing students stress.
Journal of International Students, *7*(3), pp. 601-620.

This file was downloaded from: `https://eprints.qut.edu.au/110108/`

https://doi.org/10.5281/zenodo.570021

The relationship between Second Language Anxiety and International Nursing Students
Stress

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Running head: Second Language Anxiety

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Abstract

Second language anxiety is a common phenomenon amongst international students. However, information on second language anxiety remains scarce, particularly amongst specific populations such as international nursing students. The study examined the relationship between second language anxiety and international nursing student stress after taking into account the demographic, cognitive, and acculturative factors. One hundred and fifty-two international nursing students completed an online questionnaire battery. Hierarchical regression analysis revealed that spoken second language anxiety and the acculturative factors of marginalisation and separation were significantly related to learning & teaching-related and placement-related stress in international nursing students. The results suggest that international nursing students are equally vulnerable to developing stress as a result of the pressures of their degree course, with second language anxiety, particularly its spoken aspect, being a significant component of this stress. As such, interventions aimed at building resilience in international students, particularly those in nursing programs, should factor in coping and management of second language issues into their programs, especially with respects to second language communication.

Keywords: second language anxiety, international nursing students stress, acculturation, fear of negative evaluation, self-esteem, language proficiency

Introduction

Due to the growing number of students who are choosing to study internationally, there has been an increased amount of research focusing on the wellbeing and stressors of the international student population. Research has found that there are many factors and variables that can influence the university experience of students and impact their levels of stress (Phakiti et al., 2013; Seyedfatemi et al., 2007). For example, all university students, including international students, can be influenced by various demographic factors. Cognitive factors, such as the fear of being negatively evaluated and displaying traits of perfectionism, are also factors that could influence the levels of stress experienced by university students. However, compared to domestic students, international students also have other factors that can contribute to the stress experienced at university. International students are affected by acculturative factors, such as marginalisation and separation, which have been found to be associated with higher levels of stress. Studies in this area have also indicated that language issues are a major source of concern for many international students, particularly speaking and writing in the host country's language, and these difficulties can often lead to students experiencing second language anxiety (SLA) (Brown, 2008; Fritz et al., 2008; Yu & Shen, 2010).

While it is important to explore factors that contribute to international students' stress in general, international students studying nursing have the added stress of clinical placements, in addition to the learning and teaching stress experienced in academic environments. Therefore, for international nursing students, it is important that they are able to express themselves authentically and accurately, as they must negotiate both an academic environment as well as their placement environment. However, the relationship between SLA and international nursing student stress remains almost unknown in the current literature. To better understand international nursing students' stress, the present paper sought to explore

how demographic, cognitive, acculturative, and SLA factors are associated with the stress these students experience in academic and placement environments.

International Nursing Students' Stress

For nursing students, stress can be categorised as teaching and learning-related and placement-related. Nursing students have reported that issues related to academic assessments, presentations, style of instruction, and work load are some of the teaching and learning-related sources of stress that make their coursework challenging (Gibbons et al., 2009a; Higginson, 2006). In contrast, placement-related stress involves various sources of pressure from their course requirements to practice in actual hospital settings. Issues related to conducting clinical procedures, relationships with clinical staff and patients, and expectations of placements are some of the placement-related stressors that have been identified by nursing students (Gibbons et al., 2009a; Higginson, 2006).

The majority of international nursing students have English as their second language. Emerging literature is highlighting the challenges associated with using a second language for academic pursuits (Phakiti et al., 2013). Second language issues have been associated with academic-based difficulties in international students (Trice & Yoo, 2007). International students require greater effort to overcome difficulties in their learning environment compared to domestic students (Andrade, 2006). In the case of nursing courses, second language can have a significant negative impact on international nursing students' learning of the subject content and successfully passing written exams (Phakiti et al., 2013). Additionally, international students in nursing programs can encounter professional and relational difficulties due to their communication in a second language. For students in the placement settings, relationships with patients and colleagues, as well as feelings of being a valuable member of the profession, can be negatively affected by SLA (Crawford & Candlin, 2013). Subsequently, international students have been found to exhibit symptoms of worry, anxiety,

stress, and depression with reference to their academic accomplishments (Bayram & Bilgel, 2008; Brown, 2008). In spite of the significance of second language in learning experiences of international nursing students, the characteristics that make these students susceptible to stress with the teaching and learning-related and placement-related components of their course are not fully understood.

Demographic characteristics and stress

While some demographic factors such as social support have been clearly linked with students' stress (Poyrazli et al., 2004), the effect of other demographic characteristics such as gender, age, and employment status have been less clear. Furthermore, there is scarce information on the demographic characteristics that make international nursing students vulnerable to program-specific stressors as well as SLA. With nursing programs consisting of a variety of mature-aged students who may possess prior professional nursing experience, and younger, inexperienced students, a few studies have examined the effect of age on other aspects of nursing student functioning such as academic achievement and styles of coping (Admi, 1997; Blackman, 2001). However, even this evidence has been conflicting (Blackman et al., 2007). It has been found that differences in financial satisfaction, employment status, and gender, are related to levels of reported distress in the general international student population (Khawaja & Duncanson, 2008). In particular, females and those in full-time employment were found to report higher levels of depression. Yet other studies have shown that males were more likely to report feelings of loneliness (Poyrazli et al., 2004). With the absence of information on demographic effects on SLA, particularly with international nursing students, it would therefore be important for researchers to further extract information regarding the demographic characteristics that predispose international students to stress and SLA.

Cognitive variables and stress

Many studies have been conducted on the relationship between various cognitive variables and stress in the university student population. Aspects of personality, cognitive style, and dominant affect can also influence the amount of anxiety experienced by the second language speaker, with consequences on other areas of functioning (Bailey et al., 2000; Zheng, 2008). Thus, knowing how SLA relates to the known stressors of international student stress will provide better understanding of the challenges that international students face.

Fear of Negative Evaluation

Research on language acquisition has suggested that fear of negative evaluation may mediate experiences of SLA (Casado & Dereshiwsky, 2001; Cebreros, 2003). Cebreros' (2003) found that a fear of negative evaluation by peers and instructors was amongst the reported experiences of speaking anxiety, which also included avoidance of communicating in English as second language, and feelings of being overwhelmed, nervous, and confused. However, the evidence for fear of negative evaluation in SLA remains scarce. Additionally, as issues with fear of negative evaluation have also been found in nursing students, it would be crucial to explore further how this factor exacerbates SLA in a way that could influence performances of nursing students, particularly in placement settings where communication is inevitable.

Perfectionism

Perfectionism refers to critical self-evaluations based on high personal standards of performance and achievement (Frost et al., 1990), which can be adaptive or maladaptive. As has been found with international students, perfectionistic individuals tend to ruminate and worry about meeting personal expectations, which are often unrealistic, resulting in stress and an over-exhaustion of their ability to cope (Khawaja & Dempsey, 2007). In particular, maladaptive perfectionists demonstrate higher levels of concern over mistakes, and self-

doubt, which leads to higher levels of depression (Lee & Park, 2011). Similarly, Sturman, Flett, Hewitt and Rudolph (2009) found that students with a sense of self-worth that was contingent on perfectionism were more vulnerable to depression. They proposed that students who had a greater need for successful performance and approval to maintain their sense of self-worth were more likely to develop workaholic, goal-obsessed styles that could lead to burnout, exhaustion, and psychological distress. They further clarified that these students are specifically vulnerable in situations where failure or a low sense of achievement is experienced (Sturman et al., 2009), a view that is further supported by Neff and Vonk (2009).

While perfectionism has not been directly assessed in SLA studies, especially within the nursing population, it is likely that maladaptive perfectionistic tendencies could exacerbate the experience of SLA. International nursing students with high personal standards that are difficult to achieve are at an increased risk of developing psychological distress, particularly with the added challenge of having to function as a student-nurse practitioner in professional settings where second language is the main medium of communication.

Acculturation and Stress

Two major aspects of acculturative stress experienced by international students include marginalisation and separation (Khawaja & Dempsey, 2008). Separation is evident in individuals who don't value belonging to the host culture and instead hold on to their original culture, while marginalisation is defined as a lack of social connectedness with the host culture as well as their original culture (Berry, 1997). Sullivan and Kashubeck-West (2015) found that international students had higher rates of marginalisation and acculturative stress compared to immigrant groups, and established that these higher rates are due to unique factors relating to being an international student rather than demographic factors.

Diminished interaction and interest between international students and members of the host culture can maintain or even exacerbate maladjustment and stress in international

students, particularly with communication issues (Andrade, 2006; Major, 2005). Developing meaningful connection between the international student and members of the host culture not only promotes cross-cultural understanding (Ujitani & Volet, 2008), but may also encourage second language communication in international students, which if avoided can lead to loss of self-confidence and self-efficacy, anxiety, sadness, fatigue, and feelings of inadequacy over their language skills (Brown, 2008; Major, 2005). As support between international students and members of the host culture, especially within the university, has been found to encourage the development of effective coping skills in nursing students (Seyedfatemi et al., 2007), understanding how acculturative stress relates to SLA can aid in developing management strategies for SLA and other aspects of international student stress.

Second Language Anxiety (SLA)

SLA refers to a performance-related anxiety that is experienced with day-to-day use of a second language within social, academic, and professional settings. It has been found that the physiological symptoms of SLA such as increased heart rate, hot flushes, perspiration, mind going blank, and a decreased ability to concentrate, are consistent with the symptoms of anxiety disorders (American Psychiatric Association, 2000; Andrade & Williams, 2009). Symptoms of SLA in students include cognitive and affective stress, worries about test performance, and stress about skill-based activities, all of which can hinder learning (Andrade & Williams, 2009). Social-based symptoms include feelings of shame and embarrassment, sadness, and frustration associated with expressing oneself and not being understood by native speakers (Brown, 2008).

SLA has primarily been conceptualised as consisting of spoken and written anxiety. Correlations have been found between written language proficiency and adjustment outcomes for international students (Andrade, 2006), however others have proposed that it is the spoken aspect that is most stressful part of the second language experience (Brown, 2008). It is

important to note that much of SLA appears to be perpetuated by perceived competence rather than actual proficiency in the language (Brown, 2008; Casado & Dereshiwsky, 2001; Khawaja & Dempsey, 2007; MacIntyre et al., 1997; Pitts, 2009). Despite having met university language proficiency requirements, Brown's (2008) interview with international postgraduate students indicated perceived oral ability was still a major concern and contributor to the students' level of distress and embarrassment. This was reinforced by diminished contact between international and domestic students. International students tended to withdraw from situations of communication in the host language, while domestic students avoided or were less inclined to befriend international students as they perceived the effort required to modify their communication style as exhaustive (Brown, 2008). As such, studies like Brown's (2008) have found that second language issues in international universities can generate feelings of anxiety, frustration, sadness, fatigue, shame, withdrawal from social contact with the host culture, and avoidance of communicating in the host language. This leads to a cycle of diminished opportunities for reparative experiences that could otherwise habituate international students to anxiety-provoking and stressful interactions within academic and social settings.

The Current Study

Even though there have been some studies examining the relationship between demographic and cognitive factors of stress in international students (Khawaja & Dempsey, 2007), there have been few studies examining the relationship between these stress factors and second language anxiety. Furthermore, there is a scarcity of research investigating the relationship between second language anxiety and stress in international nursing students as manifested in learning and teaching and placement settings. Hence, the current study aimed to explore the predictability that spoken and written SLA would add to international nursing student stress after taking into account the demographic, cognitive, and acculturative factors.

It is hoped that the exploratory findings from this study would contribute to current literature on SLA and international nursing student stress, providing more in-depth understanding of the factors of international nursing student stress. This may influence future directions in industrial and institutional policies, in particular those pertaining to international nursing student wellbeing, as well as in the field of language psychology.

Methods

Participants

One hundred and fifty two international students (females: 129, males: 23), enrolled in undergraduate nursing programs in faculties of nursing or midwifery across Australia participated in the study. The mean age of participants was 26.23 years ($SD = 5.60$). The majority of students were in their third year of study (38.7%), while 32% were in their second year and 29.3% were in their first year. Majority of the participants spent between 1 - 3 years in Australia (42.1%), while 23% had been in Australia for one year or less, and 34.9% had been in Australia for three or more years. A mean of 10.31 years of studying English as a second language ($SD = 6.69$) was also reported by the participants.

Measures

The electronic survey consisted of a brief demographic questionnaire and six measures which have been widely used in international student research:

Demographic measure

Demographic and general information including age, gender, marital status, country of birth, current university level, and duration of study of the English language, were obtained through a form.

Learning & Teaching-related and Placement-related Sources of Stress (Abridged form) (Gibbons et al., 2009a; Gibbons et al., 2009b)

An abridged version consisting of 6 placement-related stress items and 11 learning and

teaching-related items was used in the present study. Using a 6 point Likert scale (0= Not at

all to 6 = Extremes source of stress) the nursing students indicate their sources of stress

(Gibbons et al., 2009b). Items measure situations that can be a source of stress (e.g. the

number of presentations students give in tutorials; Building and sustaining a relationship with

patients). Statistical procedures were used by the authors to draw items out of their original

29-items scale with three subscales: learning & teaching-related, placement-related, and

course organisation-related sources of stress (Gibbons et al., 2009a). The original scale was

found to have good test-retest reliability ($r = .8$) (Gibbons et al., 2009a). Higher scores

indicate a higher level of stress.

Second Language Speaking Anxiety Scale (SLSAS) (Woodrow, 2006)

This 12-item scale was developed to measure in-class and out-of-class experience by

English-as-a-second-language students. On a five point Likert scale (1= Not at all anxious to

5 = Most anxious) the respondents indicate the level of anxiety associated with speaking in

English language in an academic setting such as when participating in a formal class

discussion, presenting in a class discussion, or asking the lecturer a question (e.g. The

tutor/lecturer asks me a question in English in class). Items were modified to make them

suitable for the present study. "Teacher" was changed to "Lecturer/ supervisor" and "school"

was changed to "university/clinical placement setting". The author reported high reliability of

the combined scales ($r = .94$), the in-class subscale ($r = .89$), and out-of-class subscale ($r = .87$). High scores indicated a high level of anxiety associated with speaking English in

academic setting.

Second Language Writing Anxiety Inventory (SLWAI) (Cheng, 2004)

This 22-item scale measures second language writing anxiety. Respondents on a five

point Likert scale (1= Strongly disagree to 5 = Strongly agree) indicate the level of their

somatic anxiety (e.g. I feel my heart pounding when I write English compositions under time

constraint), cognitive anxiety (e.g. While writing English compositions, I feel worried and uneasy if I know they will be evaluated), and avoidance behaviour (e.g. I usually do my best to avoid writing English compositions), in relation to writing in English language. The scale is internally consistent (Cronbach's α = .91). High scores indicate a high level of anxiety associated with writing in English for academic tasks.

Dysfunctional Perfectionism subscale (DYS-P) of The Frost Multidimensional Perfectionism Scale - Revised (FMPRS-R) (Khawaja & Armstrong, 2005)

This 11-item subscale was used to measure pathological or maladaptive perfectionism traits characterised by rigid goal setting, excessive high standards, inability to experience a sense of fulfilment, and distress over personal capabilities (e.g. If I fail at university or work, I am a failure as a person). Items were rated on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The author reported the scale to be internally consistent (Cronbach's α = .91). Higher score indicates an elevated level of maladaptive perfectionism.

Brief Fear of Negative Evaluation Scale (Leary, 1983)

This 12-item scale has been used to measure apprehension about being evaluated negatively by others. Respondents on a five-point Likert scale (1 = Not at all characteristic of me to 5 = Extremely characteristic of me) indicate their fears of being judged by others (e.g. I worry about what other people will think of me even when I know it doesn't make any difference; I am frequently afraid of other people noticing my shortcomings). This scale was reported by the author to have good reliability (Cronbach's α = .90). Higher score indicated a high level of negative evaluative fears.

Marginalisation & Separation (Barry, 2001)

The marginalisation and separation subscales of the East Asian Acculturation Measure (EAAM) were used in the current study to assess maladaptive acculturation. The marginalisation and separation subscales consist of 16 items rated on a seven-point Likert

scale (1 = strongly disagree to 7 = strongly agree). Items reflected a tendency to interact with one's own culture by separating from the dominant culture (e.g. I prefer going to social gatherings where most of the people are from my culture) or a tendency to marginalise from dominant and other minority groups (e.g. I sometimes feel that neither Australians nor people from my culture like me). For the current study, items were reworded for relevance to the population such that the word "Asian" was rephrased as "a person from my culture", and "American" was replaced with "Australian". Barry (2001) reported the reliability of the marginalisation subscale to be good (Cronbach's α = .85) and found the reliability rating of the separation subscale to be satisfactory (Cronbach's α = .76). Higher scores reflect elevated level of marginalisation and separation.

Procedure

University nursing schools (N = 20) in Australia were invited to participate in the study. Electronic flyers and information sheets about the present study were emailed to undergraduate international nursing students. International nursing students, who used English as a second language, were invited to participate in the study via an electronic link to the study's online questionnaire, which took approximately 30 minutes to complete. Participation in the study was voluntary and non-identifiable. Submission of the completed electronic survey was considered as informed consent.

Results

Preliminary analyses

Statistical analyses were conducted using Statistical Package for the Social Sciences (SPSS) 17.0. The data set was examined and participants (n = 8) who did not meet the criteria were excluded from the analyses. Items with less than 5% missing data were replaced via mean imputation, yielding a final sample size of 152. Data screening procedures also included checks for normality and other statistical assumptions. All statistical assumptions were met.

The internal consistency of all the scales was measured by using Cronbach alpha. The internal consistency for Learning and Teaching-related and Placement-related Sources of Stress (.90), Second language Speaking Anxiety Scale (.94), Second Language Writing Anxiety Inventory (.90), Dysfunctional Perfectionism scale subscale (.88), Brief Fear of Negative Evaluation (.84), and Marginalisation (.89) and Separation (.77) were satisfactory.

Relationship between demographic, cognitive, acculturative, and language-related variables with stress in international nursing students

Hierarchical multiple regression was used to identify how well the demographic, cognitive, acculturative, and language-related measures predicted levels of learning and teaching-related stress, and placement-related stress, in international nursing students. The dependent variables were learning and teaching-related sources of stress for the first hierarchical regression analysis, and placement-related sources of stress for the second hierarchical regression analysis. The predictor variables for both analyses were the seven demographic factors (age, sex, years spent in Australia, years spent studying English as a second language, employment status, relationship status, and university level), two cognitive measures (fear of negative evaluation and dysfunctional perfectionism), two acculturation measures (marginalisation and separation), and two language-related measures (spoken SLA and written SLA). Continuous demographic variables were re-computed as categorical variables, such that two categories were obtained for age, while three categories were obtained for years spent in Australia and years spent studying English as second language.

With learning and teaching-related sources of stress as the dependent variable, the demographic variables were entered in Step 1 of the hierarchical regression, which did not explain a significant proportion of variance, $R^2_{change} = .05$, $F_{change}(7, 136) = .94$, $p > .05$. At Step 2, dysfunctional perfectionism and fear of negative evaluation were added. A significant change was found, $R^2_{change} = .12$, $F_{change}(2, 134) = 9.40$, $p < .01$. Only fear of negative

evaluation was statistically significant, as seen in Table 1. At Step 3 separation and marginalisation were added to the model, and a significant change was found, R^2_{change} = .09, F_{change}(2, 132) = 7.70, p < .001. As seen in Table 1, fear of negative evaluation was no longer significant, with marginalisation being the only significant contributor to the model at this step. At Step 4, the language related predictors of spoken SLA and written SLA were entered into the model, and a significant change was found, R^2_{change} = .22, F_{change}(2, 130) = 27.59, p < .001. The total model explained 47.4% of the variance in placement-related stress in international nursing students (adjusted R^2 = .42), F(13, 130) = 9.012, p < .001. Marginalisation remained a significant contributor to the model, with spoken SLA the only other significant contributor to the model.

Please insert Table 1 here

Another hierarchical regression was performed with placement-related sources of stress as the dependent variable, and the same predictor variables entered in the same steps as the previous hierarchical regression analysis. At Step 1, the demographic variable were entered with no significant prediction in the variance, R^2_{change} = .06, F_{change}(7, 136) = 1.14, p > .05. At Step 2, no significant change was found when the cognitive variables were entered, R^2_{change} = .06, F_{change}(2, 134) = 4.53, p > .05. At Step 3, the acculturation measures of separation and marginalisation were entered, and a significant change was found, R^2_{change} = .06, F_{change}(2, 132) = 4.86, p < .01. Only marginalisation was a significant measure, as seen in Table 2. At Step 4, spoken SLA and written SLA were entered into the model, and a significant change was found, R^2_{change} = .16, F_{change}(2, 130) = 15.28, p < .001. The total model explained 33.3% of the variance in placement-related stress in international nursing students (adjusted R^2 = .27), F(13, 130) = 4.99, p < .001. As seen in Table 2, marginalisation continued to remain a significant contributor, and separation also became a significant contributor at this final step. Spoken SLA was also a significant contributor to the model.

Please insert Table 2 here

Discussion

The current study examined the demographic, cognitive, acculturative, and language characteristics of international nursing students that are associated with their stress in both learning and teaching environments and placement environments. The hypothesis that after taking into account demographic, cognitive, and acculturative factors, spoken and written SLA would add to the predictability of international nursing student stress was partially supported. For both sources of nursing student stress, spoken SLA was a significant measure in the total prediction model, while written SLA was not. This is consistent with Brown's (2008) study where international students most often cited distress with spoken second language communication as a problem. It appears that international students' anxiety related experiences associated with spoken second language may inhibit them from interacting and communicating with the members of the host society (Andrade, 2006; Major, 2005). Consequently, this type of avoidance can prevent them from addressing their negative expectations and fears. It also precludes them from enhancing their skills and coping strategies (Seyedfatemi et al., 2007).

Marginalisation was also a significant measure in predicting stress in both the learning and teaching environment and the placement environment. The finding that a marginalisation acculturative style is positively related to experiencing stress supports the findings of Sullivan and Kashubeck-West (2015), who found that factors relating to being an international student were the cause for higher rates of marginalisation in this population. Factors such as being in a new cultural environment where there is pressure to perform well academically, as well as dealing with isolation and distance from family and friends, could result in higher levels of stress in both of these environments (Sullivan & Kashubeck-West, 2015).

It is interesting to note that there was a significant negative relationship between

separation and placement-related sources of stress, but not for learning and teaching-related stress. From this relationship it can be inferred that those who experience high levels of stress in the placement environment are unlikely to have an acculturative style similar to separation. While causality cannot be assumed, it can be hypothesised that the communication in a placement environment, which is essential in order to successfully complete the tasks required, can assist students to form relationships with members of the host culture. These relationships may then act as a protective factor, making it less likely for students to reject the host culture. Whereas in learning and teaching environments there is less direct interaction with the host society, possibly explaining the lack of relationship between separation and this environment. This tentative finding mirrors other studies where it has been found that social support can help with the acculturation process (Major, 2005).

While previous studies with international student populations have found that fear of negative evaluation is a significant predictor of stress (Neff & Vonk, 2009; Begley & White, 2003; Roadebaugh et al., 2004), the results of this study revealed that fear of negative evaluation was only significant before acculturative factors were added to the model, and only in the learning and teaching environment. Learning & teaching-related stress may be highly influenced by socially based experiences like fear of negative evaluation and marginalisation, where stressors may manifest more in the form of performance apprehension and fear of failing. These experiences are both based on social evaluation, compared to the pressure of clinic placements, which may be more oriented around self-appraisal. Although marginalisation was significant in both environments, the Beta values show that marginalisation was higher in the learning and teaching environment. As the current study assessed only the effects of the maladaptive dimensions of cognitive factors, both of which were found to be non-significant when accounted for by acculturative and SLA factors, it suggests that the influence of cognitive styles on international student stress may be greater

when considered in tandem with their adaptive dimensions.

The finding that there was no significant relationship between demographic characteristics thought to predispose international nursing students to stress and the stress experienced in two nursing student environments was not altogether unexpected. The current literature offers conflicting results regarding the impact that demographic characteristics can have on student stress levels (Blackman et al., 2007), and this study provides further support for the suggestion that demographic factors do not play a role in student stress.

Limitations

There are several limitations to the current study. One of the limitations of the study is that no causal relationships could be concluded from the current analyses. Secondly, response rates could not be tracked and the sample size was relatively small. This could have contributed to the lack of significant findings of important demographic differences within the population. Thirdly, with the sample consisting solely of international students from Australia, there may be conditions unique to this population that limits its generalisability to international nursing students in other countries. Fourthly, there are no normative data available to compare the level of stress and SLA reported by the current sample and that of other international student populations. Lastly, apart from the stress scale, validation of the utilisation of the other measures with the international nursing student population is still severely limited, and thus needs to be interpreted with caution. Also, the abridged version of the index of sources of nursing stress used in the current study has not been validated by other sources. As such, the results from the current study need to be interpreted with caution. Future research should include corrections for these limitations, particularly in terms of making comparisons with other international student populations and utilising measures that have been well validated with the nursing student population.

Future directions & recommendations

In spite of the shortcomings, the findings from the current study do reveal important information about international students' academic stress and SLA. To the authors' knowledge, the study has presented for the first time that SLA, particularly the spoken aspect, is a significant factor in international nursing student stress, over and above the impact of other psychological factors that are currently associated with international student stress. Yet more research on SLA needs to be done, especially with prevalence and the lived experience of SLA. Future research adopting a qualitative method will be useful in explicating this phenomenon from a real-world perspective, possibly shedding light on how SLA manifests at an individual level and how it translates into internal experiences of the Self and of the Self in relation to others.

Conclusion

The current paper presented initial understanding of the sources of learning & teaching and placement-related stress in the international nursing student population, particularly the significant contribution of SLA in accounting for stress in this population of students. These findings are consistent with indications from the current literature that language, particularly the spoken aspect of second language communication, can significantly influence levels of stress in international nursing students. The results suggest that second language anxiety, particularly its spoken aspect, is a significant component of stress in international nursing students. As such, interventions aimed at building resilience in international students, particularly those in nursing programs, should factor in coping and management of second language issues into their programs, especially with respects to second language communication.

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Table 1: Hierarchical multiple regression of demographic, cognitive, acculturative, and SLA factors on learning & teaching related stress

		b	SE B	β	p	95% CI
Step 1	(Constant)	29.122	7.140		.000	15.00, 43.24
	AgeCAT	1.699	1.866	.083	.364	-1.99, 5.39
	YrsAus	.977	1.355	.072	.472	-1.70, 3.66
	Sex	4.586	2.486	.158	.067	-.330, 9.50
	StatusRC	-1.209	1.150	-.100	.295	-3.48, 1.07
	UniLevel	-.830	1.158	-.067	.475	-3.12, 1.46
	Employment	.622	1.086	.051	.568	-1.53, 2.77
	YearsEngStudy	-1.631	1.066	-.132	.128	-3.74, .48
Step 2	(Constant)	11.197	7.904		.159	-4.44, 26.83
	AgeCAT	2.830	1.782	.138	.115	-.70, 6.36
	YrsAus	.792	1.280	.058	.537	-1.74, 3.32
	Sex	4.087	2.348	.141	.084	-.56, 8.73
	StatusRC	-.966	1.087	-.080	.376	-3.12, 1.18
	UniLevel	-.460	1.105	-.037	.678	-2.65, 1.73
	Employment	.673	1.037	.055	.518	-1.38, 2.72
	YearsEngStudy	-1.403	1.007	-.114	.166	-3.40, .59
	DYS-P	.222	.124	.174	.075	-.02, .47
	FNE	.277	.124	.222	.027	.03, .52
Step 3	(Constant)	10.667	7.745		.171	-4.65, 25.99
	AgeCAT	1.221	1.750	.060	.487	-2.24, 4.68
	YrsAus	.389	1.233	.029	.753	-2.05, 2.83
	Sex	3.404	2.245	.117	.132	-1.04, 7.85
	StatusRC	-.597	1.041	-.050	.567	-2.66, 1.46
	UniLevel	-.157	1.057	-.013	.882	-2.25, 1.93
	Employment	.926	.991	.076	.351	-1.03, 2.89
	YearsEngStudy	-.553	.985	-.045	.575	-2.50, 1.39
	DYS-P	.165	.119	.130	.166	-.07, .40
	FNE	.123	.124	.098	.326	-.12, .37
	EAAMSep	.008	.105	.006	.941	-.20, .21
	EAAMMar	.317	.089	.341	.001	.14, .49
Step 4	(Constant)	2.050	6.932		.768	-11.67, 15.76
	AgeCAT	.579	1.481	.028	.697	-2.35, 3.51
	YrsAus	.684	1.057	.050	.518	-1.41, 2.78
	Sex	2.827	1.897	.097	.139	-.93, 6.58
	StatusRC	-.960	.882	-.080	.278	-2.71, .79
	UniLevel	.025	.893	.002	.978	-1.74, 1.79
	Employment	.850	.838	.070	.312	-.81, 2.51

YearsEngStudy	.406	.847	.033	.632	-1.27, 2.08
DYS-P	.195	.100	.153	.055	-.004, .39
FNE	.002	.106	.001	.987	-.21, .21
EAAMSep	-.174	.094	-.143	.066	-.36, .01
EAAMMar	.179	.078	.193	.023	.03, .33
SLS	.465	.074	.511	.000	.32, .61
SLW	.076	.062	.103	.221	-.05, .20

Note: YrsAus: Years in Australia; DYS-P: Dysfunctional Perfectionism subscale ; FNE: Fear

of Negative Evaluation; EAAMMAR: EAAM Marginalisation subscale; EAAMSep: EAAM

Separation subscale; SLS: Second Language Anxiety –Spoken subscale; SLW: Second

Language Anxiety – Writing subscale.

Table 2: Hierarchical multiple regression of demographic, cognitive, acculturative, and SLA factors on placement related stress

		b	SE B	β	p	95% CI
Step 1	(Constant)	11.276	4.096		.007	3.18, 19.38
	AgeCAT	1.259	1.071	.107	.242	-.86, 3.38
	YrsAus	-.121	.777	-.015	.876	-1.66, 1.42
	Sex	2.645	1.426	.158	.066	-.17, 5.47
	StatusRC	-.775	.660	-.112	.242	-2.08, .53
	UniLevel	-.340	.664	-.047	.610	-1.65, .97
	Employment	.693	.623	.098	.268	-.54, 1.93
	YearsEngStudy	-.459	.611	-.064	.455	-1.67, .75
Step 2	(Constant)	3.900	4.686		.407	-5.37, 13.17
	AgeCAT	1.725	1.057	.146	.105	-.37, 3.82
	YrsAus	-.197	.759	-.025	.795	-1.70, 1.30
	Sex	2.440	1.392	.146	.082	-.31, 5.19
	StatusRC	-.675	.644	-.097	.297	-1.95, .60
	UniLevel	-.187	.655	-.026	.776	-1.48, 1.11
	Employment	.713	.615	.101	.248	-.50, 1.93
	YearsEngStudy	-.365	.597	-.051	.542	-1.55, .82
	DYS-P	.091	.073	.124	.217	-.05, .24
	FNE	.114	.073	.159	.121	-.03, .26
Step 3	(Constant)	4.795	4.683		.308	-4.47, 14.06
	AgeCAT	.950	1.058	.080	.371	-1.14, 3.04
	YrsAus	-.469	.745	-.060	.531	-1.94, 1.01
	Sex	2.126	1.358	.127	.120	-.56, 4.81
	StatusRC	-.501	.629	-.072	.428	-1.75, .74
	UniLevel	-.069	.639	-.010	.915	-1.33, 1.20
	Employment	.839	.599	.119	.164	-.35, 2.02
	YearsEngStudy	.008	.595	.001	.989	-1.17, 1.19
	DYS-P	.067	.072	.091	.353	-.08, .21
	FNE	.043	.075	.059	.572	-.11, .19
	EAAMSep	-.063	.063	-.090	.321	-.19, .06
	EAAMMar	.167	.054	.313	.002	.06, .27
Step 4	(Constant)	.699	4.501		.877	-8.21, 9.60
	AgeCAT	.638	.961	.054	.508	-1.26, 2.54
	YrsAus	-.320	.686	-.041	.642	-1.68, 1.04
	Sex	1.847	1.232	.110	.136	-.59, 4.29
	StatusRC	-.678	.573	-.098	.238	-1.81, .46
	UniLevel	.019	.580	.003	.974	-1.13, 1.17
	Employment	.803	.544	.114	.142	-.27, 1.88

YearsEngStudy	.468	.550	.066	.396	-.62, 1.56
DYS-P	.081	.065	.111	.215	-.05, .21
FNE	-.016	.069	-.022	.816	-.15, .12
EAAMSep	-.150	.061	-.214	.015	-.27, -.03
EAAMMar	.101	.051	.189	.048	.001, .20
SLS	.226	.048	.431	.000	.13, .32
SLW	.035	.040	.081	.389	-.05, .11

Note: YrsAus: Years in Australia; DYS-P: Dysfunctional Perfectionism subscale ; FNE: Fear

of Negative Evaluation; EAAMMAR: EAAM Marginalisation subscale; EAAMSep: EAAM

Separation subscale; SLS: Second Language Anxiety –Spoken subscale; SLW: Second

Language Anxiety – Writing subscale.