The Contribution of Stress Level, Coping Styles and Personality Traits to International Students’ Academic Performance

Tryphena Jacqueline Tan and Cecelia Winkelman,
Australian Catholic University, Locked Bag 4115, Fitzroy Melbourne, VIC 3065 Australia
www.acu.edu.au
tryphenatan@hotmail.com
c.winkelman@patrick.acu.edu.au

Abstract

The purpose of this study was to investigate how stress level, coping styles and personality traits contribute to international students' academic performance. Participants comprised of 100 international students across undergraduate and postgraduate levels from universities in Melbourne, Australia. Participants were aged 18 to 40 years old. Using a single sample survey design, all 100 participants completed a background information sheet, the Coping Skills Inventory, the Social Avoidance Distress Scale and the Eysenck Personality Questionnaire-Revised for Adults. Ten participants volunteered to be interviewed. The interview was audio-taped. There were three hypotheses for this research. The first hypothesis predicted that stress level, coping styles and the personality traits of neuroticism, tough-mindedness and extraversion would explain the variation in grades of the international students. The second hypothesis predicted that the personality traits of neuroticism, tough-mindedness and extraversion would explain coping styles. The third hypothesis predicted that gender would affect coping styles and personality traits of neuroticism, tough-mindedness and extraversion. The results for the second and third hypotheses were presented and discussed. The discussion considered the difficulties faced by international students.

Key Words: International students, stress, coping style, personality

Introduction

The ability of individuals to function effectively in dealing with life challenges has been a topic of interest to psychologists (Phinney & Haas, 2003). One life challenge for many of today’s young people is the transition from high school to university. In general, studying at university is a stressful time for most students. This is the time when most young adults are struggling with their new found freedom and negotiating developmental tasks, focusing on interpersonal relationships and juggling that with academic concerns (Beard, Elmore & Lange, 1982). In addition, academic, social/environmental, and personality factors may contribute to adjustment to university life. According to Russell & Petrie (1992) the adjustment of university students can be organized according to three factors: academic performance, social adjustment, and personal adjustment.

This transition presents even more challenge to the international student. This is due to the additional adjustment required to a new environment, culture and language. While international students struggle to keep up with their course loads, they are also trying to adapt to a foreign culture (Lee and Salamon, 2004). In addition, many arrive expecting to share their classes with a homogenous Australian cohort and, instead, are surprised to find an ethnically diverse student population.

The international student population in Australia’s universities is ever increasing, comprising more than 10% of the total enrolment in some universities. These students contribute towards the cultural richness of these institutions (Heggsins III & Jackson, 2003). The International Student Office in each of these institutions is set up to support and assist the international students. The needs of these students are varied, ranging from emotional adjustment to the academic requirements to dealing with cultural differences.

Although the International Student Office personnel are available to help these students to assimilate into their new societal settings, the problems they face may be greater than such help can address. According to
Robertson, Line, Jones and Thomas (2000), a majority of international students face difficulties understanding the colloquial language, are burdened by the high cost of tuition fees and feel lonely and isolated. Furthermore, Burns (1991) found that stress levels are higher among international students when compared to local students. There are also other problems faced by international students, such as being pressured to succeed by their families, feeling less confident with their academic skills and being misunderstood by academic staff due to their accent (Choi, 1997; Mullins, Quintrell & Murphy 1995; Ramsey, Barker & Jones, 1999; Yanhong Li & Kaye, 1998). The lack of social support may be an additional problem with which these students must cope (Moos, Brennan, Fondacaro & Moos, 1990; Mann & Zautra, 1989; Holahan & Moos, 1987).

Stress & Stress Level
Stress is now recognized as an inevitable aspect of life, but what makes the difference in human functioning is how people cope with it (Lazarus & Folkman, 1984; Scheier, Weintraub & Carver; 1986; Kim & Duda, 2003). Most people manage to maintain reasonable health and functioning under stressful conditions (Folkman, 1992). According to Lazarus (1966), stress is not a variable but a rubric consisting of many variables and processes. Stress has been classified as a host of potentially unpleasant or dangerous events that include unavoidable pain, excessive noise and fatigue under strenuous work conditions as well as more routine life changes (Mischel, 1986). Stress could be categorized into different levels. The level of stress depends on how an individual copes with the given situation. For example, the Social Readjustment Rating Scale scores (Holmes & Rahe, 1967; Holmes & Masuda, 1974) offer a measure of current degree of stress. This scale indicates that the more change one is going through, the more stress one is experiencing.

Generally, a significant but modest association has been found between degree of stress and physical illness. More stressful life events take a somewhat greater physical and emotional toll on most, but not on all people (Rabkin & Struening, 1976). Reactions to stress also depend on the individual’s psychological environment. Individuals generally respond better to stress when they have social ties and support, that is, close friends and groups to which they belong (Antonovsky, 1979). Individuals are able to cope better when they can share their experiences with others (Mischel, 1986). When individuals are members of a group to which they “belong”, they can receive emotional support, help with problems, and even a boost to self-esteem (Cobb, 1976).

Coping Styles
Specific types of coping resources and strategies that deal with stress have been identified (Lazarus & Folkman, 1984; Lazarus, 1993; Parker & Endler, 1992). One way to define coping is as a response to specific stressful situations (Moos & Holahan, 2003). Coping is a dynamic process that fluctuates over time in response to changing demands and appraisals of the situation (Moos & Holahan). Coping is a stabilizing factor that helps maintain psychological adjustment during stressful periods; accordingly, coping efforts should be most helpful when there is a high level of stressors (Moos & Holahan).

A second way to define coping is as the changing of thoughts and actions to manage the external and/or internal demands for a stressful event (Lazarus, 1991, 1999). Pierce, Sarason and Sarason (1996) presented a third way to define coping. For them the starting point is a specified event that involves personality characteristics, personal relationships and situational parameters.

According to Pierce, Sarason and Sarason (1996) individuals’ coping styles are reflected in how they habitually construe and manage complex situations. In general, when personality characteristics, personal relationships and situational parameters come together to produce a robust coping style, individuals tend to exhibit the following characteristics. They tend to have more self-confidence; they tend to perceive that they have more control over stressful situations; they tend to be more persistent and assertive; and they tend to be more likely to expect success. These individuals will also tend to be less anxious, less depressed and to have fewer health problems (Heppner, 1988; Heppner & Baker, 1997).

Coping is also determined by two constraints: personal and environmental. Personal constraints include psychological strengths/deficits and internalized cultural values and beliefs that allow certain ways of behaving. Environmental constraints include demands that compete for the same resources that thwart coping efforts.
The way an individual copes is influenced by his or her resources, which include both health and energy (Lazarus & Folkman, 1984), social support, material resources and existential beliefs, such as a belief in God (Lazarus & Folkman, 1984; Kim & Duda, 2003). Those with these resources have been found to sustain stress better (Lazarus & Folkman; Kim & Duda).

One consistent finding is that of the positive role of social support in helping an individual to cope with a stressful situation (Pierce et al., 1996). Social support could be viewed as a resource or as a coping response. As a resource, social support includes the availability of tangible help, guidance, and emotional support. A coping response would include seeking help from others (Pierce et al., 1996). Personality and coping are involved directly or indirectly in the production and maintenance of various kinds of maladjustments (Snyder & Ford, 1987). Thus, personality traits could influence the types of coping style used.

In terms of daily situations and problems that individuals face, judging coping by its effect on outcomes may do a disservice to the efforts that individuals make to cope with difficult, intractable and unrelenting conditions of life (Folkman, 1992). The presence of distress may indicate that adaptive coping processes are taking place. Some situations overwhelm even the best coping efforts of individuals.

Personality traits are distinguishing qualities or characteristics of a person, that is, they are a readiness to think or act in a similar fashion in response to a variety of different stimuli or situations (Carver & Scheier, 2000). According to Gordon Allport’s theory (1937), traits are determining tendencies or predispositions to which an individual responds. These traits are relatively general and enduring responses that produce fairly broad consistencies in behaviour. Allport (1937) believed that one’s pattern of dispositions or “personality structure” determined one’s behaviour. Each individual’s behaviour is determined by a particular trait structure that is unique within that individual. Cattell (1950, 1965) defined a trait as the basic unit of study in personality, as a “mental structure” inferred from behaviour, and as a fundamental construct that accounted for regularity and consistency of behaviour.

According to Eysenck (1970c, cited in Eysenck & Eysenck, 1975), the main traits form two independent dimensions of personality. One reflects a changeable-unchangeable dimension. This is called the extraversion-introversion dimension. A second reflects an emotional-nonemotional or instability-stability dimension. This is called the neuroticism-normal dimension. These two dimensions have contributed more to a description of personality than any other set of two dimensions outside the personality field (Eysenck & Eysenck, 1969; Cattell & Scheier, 1961).

Eysenck (1952) also has hypothesized a third dimension of personality, psychoticism, by which he meant tough-mindedness. Unlike psychosis, which is a break from reality, Eysenck (1952) defined psychoticism as possessing traits that make an individual unusual in both a positive and a negative sense, such as a creative genius or a sociopath. An individual high in this trait may be a loner, may easily show hostility, or may disregard danger. The factor-analytic studies of personality conducted by Royce (1972) also support the fact that psychoticism is a third major personality dimension.

Aim

The aim of the present study was to extend the work of Lazarus and Folkman (1984) to gain further understanding of the stress and coping process in a particular context, that facing international students. The relationship between personality and coping was also considered in this study. The focus of this study was to investigate how the stress level, the different types of coping styles and different personality traits have contributed to international students’ academic performance.

Three hypotheses were used for this present study. The first hypothesis predicted that stress level, coping styles and the personality traits of neuroticism, tough-mindedness and extraversion would explain the variation in grades of the international students. The second hypothesis predicted that the personality traits of neuroticism, tough-mindedness and extraversion would explain coping styles. The third hypothesis was exploratory and
predicted that gender would affect coping styles and personality traits of neuroticism, tough-mindedness and extraversion.

**Method**

**Participants**
The participants were international students from different universities in Melbourne, Australia. A total of 100 international students (62 females, 38 males) participated in the study. Ages ranged from 18 years to 40 years (M= 23.7, SD= 3.9). A sub-sample of ten volunteered to participate in audio-taped interviews.

**Materials**
Materials included an information letter, consent forms, and a questionnaire pack.

The *Social Avoidance and Distress* (SAD) scale (Watson & Friend, 1969) assesses stress level. The scale contains 28 items with a dichotomous true-false response format. Two subscales, social avoidance and social anxiety, have 14 items each. The higher the sub-scale score, the higher the social avoidance and social anxiety, respectively. The Cronbach’s alpha was reported by Watson and Friend (1969) as .90.

The Coping Skills Inventory (Jerabek, 1996) assesses the ability to cope with stress and difficulties. The scale contains 45 items with a 5-point Likert response format of (1) almost never (2) rarely (3) sometimes (4) quite often (5) most of the time. The higher the score, the better the coping skills. The Cronbach’s alpha was reported by Jerabek (1996) as .94.

The Eysenck’s Personality Questionnaire- Revised (EPQ-R) (Eysenck & Eysenck, 1975) assesses three main dimensions: neuroticism (24 items), extraversion (23 items) and tough-mindedness (32 items) with a yes/no response format. The higher the score, the more the trait is being reported. The Cronbach’s alpha was reported as .85 to .88 for neuroticism, .85 to .90 for extraversion, and .76 to .78 for tough-mindedness.

**Procedure**
A survey design was used as the primary data for this research. In addition, face-to-face interviews were conducted with a sub-sample with regard to the daily difficulties encountered by international students. These interviews were recorded on audio-tape.

**Results**

**Quantitative data**
To test the first hypothesis, a standard multiple regression analysis was conducted. The result of that analysis is shown in Table 1 below.

<table>
<thead>
<tr>
<th>Variables:</th>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress Level</td>
<td>.04</td>
<td>.02</td>
<td>.24</td>
</tr>
<tr>
<td>Coping Styles</td>
<td>.01</td>
<td>.01</td>
<td>.18</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>.01</td>
<td>.02</td>
<td>.07</td>
</tr>
<tr>
<td>Tough-mindedness</td>
<td>-.06</td>
<td>.02</td>
<td>-.24*</td>
</tr>
<tr>
<td>Extraversion</td>
<td>-.02</td>
<td>.02</td>
<td>-.13</td>
</tr>
</tbody>
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*Note. Adjusted R² = .11 (N = 100, p = .007).*

Table 1 shows that the combined predictor variables of stress level, coping styles and personality traits of neuroticism, tough-mindedness, and extraversion explained 11% of the variation in the grade point average of international students. One of the predictors, the personality trait of tough-mindedness, contributed uniquely and significantly, *t* = -2.42, *p* < .05. Tough-mindedness makes its contribution such that the more tough-minded an
individual, the lower the grade point average, and vice versa (Beta = -.24). The squared part correlation indicates the amount of variation in grade point average accounted for by tough-mindedness; after controlling the rest of the predictor variables, tough-mindedness accounted for 5.2% of the variability in grade point average.

To test the second hypothesis, a standard multiple regression analysis was conducted. The result of that analysis is shown in Table 2 below.

### Table 2
Regression Analysis Summary for Personality Variables Contributing to Coping Styles

<table>
<thead>
<tr>
<th>Personality Variables:</th>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism</td>
<td>-1.18</td>
<td>.21</td>
<td>-.45*</td>
</tr>
<tr>
<td>Tough-mindedness</td>
<td>-.68</td>
<td>.30</td>
<td>-.18*</td>
</tr>
<tr>
<td>Extraversion</td>
<td>1.09</td>
<td>.25</td>
<td>.35*</td>
</tr>
</tbody>
</table>

*Note. Adjusted $R^2 = .37$ (N = 100, $p = .000$).

Table 2 shows that the combined personality variables of tough-mindedness, extraversion and neuroticism explained 37% of the variation in the scores of coping styles. This result was statistically very significant, $p = .000$. Each individual personality trait contributed uniquely and significantly. Beta values indicate the relative strength of the personality variables in explaining coping styles; in order of strength, these contributions are: neuroticism (-.45), extraversion (.35) and tough-mindedness (-.18). The negative Beta value (-.45) indicates the negative relationship between neuroticism and coping style, such that, the lower the neuroticism score, the higher the coping ability and vice versa. The negative Beta value (-.18) indicates the negative relationship between tough-mindedness and coping style, such that, the lower the tough-mindedness score, the higher the coping ability and vice versa. Extraversion, however, has a positive contribution to coping styles, such that, the higher the extraversion score, the higher the coping ability score; and the lower the extraversion score, the more introverted and the less the coping ability. The squared part correlation indicates the amount of variation in coping styles that each predictor variable uniquely explains is 19.0% for neuroticism, 3.3% for tough-mindedness, and 12.0% for extraversion.

With regard to the third hypothesis, a t-test was used to analyze whether gender had an impact on coping styles or on the personality variables. None of the t-tests were significant, for coping styles, $t(98) = -0.28, p > .05$; for neuroticism, $t(98) = -1.25, p > .05$; for tough-mindedness, $t(98) = 1.88, p > .05$; for extraversion, $t(98) = 0.33, p > .05$.

**Qualitative data**

The qualitative data is based on interviews with seven international students who participated in the study. Common themes that arose from this content analysis of the interviews were a) difficulties in comprehending the English language, b) coping with feelings of homesickness, c) difficulties in fitting into the Australian culture, d) the unfamiliar food / environment, e) support of friends, f) difficulties in time management, and g) racism / discrimination. Herewith are selected comments grouped by theme.

**Difficulties in comprehending the English Language**

Student A: “I usually don’t understand the whole sentence and so guess the meaning of it, thus I fail badly.”

Student B: “I can’t understand what they are saying; I try to check them with the dictionary, but forget the meaning of it and can’t get them into my head. I am just trying to cope with it.”

Student C: “The teacher has their own slang so I could not get used to it.”

Student E: “I have a lot of problems understanding English as it is not my first language and I have not overcome this problem yet.”
Student F: “I had a lot of problems communicating with people in English.”
Student G: “I have difficulties in English so I can’t express myself very well. Not many local students want to be friends with me”.

Coping with feelings of homesickness
Student B: “I do feel homesick all the time. I miss my family very much. I will talk to my friends or write letters to feel better.”
Student C: “I miss everything at home, from my family, friends to the food and environment.” (She will call home, call her friends or look at photos. All these help to make her feel better.)
Student D: “I feel very homesick and do meditation to help me overcome my homesickness.”
Student E: “I feel very homesick as I have to study in English. I thought that studying in Australia would be easier but I was wrong.” (She deals with homesickness by emailing her family and friends and, at times, by drinking alcohol to feel better.)
Student F: (She experienced homesickness because of the stress with studies. She deals with it by going out with friends and watching Cantonese movies.)
Student G: (She said that she felt homesick because she misses her family and felt lonely because she has no friends.)

Difficulties in fitting into Australian culture
Student A: “I have complaints about the way Australians think; their way of thinking is different from Japanese people.”
Student B: “I had difficulty adapting to the culture in Australia as they are more open-minded [than back home].”
Student C: “Students in Australia do their homework in school rather than at home. In Malaysia we do our homework at home.” (She feels different from the others in this respect.)
Student E: “Studying in Australia is different than back home. Here they use human models to teach, whereas back home just use textbooks.” (Initially she found this shocking.)

The unfamiliar food and the unfamiliar environment.
Student B: “I felt [it was] difficult to adapt to the cold in Australia; it’s supposed to be warmer than Japan.”
Student C: “One thing I don’t like about Melbourne is that the shops close very early so [there is] not enough time to go shopping and nothing to do at night.”
Student C: “There are a lot of different types of food here like Shanghainese food and Vietnamese food.” (She went on to say that she cannot get the food she eats back home and has to adapt to the food available here.)
Student D: (He said that he is being introduced to different types of food in Australia that he has never eaten before. Like student C above, he misses his home country food and feels strange eating what is available here.)
Student F: (She said that she enjoys the different types of Asian food that she can get here. However, she still cannot adapt to western food.)
Student G: “I also feel [that] where I stay is very dangerous because [there are] many drunkards around so I don’t feel safe.”

Many expressed that an important factor was having the support of friends.
Student B: (She said that most of her friends were Japanese and that this helped her to adapt better in Australia.)
Student C: “I go out with my friends at least once a week and this gives me support. I don’t feel so lonely.”
Student D: (He said he felt happy that he had friends in Australia as he does not feel so alone.)
Student E: (She felt that if she had more friends it would help her not to feel so homesick.)
Student F: (She said that she has many Asian friends and a few Australian friends and this helps her not to feel isolated.)
Student G: (Now that she has friends she does not feel so lonely.)

The students found difficulties in managing their time
Student A: “I try hard to understand my studies, [to] spend time to achieve something like getting a good grade, [yet I] need personal time and time to clean the house. I feel [it’s] very difficult to manage my time.”
Student G: (She said that with studying and working, she felt she has difficulty managing her time.)

*Their minority status elicited unwanted experiences of racism and discrimination.*

Student A: “The Australians think I am different.”

Student B: “I felt Australian people discriminate [against] me because I am Asian.” She told of an experience that happened when she went to the post office to collect a parcel. The post office worker needed her signature and “…when [he] passed the pen to me I felt he treated me like a dirty person.”

Student F: (She reported experiencing racism in Australia.)

Student G: “I am the only Asian in the class. I feel out of place and sometimes I feel they don’t like me because they don’t talk to me. Even if I have the chance to speak, I can’t express myself very well.”

*Experience of robbery*

Student B: “I experienced [a] robbery. It was a very frightening experience. In the midnight, the guy pushed open the door. My housemate got hurt. The guy tied my housemate and me up. He stole our mobile phone and money.”

**Discussion**

With regard to the quantitative analysis, the first hypothesis that stress level, coping styles, and personality traits of neuroticism, tough-mindedness and extraversion would contribute to grade point average, was supported. The results supported the second hypothesis that the personality variables would contribute to coping styles. The third hypothesis that gender would affect coping styles and personality was not supported.

The results for the first hypothesis supported previous research by Russell and Petrie (1992). They reported that various academic, social / environmental, and personality factors may be considered when evaluating university academic adjustment. That tough-mindedness contributed uniquely, but negatively to grade point average suggests that those who tend to be impulsive, to disregard others, to be non-conformist or to be risk-taking tend to earn poorer grades, and vice versa. That is, those international students who recognize the need for and appreciate the support from their friends, classmates, lecturers and others around them to make life more bearable to survive in a foreign country would tend to earn higher grades.

The results for the second hypothesis supported previous research by Pierce, Sarason and Sarason (1996) that the role of personality characteristics, personal relationships and situational parameters combined to produce a robust coping style. According to Pierce, Sarason and Sarason (1996) individuals that reveal such personality characteristics tended to exhibit more self-confidence, to perceive having more control over stressful situations, to be more persistent and assertive, and to expect success. In other words, personality traits affected the way individuals coped in their daily lives. For international students who had the additional stress of adapting to a foreign environment, culture and language, these results may explain the way international students cope with their problems.

The personality traits measured in this study indicate that they contribute to the coping styles of international students. While all three traits contributed, that of neuroticism and extraversion was greater than that of tough-mindedness. The contribution of neuroticism to coping styles suggests that the more anxious and worried the students, the poorer their coping ability. Feeling unhappy, facing problems of adjustment to a new culture and environment, trying to cope might explain the result that the higher the neuroticism reported, the poorer the coping ability, and vice versa.

The contribution of extraversion suggests that the more introverted the student, the poorer the coping ability. Those who are more extraverted would find it easier to socialize, to make friends and to be energized by time spent with others. These more extraverted students, feeling less lonely and isolated, would have more emotional energy to invest in their studies and experience more confidence in their coping ability. This might explain the contribution of extraversion to coping ability.
In this study, tough-mindedness was a negative, albeit small, contributor to coping ability, explaining only 3% of variation in coping ability. Tough-mindedness reflects a capacity to be different from and to disregard others, to be a loner and to be risk-taking. This result suggests that to the degree that international students regarded themselves as tough-minded, they experienced themselves as having less coping ability and vice versa. Those with more tough-mindedness would tend to value non-conformity. Perhaps, valuing coping ability may be regarded as insufficiently nonconformist to attract agreement from individuals who tend to have tough-mindedness. This may help to explain this results for the second hypothesis.

The third hypothesis that gender would have an impact on coping styles and personality traits was exploratory. The result does not support Eysenck and Eysenck's (1975) finding that males report higher tough-mindedness than do females. This may be explained by the fact that the males in this sample seemed to suffer homesickness as much as the females. In other words, they did not show a greater tough-mindedness than their female peers. Perhaps, they felt themselves to be equally as vulnerable to the pressures of overseas study.

That there was no significant difference between the genders in their coping styles or in the other two personality traits, neuroticism and extraversion, may simply indicate that there is no difference between the genders on these variables. In other words, men and women may share more similarities in coping styles and personality traits than they do differences. While there are clearly differences between men and women, this study did not find them on these variables.

With regard to the qualitative analysis, the interviews revealed that the personality of each international student influenced that individual’s coping strategies when faced with difficulties. For example, an individual who is extraverted reported that loneliness was easily overcome. Another, more introverted individual, reported suffering loneliness and attributed this to a shyness that made it difficult to approach people and make friends. Further, the interviews yielded seven themes that represented common experiences. All of these themes reflected the difficulties and problems they face as international students. These themes represent challenges they must cope with if they are to succeed in their studies.

Conclusion
To conclude, the purpose of this study was to understand the variables that contributed to international students’ experiences. The impact stress level, coping styles and personality traits on their academic performance was discussed. The study found that personality traits contribute to coping styles. No sex differences were found. Qualitative data yielded common themes in international students’ experiences. Students reported that stressors challenged their ability to cope.

Hopefully, this research will contribute to a better understanding of international students by student affairs practitioners and personnel. Recognizing the factors that may influence the process of the transition to study by the international students could increase the awareness of policy makers. This then could lead to the development and implementation of programmes to facilitate this transition. For example, programmes could address the interaction patterns between Australian and international students in preparing both for face-to-face contact. Such policies could augment the cultural horizons of both host and international students, enriching the experiences of both.

References


