



Perceived Stress And Coping In Part-Time Graduate Students: A Quantitative Examination On The Gender Differences

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DIFFERENCES

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Abstract

The present quantitative study explored the gender differences in perceived stress and coping strategies used by part-time graduate students in Hong Kong, Singapore and Australia. Besides, relationships between total stress and difference orientation on coping were also areas of investigation. 194 postgraduate counselling students, 125 from Hong Kong, 43 from Singapore and 24 from Australia, were volunteered to answer an anonymous questionnaire during class. A questionnaire consisting of four instruments, namely, the Student-Life Stress Inventory Scores (SLSI), the Coping Inventory for Stressful Situations Score (CISS), the Nowickie-Strickland Internal-External Control Scale (ANS-IE) Short Form and Perceived Social Support, was administered to explore stress, coping and locus of control of the students. Reliability coefficients were found to be satisfactory for the four instruments. Results showed the hypotheses that total stress was positively correlated with emotion orientation, avoidance orientation and distraction coping. Moreover, female students employed significantly more of the above three coping methods in facing stress when comparing to the male. However, the hypothesis that average total stress score in female was higher than male was not found in this study. Variables including differences in individual personality, cultures, age, education, social role, social support, counselling skills and past major life events might be some of the essential components in determining the overall stress of the students other than gender and coping used. Implications of the results urged more specific and comprehensive measures on stress and coping for this specific population who complete demands in different roles simultaneously. In addition, although stress can be either negative (distress) or positive (eustress), it is suggested to reduce stress to prevent impaired task performance, burnout, psychological problems, post-traumatic stress disorders (PTSD) or even crisis.



Keywords— *Perceived Stress, Coping Strategies, Gender Differences, Graduate Students, Counselling Students, Emotion-Oriented Coping, Avoidance-Oriented Coping, Distraction Coping, Locus of Control, Perceived Social Support, Psychological Well-Being, Stress Management.*

IJMRR



Declaration of Originality

I declare the following to be my own work as understood by the University's policy on plagiarism, unless otherwise indicated.

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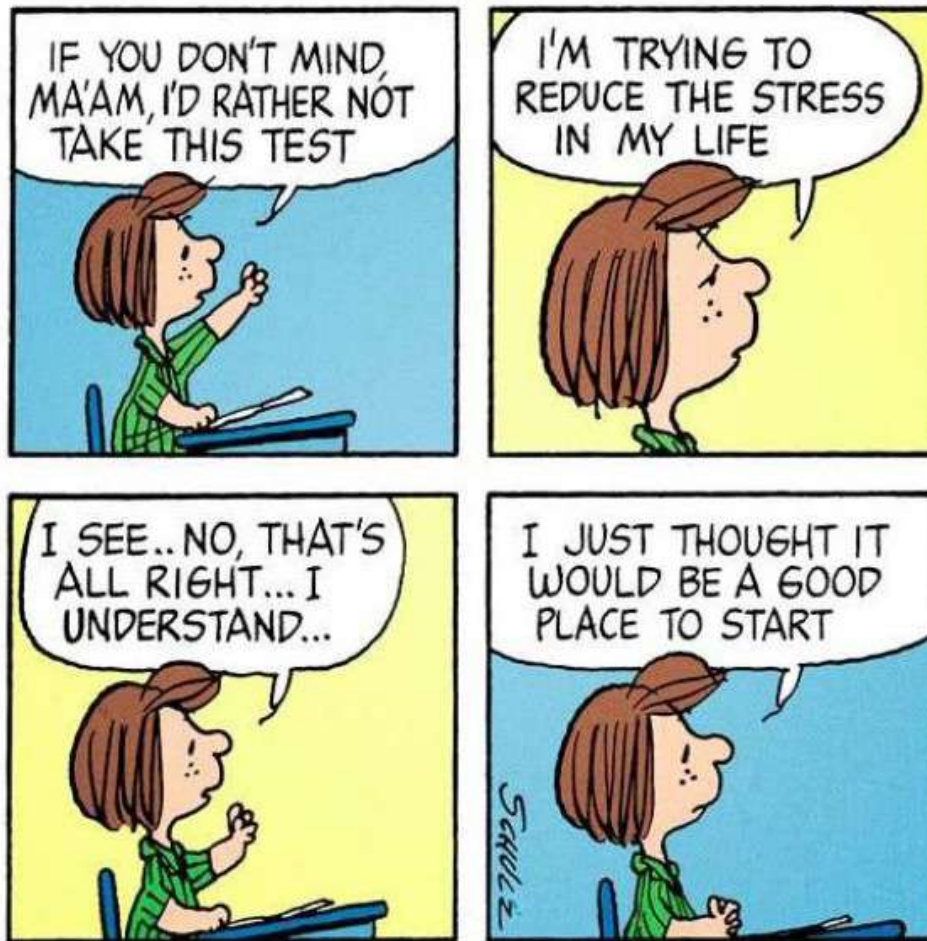
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Introduction

The area of stress and its impact on individuals has a long history of research. Although medical interest in stress dates back to the father of medicine Hippocrates (460 – 377 B. C.), it was not until the 1920s that Walter Bradford Cannon (1871-1945), a physiologist in 1929, used engineering physics concepts to describe humans' reaction to stress as "fight-or-flight response", which is our physiological response to stress. Selye (1936, 1946, 1950, 1953, 1956, 1971, 1974, 1976, 1982), an Austrian-Hungarian endocrinologist doctor who is the world-famous pioneer and popularizer of research on biological stress in human individuals and groups ("the father of stress"), conceptualized stress as the General Adaptation Syndrome (G. A. S.) after observing and studying the behaviours and reactions of animals exposed to a variety of non-specific damaging agents.

'In its medical sense, *stress is essentially the rate of wear and tear in the body*. Anyone who feels that whatever he / she is doing – or whatever is being done to him / her – is strenuous and wearing, knows vaguely what we mean by *stress*. The feelings of just being tried, jittery, or ill are subjective sensations of stress. But stress does not necessarily imply a morbid change: normal life also causes some wear and tear in the machinery of the body. Indeed, stress can even have curative value, as in shock therapy, bloodletting, and sports. ... For scientific purposes, *stress is defined as the state which manifests itself by the G. A. S.* The latter comprises: adrenal stimulation, shrinkage of lymphatic organs, gastrointestinal ulcers, loss of body-weight, alterations in the chemical composition of the body, and so forth. All these changes form a syndrome, a set of manifestations which appear together... This syndrome consists of three stages: After a traumatic stress, the body enters an *alarm reaction* (or, *shock*) of temporary shock (mobilize resources). From this, it rebounds and then there will be a *resistance stage* (or, *adaptation reaction*) to cope with stressor. If the stress persists and is prolonged, then wear and tear may lead to *exhaustion stage* (reserves depleted).' [Selye,

H. (1976). *The stress of life* (Revised Edition). New York: McGraw-Hill.]

According to this "general adaptation theory", there is a link between stress and physical illness (diathesis). Selye suggested that persistent stress inevitably leads to a depletion of the body's ability to cope and ultimately to exhaustion. Later researchers have recognized the importance of the interaction between the person and the environment. For example, McNerney (1974, p. 2) stated, "Stress is your body's physical, mental and chemical reactions to circumstances that frighten, exercise, confuse, endanger or irritate you." Each individual perceives situations differently and the coping mechanisms available to each also differ. This means that each individual experiences stress differently.

Hong Kong SAR's Chief Executive Mr Tung Chee-hwa has been promoting the concept of "Continuing Education" since 1997. He even set up a Continuing Education Fund (CEF) which worth HK\$5000 billions in April 2002. Therefore, many Hong Kong people pursue further studies, in certificate level, bachelor level, master level or doctoral level. There has been a great deal of research on the role of stress in relation to areas such as the workplace, adolescence, family relationships (like Professor Reuben Hill's theory of family stress, 1947, 1959, 1983, University of Minnesota), trauma, etc. Very little research has been done on stress associated with university study. The little research that exists has focused on undergraduate research and has mainly been concerned with the transition to university (college) life. The study of stress in graduate students has been largely neglected.

As a group, graduate students are not like undergraduate students in a number of ways. In general, they tend to be older and to have more responsibilities outside of university study than do undergraduate students. The impact of current global economic pressures means that

increasing number of individuals in the workforce feel the need to obtain higher qualifications to remain competitive in the workforce. Increasing numbers of graduate students are both studying and working full time. Many of them also have significant family responsibilities. This can lead to stress associated with the competing demands associated with work, family and student roles.

The individual's personal and social resources can either ameliorate the experience of stress or add to it. The role of the individual's own coping strategies in dealing with stress is very significant. The ability to deal with such competing demands is dependent to a large degree on the person's coping style. In addition, the presence of significant social support in the person's life is valuable in ameliorating the effects of the demands faced by the individual.

This study sought to address the deficiency in the research by focusing on stress associated with graduate study in individuals who are largely juggling between competing commitments. Individual coping strategies, as well as personal and social factors that may buffer the stress would also be examined.

In this study, stressors and reactions to stressors would be discussed. Those definitions used by Gadzella (1994) were borrowed, 'stressors are defined as events or conditions (stimuli) that demand adjustments beyond the normal wear and tear of daily living. Stressors cause various reactions or responses (physiological, emotional, or behavioral) which may create difficulties in coping with them for some individuals. The reactions to stressors can also be viewed as appraisals (cognitive approach), that is, evaluating whether the stressors are relevant or irrelevant and whether one has the strategies.'

Review Of Related Literature

Major types of stress

Major types of stress are frustration, conflict, change and pressure.

Frustration occurs in any situation in which the pursuit of some goal is thwarted.

Conflict occurs when two or more incompatible motivations or behavioural impulses compete for expression. According to Kurt Lewin (1935), there are three types: Approach-approach conflict, Avoidance- avoidance conflict and Approach-avoidance conflict. In an approach-approach conflict, a choice must be made between two attractive goals. In an avoidance- avoidance conflict, a choice must be made between two unattractive goals. In an approach-avoidance conflict, a choice must be made about whether to pursue a single goal that has both attractive and unattractive aspects. It often produces **vacillation**, that is, you go back and forth, beset by indecision. Neal Miller (1944, 1959) used goal gradient (approach gradient / avoidance gradient) to describe. According to Miller, as you near a goal that has positive and negative features, avoidance motivation tends to increase faster than approach motivation, sending you into threat; however, if you retreat far enough, you will eventually reach a point where approach motivation is stronger than avoidance motivation, and you may decide to go ahead once again. The ebb and flow of this process leads to vacillation.

Change is any noticeable alternation in one's living circumstances that require readjustment. Thomas Holmes, Richard Rahe, and their colleagues set out to explore the relations between stressful life events and physical illness (Holmes & Rahe, 1967; Rahe &

Arthur, 1978). Theorizing that stress might make people more vulnerable to illness, they interviewed thousands of tuberculosis patients to find out what kinds of events had preceded the onset of their disease. Surprisingly, the most frequently cited events were not uniformly negative. Based on this analysis, Holmes and Rahe (1967) developed the Social Readjustment Rating Scale (SRRS) to measure life change as a form of stress. In one year: People with scores of 300 and higher have a high health risk. People scoring between 150 and 300 points have about a 50-50 chance of serious health change within two years. People scoring below 150 have a 1 in 3 chance of serious health change.

Pressure (to perform and to conform) involves expectations or demands that one behave in a certain way.

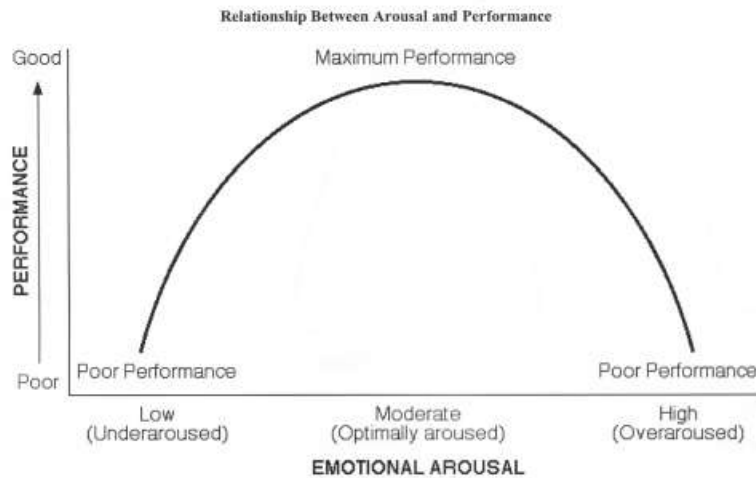
Reactions to stressors

People's response to stress is complex and multidimensional. Stress affects the individual at several levels.

- Emotional Response – Annoyance, anger, anxiety, fear, dejection, grief, sadness.
Emotional arousal may interfere with coping. According to the Yerkes-Dodson inverted-U hypothesis (Yerkes & Dodson, 1908), task performance improves with increased arousal up to a point and then declines. The optimal level of arousal on a task depends on the complexity of the task.

Figure 1

Yerkes-Dodson inverted-U hypothesis (Yerkes & Dodson, 1908)



- Physiological Response – Cannon and Selye

Physiological arousal in response to stress was originally called the Fight-or-Flight Response by Cannon. This automatic response has limited adaptive value in our modern world. Selye's General Adaptation Syndrome describes three stages in physiological reactions to stress. Diseases of adaptation may appear during the stage of exhaustion.

There are two major pathways along which the brain sends signals to the endocrine system in response to stress. The first pathway, routed through the autonomic nervous system, releases a class of hormones called catecholamines into the bloodstream. The second pathway, routed through the pituitary gland, releases a class of hormones called corticosteroids.

- Behavioural Response – Coping efforts

Coping refers to active efforts to master, reduce, or tolerate the demands created by

stress. According to Higgins and Endler (1995), theory and research have singled out coping processes as a possible moderator of the relationship between stressful life events and subsequent psychological and somatic symptoms (Endler, 1988; Folkman, Lazarus, Gruen and DeLongis, 1986; Locke, Hurst, Heisel, Kraus and Williams, 1979). Methods of coping include Aggression, Giving up, Indulging oneself, Defense mechanism, Positive illusions and Constructive coping. Aggression is any behaviour that is intended to hurt someone, either physically or verbally. Martin Seligman (1974, 1983) explains giving up in terms of learned helplessness. Defense mechanisms (e.g., denial of reality, fantasy, isolation, undoing, overcompensation, repression, projection, displacement, reaction formation, regression, rationalization, identification, sublimation, introjection, depression, undoing, suppression, idealization, dissociation, distortion, hallucination, sour grapes, and sweet lemon) are largely *unconscious* reactions that protect a person from unpleasant emotions such as anxiety and guilt. Several lines of evidence (Shelly Taylor and Jonathon Brown, 1988, 1994) suggest that positive illusions may be healthful, but there is some debate about the matter. It is probably a matter of degree. Small illusions may be beneficial, but extreme distortions of reality are usually maladaptive.

Constructive coping refers to relatively healthful efforts that people make to deal with stressful events.

Effects of stress on psychological functioning

The common negative effects of stress on psychological functioning are impaired task performance, burnout, Posttraumatic Stress Disorder (PTSD), other psychological problems and disorders.

Research on the effects of stress has concentrated on negative outcome, although positive effects may occur. Baumeister's (1984) work on choking under pressure suggests that pressure can interfere with task performance, even by well-trained athletes.

Burnout involves physical, mental, and emotional exhaustion, depersonalization and reduced personal accomplishment that is attributable to long-term involvement in emotionally demanding situation.

Posttraumatic Stress Disorder (PTSD) involves disturbed behaviour that is attributed to a major stressful event but that emerges after the stress is over.

Stress can contribute to a host of common problems, such as poor academic performance (Lloyd *et al.*, 1980), insomnia (Hartmann, 1985), nightmares (Cernovsky, 1989), sexual difficulties (Malatesta & Adams, 1984), alcohol abuse (Jennison, 1992), drug abuse (Lester, Nebel, & Baum, 1994), and unhappiness (Heady & Wearing, 1989). Stress has also been related to the development of various psychological disorders, including depression (Gruen, 1983), schizophrenia (Spring, 1989), anxiety disorders (Lester *et al.*, 1994), and eating disorders (Strober, 1989).

The effects of stress on physical health

Psychosomatic diseases are physical ailments with a genuine organic basis that are caused in part by psychological factors, especially emotional distress.

- Type A behaviour pattern verses Type B behaviour pattern

According to Meyer Friedman and Ray Roseman (1974), Type A personality involves 3 elements: competitiveness, time urgency and hostility. Type B personality is marked by relatively relaxed, patient, easygoing, amicable behaviour.

Stress appears to play a role in many types of illnesses, not just psychosomatic diseases. The Type A personality has been implicated as a contributing cause of coronary heart disease. Cynical hostility may be the most toxic element of the Type A syndrome.

The increased coronary risk for Type A's is perhaps double that for Type B's (Lyness, 1993; Weaver & Rodnick, 1986). At least 4 mechanisms have been hypothesized to contribute to the association between Type A personality and heart disease.

- Immune response

The immune response is the body's defense reaction to invasion by bacteria, viral agents, or other foreign substances. Researchers have found associations between stress and the onset of a great variety of specific diseases, although the evidence on many is highly tentative. Stress may play a role in a host of diseases because it can temporarily suppress the effectiveness of the immune system.

Although there is little doubt that stress can contribute to the development of physical illness, the link between stress and illness is modest. Stress is only one factor in a complex network of biopsychosocial variables that shape health.

Social support refers to various types of aid and succor provided by members of one's social networks.

Hardiness is a syndrome marked by commitment, challenge, and control that is purportedly associated with strong stress resistance.

Optimism is a general tendency to expect good outcomes.

There are individual differences in how much stress people can tolerate without experiencing ill effects. Social support is a key moderator of the relationship between stress and illness, although social relationships are *not* equivalent to social support.

The factors associated with hardiness – commitment, challenge, and control – may increase stress tolerance. Optimism may lead to more effective coping with stress, whereas pessimism has been related to passive coping and poor health practices.

A recent study of Lewis M. Terman's sample of gifted children in 1921 (Terman, 1925; Terman & Oden, 1959) suggests that conscientiousness is associated with greater longevity. Physiological factors, such as cardiovascular reactivity, may also influence stress tolerance.

Coping

Viktor Frankl (1959, 1965, 1967, 1969, 1978) talked about three methods to cope with stress: commitment in a career whole-heartily, commitment in a relationship deeply, and

commitment in God completely. The main theme is "commitment".

Cary Cherniss (1980a, 1980b, 1995) investigated many human workers in 1980s to 1990s and concluded that the "request for meaning" is the most important factor for coping stress. That is, if a human worker thinks that he / she is doing a meaningful job, he / she will not burnout easily.

Dunlap and Stewart (1983), Ross and Altmaier (1994) mentioned that stress management is a decision making process, including Altering, Avoiding, Accepting, building resistance, changing perception (AAAbc).

Humphrey and Humphrey (1986) and Lau (2002) found that the coping strategies used by most people were talking to somebody else, seeking religious advices from God, setting priority, taking medicine, entertaining oneself, eating, shopping, mediation, and relaxation. Among them, mediation and relaxation are the most effective (Lau, 2002). However, they are the most uncommon method used.

Alan Lakein (1996) mentioned "Twenty Ways I Save Time". Four of them are useful for graduate students to cope with stress.

- I won't waste time to feel regret for my failure.
- I always put some cards in my pocket, so that I can jot down my ideas and notes at any time and everywhere.
- I will concentrate on one thing only at one time.
- I will deal with every paper for one only.

Attribution Processes: Explaining Behaviour

Attributions are inferences that people draw about the causes of events, others' behaviour, and their own behaviour. Attribution Theory (Weiner, 1986) relates future involvement in the task of how one accounts for previous successes and failures: why we *think* we succeeded or failed. There are three main dimensions to these attributed reasons: *Stability-instability*, *Controllable-uncontrollable* and *Internal-external*.

Stability-instability means if we attribute failure to something that is unstable, such as bad luck, which may not occur in the future, expectations about future performance may be unaffected; however, if failure is attributed to a stable factor that will occur in the future, such as low ability, then one would expect to continue failing in the future.

Control Theory deals with the locus of control. Some causes are within our control (for example, the amount of effort we put in), or someone else's control (for example, the difficulty of the task set). Our feelings of control are important in determining how we feel about performing in the future.

Internal attributions ascribe the cause lies within ourselves (for example, ability, which in this case is also uncontrollable), whereas external attributions ascribe the cause in someone else (for example, lecturers' poor quality teaching). Generally, internal attribution is better because it raises students' motivation, thus they are able to learn by themselves. External attribution makes students think that tasks are difficult and they tend to give up.

In the West (Biggs and Watkins, 1995), success and failure are usually attributed to, in

order of importance: ability, task difficulties, luck, and effort. The first and the last one are more or less internal; the others are not. In Asia, there is an earlier research (Hau and Salili, 1991) that the top five attributions for success of Hong Kong secondary students were (in order importance): effort, interest in study, study skill, mood, and ability. All of them are more or less internal. In this, Hong Kong students are typical of many Asian cultures, which emphasize diligence and effort as being the keys to success. It is likely that such attributions account for the high degree of success that Asian immigrants have in Western schools.

A particular bad form of attribution reduces the student to a state known as *learned hopelessness*. This occurs when the attributions are stable, internal, uncontrollable, and *general*, so that performance is affected over a broad range of performances. The result is a deep depression: 'Things are bad on all fronts, and I cannot do anything about it.' The world is unpredictable and uncontrollable. In these circumstances, a brief in effort only makes matters worse, because if a student knows he or she is putting in every effort possible, and teachers and parents are still not satisfied, then what hope is there? It is probably such a belief that drives some students to suicide.

Gender considerations

There were many attempts to investigate gender differences on stress and coping. Nowicki and Duke (1974) did a locus of control study for noncollege as well as college adults. Dyk (1987) gave a very good advice on management of different roles. Coyne (1991) did a research on social factors and psychopathology. Smith (1993) did a research on personality and illness. Rocha-Singh (1994) developed validity of Graduate students Stress Inventory (GSI). Pierce, Sarason and Sarason (1996) did a research on coping and social support.

Women (Gilligan, 1990) are especially sensitive to contextual cues and relationship messages as they form their sense of identity and moral values. Therefore, gender comparison is always a research interest.

Van Meter and Agronow (1982) surveyed 133 married females; students aged 64 to 74 in a home economics department by using mailed questionnaires. They found out that satisfaction with child care would be an important factor associate with low role strain. Also, husband's positive support lessens the strain of married college female. Moreover, highly educated husband will have more encouragement for his wife to pursue a degree. Furthermore, if married college female places family role first, she will lower level of role strain.

Parkes (1984) investigated 171 female student nurses, aged 18 to 25, over 4 years period. The patterns of coping reported by internals (locus of control) are potentially more adaptive in relation to types of appraisal than externals.

Endler and Parker (1990b) used the Multidimensional Coping Inventory (MCI) to show that women used more emotion-oriented coping than men. Later on (Endler and Parker, 1994), they modified the MCI into the Coping Inventory for Stressful Situation (CISS) and they used CISS to investigate 832 college students attending psychology classes in Ontario (397 males, 435 females) and 483 adults (215 males, 268 females). The study showed a strong support on the validity of CISS and it proved that the CISS is a reliable measure of the basic coping styles (task, emotion and avoidance oriented).

Blankstein, Flett and Koledin (1991) used the life orientation test and other instruments to survey a group of 408 undergraduate of introductory psychology of all years in Toronto on hassles (minor stress), pessimistic and optimistic outlook. It was discovered that there is a negative correlation of hassles and optimism of female and male. Also, hassles correlated significantly with persistent symptoms of poor psychological adjustment. No gender difference was found on dispositional optimism and hassles symptoms index. Female showed higher ratings for hassles involving academic deadlines, weight, household chores

Mallinckrodt and Leong (1992) surveyed 166 United States Graduate students residing in the campus of a United States university (92 males, 74 females) on their social support, stressful life events and psychological stress symptoms. They found out that female has significantly more life change, stress, anxiety and depression; significantly less support from academic departs and family environments than male. Also, sex differences may reflect a greater willingness of female to report stress symptoms.

Gadzella (1994) used the Student-Life Stress Inventory (SLSI) to survey 290 undergraduates (106 males and 184 females) aged 17 to 23. It was found out that SLSI is moderately reliable and valid. Female has significantly higher scores on the two stressors (pressures and changes), and on the three reactions (physiological, emotional and behavioral). Male showed higher scores on cognitive appraisal showing less concern about their stressors and strategies they used.

Gerdes and Ping (1994) obtained volunteers (63 women and 69 men) from diverse classes at the University of Beijing and matched the distribution of their majors with volunteers (62 women and 79 men) from classes at a highly selective private university in the

northeastern United States. They found out that total stress correlated with level of emotion-focused coping for all groups except Chinese male. Also, there is no gender difference in level of problem focused or emotion focused coping.

Higgins and Endler (1995) used the Coping Inventory for Stressful Situation (CISS) to investigate 205 undergraduates in Toronto (101 males and 104 females) on their coping process, stressful life events, psychological and physical distress. They found out that emotion oriented coping is significantly positive correlated with all measures of physical and psychological distress in male and female. Female used more emotion oriented coping than male, also reported more somatic distress and more psychiatric symptomatology than male. Task oriented coping is negatively correlated to psychological and physical distress only for male in this study. The study supports that problem oriented approach is related to good adjustment. Social diversion is significantly negative correlated with depression for all, especially female.

Callaghan *et al* (2000) mailed out some cross-sectional and within group comparison surveys to 500 Chinese nurse in Hong Kong to survey their stress and coping. The return rate was 168 (or 33.6%). They found out that there is a significant link of stress and sickness levels. Furthermore, there is no gender difference on female's stress and male's stress. It may be due to the low response rate.

Cassidy (2000) studied 220 subjects on self support realized that cognitive appraisal plays a major role in process of stress and health. Also, supports daily hassles important in predicting outcomes of stress process.

Davies *et al* (2000) used five audio-taped questions to investigate 49 male undergraduate students from University of Oregon on their stress. It was aware that they had important health needs but took little action to address them. The greatest barrier to seek services is the men's socialization to independent and conceal vulnerability.

Kenney (2000) investigated 299 females in southwestern United States on their stressors, personality traits and symptoms of health. The subjects were divided into three age groups: younger, middle-aged and older. The middle-aged females have fewer physical and emotion problems than younger and older peers. Concerning on the inner balance, the younger one is compromised; the middle-aged one is adequate; the older is stable.

Misra and McKean (2000) used the Student-Life Stress Inventory (SLSI) to survey 249 (42% return rate) fulltime undergraduates on their academic stress, leisure satisfaction, time management, trait and state anxiety. They found out that Anxiety and academic stress showed positive association. Also, there is higher academic stress and anxiety, and lower leisure satisfaction among female than male.

In Porter's (2000) study, gender differences in coping were examined using trait and momentary situation-specific forms of the Daily Coping Inventory (DCI) and the Ways of Coping (WOC) questionnaire. The momentary measure also included assessment of problem content and appraisal. Participants were 47 men and 48 women (mean age = 42; 97% Caucasian) with high levels of work or marital stress. Participants completed trait versions of the DCI and WOC at the start of the study. Over the next two days, they carried an electronic diary which randomly prompted them every 40 minutes to report on their stressors, stress appraisals, and coping efforts. Analysis of the trait data indicated gender differences in coping

consistent with what would be predicted by the socialization hypothesis: Women reported greater use of social support and catharsis on the DCI than men. However, no gender differences in coping were observed on the momentary assessments. Overall, the pattern of results suggest that previous findings of gender differences in coping may be attributable to heuristic recall strategies based on conventional gender role stereotypes, rather than to actual differences in behaviour.

Aranda (2001) surveyed 171 Mexican American males and females on stress, coping, social support and psychological distress. It was found out that Female at household context significantly sources of stress and social support. Also, Male, stress at work and support outside household more silent. Moreover, No gender difference is found in the rate of depressive symptoms. Furthermore, Education level is negatively correlated with psychological distress for female only.

Erdwins *et al* (2001) investigated 129 married, educated and employed, female with middle-to-upper income and at 1 preschool child. They found out that more confidence in female as parents, less reported overwhelmed by multiple role demands. Also, More self efficacy in joy, less conflict between work and family roles. Moreover, more female felt supported by her spouse and supervisor, less experienced work / family conflict and maternal separation anxiety.

Gadzella (2001) used the Student-Life Stress Inventory (SLSI) to investigate 381 students in classes of State University. It was found out that SLSI is a valid measurement. Also, SLSI supports internal consistency.

Hamarat *et al* (2001) surveyed 189 adults on perceived stress, coping resources effectiveness and life satisfaction. They are divided into three groups: young (18-40 years old), middle (41-65 years old), and old (66 and above). Result shows that the young group viewed the perceived stress as a predictor of life satisfaction; the two older groups viewed the coping resources as a predictor of life satisfaction. Also, higher scores in coping resources of mid / old strongly related to life satisfaction. Moreover, No gender difference in subjective well being found in the study. Furthermore, It demonstrates variance of income, gender, education and religiosity had no meaning with perceived stress and coping resources, but psychological states, traits and coping resources much more critical role in life satisfaction.

Lo (2002) used longitudinal study and descriptive correlation design to survey some Year 1-3 undergraduate Australia student nurses on perceived stress, coping and self esteem. It was found out that Chronic and transient stress significantly correlated with avoidance coping and negative self esteem. Also, Positive self esteem is significantly correlated with proactive behaviours.

Hypothesis

The hypotheses of this study were:

- Total stress would be positively correlated with emotion orientation, avoidance orientation and distraction coping.
- There would be no difference between males and females on the coping response towards stress.
- Total stress score in female was higher than male.

METHODS

SUBJECTS

The participants in this study were recruited from part-time University of South Australia graduate students in counselling psychology in Hong Kong, Singapore and Australia during the years 2002 and 2003. All students were free to choose to participate, and all those who voluntarily participated were included in the analysis. There were in total 194 participants, aging from 22 to 65 years old, with female as majority (74.7%). Employment distributions were 27.1% social workers, 21.9% managerial, 20.8% medical, 15.6% teachers, and 3.6% other. The two most common occupations ("counsellor / social worker / pastor", and "managerial / clerical / IT") made up nearly half (49%) of the sample. Employment statuses were 78.3% full-time, 13.2% part-time and 8.5% unemployed. Their average hours worked was ranging from 0 hours (for those unemployed) to 65 hours per week, with a mean of 39.935 hours and a standard deviation of 13.745 hours. Marital statuses were 56.7% married, 38.1% never married, 2.6% divorced, 1.5% separated and 1% widowed. The two most common marital statuses (married and never married) made up 94.8% of the sample. 63.7% of the sample had children at home. Ethnic identities were 78.4% Chinese, 8.2% Anglo Saxon, 6.2% Indian, 3.1% South European, 0.5% Malay, 0.5% South European and 3.1% other. The two most common ethnic identities (Chinese and Anglo Saxon) made up more than 85% of the sample. Countries were 65.1% Hong Kong, 22.4% Singapore and 12.5% Australia. This is a convenient sampling and no special sampling method was employed, so it belongs to non-probability sampling is in use which means probability of selecting a single individual is not known. Participants were not paid but expected to participate since that was part of the workshop and no other activity was arranged if the

students did not choose to participate. The fact that all the participants were studying the same course in their respective countries made the samples relatively similar, although the Hong Kong group was considerably larger than the groups from Australian and Singapore. Because the samples comprised graduate counselling students and were of relatively smaller sizes, the degree to which the results can be generalized is limited. The Human Ethics Committee of the University of South Australia approved the study.

APPARATUS

The 5-page survey form contained six sections. Section A, the Student-Life Stress Inventory (SLSI) Part I (Gadzella, 1991, 1994) which was a 5-scale test, consisted of 23 items and mainly concerned with specific sources of potential stressors associated with university life. It focuses on 5 types of stressors (5 scales), included: frustrations, conflicts, pressures, changes and self-imposed stressors. Participants responded by circling a number from 1 to 5 on the sub-scales (possible scores 23 to 115).

Section B, the Student-Life Stress Inventory (SLSI) Part II (Gadzella, 1991, 1994) which was a 5-scale test, consisted of 28 items and mainly concerned with students' specific reactions to stressors. It focuses on 4 reactions to stress (4 scales), included: physiological, emotional, behavioural and cognitive. Participants responded by circling a number from 1 to 5 on the sub-scales (possible scores 28 to 140). The Cronbach's alpha coefficient = 0.92. The Test-Retest reliability = 0.57 to 0.76. About the construct validity, it is correlated with conceptually related measures such as learning processes, test anxiety, powerful others, internality, locus of control. The criterion validity is not addressed. The present study's focus is on graduate students who have been largely neglected in the study of stress. Graduate

students tend to be mature aged and are likely to have competing responsibilities (such as demands of family) outside of university study. The majority of graduate students are both studying and working full time. Competing demands associated with work, family and student roles are likely to influence the experience of stress and the ability to cope. Of the many factors associated with stress the focus of this study will be on: Personal variables – coping styles, multiple roles (work, study, family), locus of control, perceived social support; Demographic variables – gender, employment status, age, and ethnicity.

Section C, the Coping Inventory for Stressful Situations (CISS) (Endler and Parker, 1990a, 1994) which was also a 5-scale test, consisted of 48 items and mainly concerned with three coping styles, included task oriented coping scale (active attempting to deal with the stress), emotion oriented coping scale (pondering, day dreaming, emotional), and avoidance oriented coping scale. The avoidance-oriented coping had two sub-scales: distraction (seeking activities that distract from the stress) and social diversion (seeking out social support or using social meant to distract one-self). Respondents circled a number from 1 to 5 on the sub-scales (possible scores 61 to 305, since some questions belonged to more than one sub-scale). The Cronbach's alpha coefficient = 0.86 to 0.91. The Test-Retest reliability = 0.51 to 0.73. About the construct validity, it is correlated with the Ways of Coping Questionnaire (WAYS) (Susan Folkman and Richard S. Lazarus, 1984, 1987). Concerning on the criterion validity, it is correlated with a number of scales, such as the Zung Self-rating Depression scale (Zung WWK, 1965), the Beck Depression Scale (BDS), Endler Multidimensional Anxiety Scale (EMAS) (Endler, 1991), the State Anxiety Inventory (SAI), and the Eysenck Personality Questionnaire (EPQ) (Eysenck, 1972). Research tends to find that (1) Emotion orientation is associated with poorer physical and psychological health, (2) Task orientation is associated with lower physical and psychological distress, (3) Avoidance orientation is

associated with both negative and positive outcomes, (4) Perceived Social Support influences the efficacy of coping.

Section D, the Adult Nowickie-Strickland Internal-External Control Scale (ANS-IE) Short Form (Nowicki and Duke, 1974), included 21 yes-or-no questions measuring the locus of control of the subject's position on the internal-external dimension. Respondents circled Yes if they agree with the statement and No if they did not agree with the statement. The total number of Yes and No then converted into scores (possible scores 0 to 21). High scores denoted more external control and low scores denoted more internal control. The Cronbach's alpha coefficient = 0.74 to 0.86. Test-Retest reliability = 0.65 to 0.83. About the construct validity, it is correlated with Rotter's Internal-External Locus of Control scale (RIELOC) (Rotter, 1966), anxiety, achievement and pathology. Concerning on the criterion validity, there is no correlation with social desirability – Blacks more external than whites, lower class more external than middle class.

Section E, the Perceived Social Support, was a one-item scale. Participants circled a number from 0 to 5 on a scale where 0 = not at all and 5 = very much to the following question: "When you have a problem how much support do you feel you usually get from people close to you (such as family, friends or colleagues)?" There was no reliability or validity information provided. Social support has consistently been associated with better health and well being. Social support can be conceived as (1) Perceived social support, (2) Supportive relationship, (3) Supportive networks. These forms of social support are interrelated. They have all have been shown to buffer the effects of stress to some extent.

Section F sought general demographic information (gender, age, occupation,



employment status, number of hours worked in a week, marital status, whether having children or not, main ethnic identity).

PROCEDURE

At the beginning of the experiment, subjects were handed a Subject Information Sheet explaining the nature and purpose of the research. They were reminded that they could withdraw from the study at any time and would not be identified in the published research. The demographic questionnaire was also completed. Duration of the study was 2 years (during the years 2002 and 2003). Duration of the testing was 20 minutes. Participants were distributed the questionnaires during the classes and they were asked to add up the marks themselves before submission.

ANALYSIS

The results were analyzed using mean and standard deviations. Pearson's Product Moment Correlation Coefficients were calculated. Student's t-tests were run to see if there were gender differences.

RESULTS

Means, standard deviations and t-tests

Descriptive statistics were used to summarize the score for the Student-Life Stress Inventory Scores (SLSI), the Coping Inventory for Stressful Situations Score (CISS), the

Nowickie-Strickland Internal-External Control Scale (ANS-IE) Short Form and Perceived Social Support.

Table 1. Descriptive statistics

Frequencies and Percentages for categorical variables

Demographic Variables

Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid male	49	25.3	25.3	25.3
female	145	74.7	74.7	100.0
Total	194	100.0	100.0	

Occupation

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid counsellor /				
social / pastor	52	26.8	27.1	27.1
medical	40	20.6	20.8	47.9
teacher	30	15.5	15.6	63.5
managerial /				
clerical / IT	42	21.6	21.0	85.4
other	7	3.6	3.6	89.1
none	21	10.8	10.9	100.0
Total	192	99.0	100.0	
Missing System	2	1.0		
Total	194	100.0		

Employment status

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid unemployed	16	8.2	8.5	8.5
part-time	25	12.9	13.2	21.7
full-time	148	76.3	78.3	100.0
Total	189	97.4	100.0	
Missing System	5	2.6		
Total	194	100.0		

Marital status

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid married	110	56.7	56.7	56.7
never				
married	74	38.1	38.1	94.8
divorced	5	2.6	2.6	97.4
separated	3	1.5	1.5	99.0
widowed	2	1.0	1.0	100.0
Total	194	100.0	100.0	

Children home

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	70	36.1	36.3	36.3
no	123	63.4	63.7	100.0
Total	193	99.5	100.0	
Missing System	1	.5		
Total	194	100.0		

Ethnic identity

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Chinese	152	78.4	78.4	78.4
Malay	1	.5	.5	78.9
Indian	12	6.2	6.2	85.1
Anglo				
Saxon	16	8.2	8.2	93.3
South				
European	6	3.1	3.1	96.4
North				
European	1	.5	.5	96.9
other	6	3.1	3.1	100.0
Total	194	100.0	100.0	

Country

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Singapore	43	22.2	22.4	22.4
Hong Kong	125	64.4	65.1	87.5
Australia	24	12.4	12.5	100.0
Total	192	99.0	100.0	
Missing System	2	1.0		
Total	194	100.0		

Mean and Standard Deviation for continues variables

Demographic Variables

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Age	194	22	65	38.12	8.36
Average hours worked	170	.0	65.0	39.935	13.745
Valid N (listwise)	170				

Social Support

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Social support	194	0	5	3.70	1.12
Valid N (listwise)	194				

Student Life Stress Inventory (SLSI)

1. Stressors

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Frustration	194	8	39*	18.48	4.21
Conflicts	194	3	14	8.60	1.92
Pressures	194	4	20	13.37	3.02
Changes	194	3	15	8.35	2.51
Self imposed stressors	194	10	29	19.30	3.73
Valid N (listwise)	194				

* the maximum possible score is 35.

2. Reactions

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Physiological	194	16	60	35.24	9.13
Emotional	194	5	24*	12.45	3.02
Behavioural	194	8	37	17.91	5.17
Cognitive	194	2	10	5.15	1.76
Valid N (listwise)	194				

* the maximum possible score is 20.

3. Total Stress

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Total stress	194	72	197	138.57	21.94
Valid N (listwise)	194				

Coping Inventory for Stressful Situations (CISS)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Task orientation	194	25	86*	56.08	10.31

Emotion					
orientation	194	21	69	42.13	9.29
Avoidance					
orientation	194	20	79	45.45	9.36
▫ Distraction	194	8	38	22.83	5.72
▫ Social					
diversion	194	5	25	15.01	4.30
Valid N (listwise)	194				

* the maximum possible score is 80.

Locus of Control Scale

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Locus of control	194	0	19	5.90	3.74
Valid N (listwise)	194				

The results for t-test were summarized in Table 2.

Table 2. *t*-test comparing males and females on stress, coping, locus of control and social support

Dimension			Male (N = 49)		Female (N = 145)		<i>t</i>
			Mean	<i>SD</i>	Mean	<i>SD</i>	
Stressor	● Frustrations		18.18	5.14	18.59	3.85	−0.578
	● Conflicts		8.51	2.19	8.63	1.82	−0.392
	● Pressures		13.18	3.14	13.43	2.99	−0.488
	● Changes		8.45	2.93	8.31	2.36	0.334
	● Self imposed		19.29	4.03	19.31	3.64	−0.040
stressors							
Reactions	● Physiological		33.18	10.15	35.93	8.69	−1.831
	● Emotional		11.80	2.76	12.67	3.08	−1.761
	● Behavioural		16.73	5.03	18.31	5.17	−1.857
	● Cognitive		4.84	1.69	5.26	1.78	−1.439
Total Stress			134.16	24.35	140.06	20.94	−1.632
Coping	● Task orientation		56.24	10.85	56.02	9.91	0.134
	● Emotion		39.73	9.83	42.94	8.99	−2.105*
	orientation						
	● Avoidance		42.53	10.01	46.43	8.96	−2.559*
	orientation						
	▫ Distraction		20.59	5.87	23.59	5.49	−3.244**
	▫ Social diversion		14.59	5.19	15.14	3.98	−0.777

Locus of Control	5.82	4.26	5.93	3.56	-0.185
Social Support	3.63	1.24	3.72	1.08	-0.475

* significant at the 0.05 level (2-tailed).

** significant at the 0.01 level (2-tailed).

Women got higher scores on four stressors (frustrations, conflicts, pressures and self-imposed stressors), and higher scores on all reactions to stressors (physiological, emotional, behavioral and cognitive). Men got higher score only on one stressor, changes. Women reported experiencing more stressors and reactions to stressors. The t-tests showed that there was no significant difference between men and women in the ratings on four stressors and reactions to stressors.

The mean emotion orientated score was significantly greater in female group ($M = 42.94$, $SD = 8.99$) than the male group ($M = 39.73$, $SD = 9.83$), $t = -2.105$, $p < .05$. The mean avoidance orientation score was significantly greater in female group ($M = 46.43$, $SD = 8.96$) than the male group ($M = 42.53$, $SD = 10.01$), $t = -2.559$, $p < .05$. The mean distraction score was significantly greater in female group ($M = 23.59$, $SD = 5.49$) than the male group ($M = 20.59$, $SD = 5.87$), $t = -3.244$, $p < .01$. According to our data, the null hypothesis that "there is no difference between man and woman on the coping response towards stress" is rejected. There is a significant different between man and woman in coping stress, as the p values of emotion orientation, avoidance orientation and distraction is smaller than 0.05. Therefore, there is a significant gender differences at 0.05 level. Women also had higher scores on social diversion, but the difference was not significant. Men

reported higher scores on using task-oriented coping style, but the difference was not significant, too.

The mean total stress score was not significantly greater in female group ($M = 140.06$, $SD = 20.94$) than the male group ($M = 134.16$, $SD = 24.35$), $t = -1.632$, $p > .05$. Therefore, there were no significant differences between total stress score in female and male in this study.

Correlations

The Pearson's Product Moment Correlation Coefficients were calculated and summarized in Table 3.

Table 3. *Correlations between Total Stress with Coping Styles*

	Total stress	Task orientation	Emotion orientation	Avoidance orientation	distraction	social diversion
Total stress	1.000	-0.086	0.600**	0.244**	0.232**	0.137
Task orientation	-0.086	1.000	-0.165*	0.140	0.025	0.201**
Emotion orientation	0.600**	-0.165*	1.000	0.354**	0.359**	0.201**
Avoidance orientation	0.244**	0.140	0.354**	1.000	0.822**	0.682**

distraction	0.232**	0.025	0.359**	0.822**	1.000	0.276**
social	0.137	0.201**	0.201**	0.682**	0.276**	1.000
diversion						

* Correlation significant at the 0.05 level (2-tailed).

** Correlation significant at the 0.01 level (2-tailed).

Note: Distraction and social diversion are sub-scales of avoidance orientation.

Correlation is used to establish if there is any relationship between two variables, that is, change in one variable is accompanied by a change in another variable. From Table 3, there is no coefficient greater than 0.8 or less than -0.8. The simple conclusion is therefore there is no strong correlation between any two pairs of variables here.

Results showed the positive correlation between total stress and emotion coping was significant, $r = .600, p < .01$. Results showed the positive correlation between total stress and emotion coping was significant, $r = .244, p < .01$. Results showed the positive correlation between total stress and emotion coping was significant, $r = .232, p < .01$. We can say that significant (although moderate) correlations were found between total stress and three kinds of coping methods, namely the emotion orientation, avoidance orientation and distraction coping.

Cronbach's (1951) alpha was computed to assess reliability; it indicated an extremely high amount of internal consistency among the responses to the questionnaire (alpha $\alpha = 0.92$).

These are only some ways to analyse the results statistically. There are many other

combinations and methods possible. However, since the writer does not have the original data, these are the only results the writer can use.

DISCUSSION

The aim of this study was to investigate the gender differences in perceived stress and coping in postgraduate counselling students. Results showed that significant correlations were found between total stress and three kinds of coping methods, namely the emotion orientation, avoidance orientation and distraction coping. Moreover, it can be seen from Table 2 that females obtained higher average scores than male on emotion orientation, avoidance orientation and distraction in this experiment. That means female students employed significantly more of the above three coping methods in facing stress when comparing to the male. There is no significant gender difference in using task orientation and social diversion. However, there were no significant differences between total stress score in female and male in this study.

Interpret results in light of hypothesis or research question

- Significant correlations were found between total stress and three kinds of coping methods, namely the emotion orientation, avoidance orientation and distraction coping.

The idea that emotion oriented coping significantly positive correlated with total stress is consistent with the previous findings (Endler and Parker, 1990b; Gerdes and Ping, 1994; Higgins & Endler, 1995).

The idea that avoidance oriented coping significantly positive correlated with total stress is consistent with Lo's (2002) findings. Distraction is a sub-scale of avoidance, so the same result follows. Actually, social diversion, another sub-scale of avoidance, also positively correlated with total stress, but the result was not significant ($p > 0.05$). It might due to the fact that students in this study were busy people and take up many roles together, hence they had no much time to socialize with others.

- Female students employed significantly more of the above three coping methods (emotion orientation, avoidance orientation and distraction coping) in facing stress when comparing to the male.

The idea that female students employed significantly more emotion oriented coping than male is consistent with the previous findings (Endler & Parker, 1990, 1994; Higgins & Endler, 1995).

In this study, large percentage of female subjects comes from Hong Kong, a place where is strongly influenced by Confucian ideology. The idea of avoidance of conflicts and maintenance of the equilibrium are uphold in Chinese society. The value of group harmony in contrast to conflict confrontation is highly appraised. This explains why females tend to use avoidance orientation in facing stressful events.

Another explanation for females using more avoidance orientation coping is on the way they were brought up. Baumrind (1971) proposed that there are four main distinct parenting styles – Authoritative, Authoritarian, Permissive and Neglectful. Most western countries' parents use authoritative parenting, and most Chinese parents are authoritarian (Dornbusch,

Ritter, Leiderman, Roberts & Fraleigh, 1987). In this study, large percentage (78.4%) of subjects is Chinese, who received authoritarian parenting from their parents. Furthermore, traditional Chinese parents tend to love boys more than girls. In a family, fathers have more power than mother, brothers have more power than sisters, and husbands have more powers than wives. Females growing in such power-differential families are usually shy and not confident in trying out challenges. Although they received educations on gender studies inside the university, it is difficult to change their thinking in a short period of time. This explains why females tend to use avoidance orientation in facing stressful events. Distraction is a subscale of avoidance, so the same explanation is applied, too. Actually, social diversion, another sub-scale of avoidance, also had gender differences, but the result was not significant ($p > 0.05$). It might due to the fact that females in this study were busy people and take up many roles together, like wife and mother. Hence they had no much time to socialize with others. In conclusion, we can say that female students use more different coping styles than male students.

In this study, both males and females have no difference in choosing problem-focused coping method. This finding rejects the general belief that men are more likely to use task-oriented coping method (Endler & Parker, 1994). However, it may not be a result of gender difference. Rather it may be a result of academic background. All participants are graduated students from middle class. They are highly educated and more likely to have an internal locus-of-control orientation. They have a high sense of personal control over life. According to the transactional theory of stress and coping, different social groups in different situations may have different pattern of coping. Academics belong to a group of people who succeed through the examination system; they may be socialized to use more problem-focused coping. In addition, all subjects were highly educated persons. They studied

Counselling in graduate school. They learnt problem-focused counselling theory, which emphasized focus on cause, explanation, history (past), deficit in culture, resistant to changes and defense. Consequently, both male and female use more problem-focused coping.

- The hypothesis that average total stress score in female was higher than male was not found in this study.

In the past findings (Gadzella, 1994; Misra and McKean, 2000), they showed that female reported experiencing more stressors and reactions to stressors than the male. However, we cannot find similar results on this study. Variables including differences in individual personality, cultures, age, education, social role, social support, counselling skills and past major life events might be some of the essential components in determining the overall stress of the students other than gender and coping used. Also, it may be due to the low response rate (Callaghan *et al*, 2000) and imbalance between the sample number of male and female.

Limitation of the study

This is a convenient sampling and no special sampling method was employed. Participants were not paid but expected to participate since that was part of the workshop and no other activity was arranged if the students did not choose to participate. Is this an implicit obligation on the students? Students have to pay (the tuition fee) to do the questionnaire under some undue pressure.

Another limitation in this study was that no participants received debriefing after filling

in the questionnaire. Although all participants were received the Subject Information Sheets explaining the nature and purpose of the research, to a certain extend, this questionnaire rose out some uncomfortable feeling of the participants. It is suggested that in order to avoid psychological uncomfortable, each participants should receive debriefing. In addition, a published report should be mailed to the participants (if they agree to leave their addresses) so that they know actually what is going on.

Most parts of the questionnaire required the participants to work out the total for each section by summing the numbers you circled for each items in that sections and then writing each total in the relevant boxes on the Data Sheet provided at the end of the questionnaire. A little portion of the participants was careless in adding up the marks because of their weak mathematical ability without using calculators. For example, in the section "frustrations", the maximum possible score was 35. However, someone "claimed" that his / her score was 39. Assuming that participants were conscientious, it was due to calculation error.

A majority of the participants (78.4%) were Chinese. Their understanding in English is a problem. English is not their mother language. Although all participants have received their bachelor degrees already, a few of them were not very fluent in English. This can be improved by translating the questionnaire from English into Chinese for the Chinese participants.

Theoretical importance

Implications of the results urged more specific and comprehensive measures on stress and coping for this specific population who complete demands in different roles

simultaneously. It may also help instructors and counsellors to understand why some of their students show high anxiety, fear, and depression. Moreover, the subjects in this study were composed of a group of part-time graduate students. Although we did not include full-time postgraduate students in this study, we can also predict the stress and coping of them since most full-time postgraduate students receive research grants and tutorship from the university and they are supposed to teach or research besides studying their course.

Recommendations

Recommendation for graduate students' employers, family members and friends:

- The graduate students' employers should find ways to lessen the heavy workload of graduate students by lifting some of the duties of graduate students and distributing evenly the workload among employers.
- Social support is found to be an effective way to reduce stress. The graduate students family members and friends should be more tolerate and acceptance towards the graduate students themselves, listen to them empathically and encourage them to seek professional help when needed.
- More importantly, there is a role for peer support groups to strengthen social alliances band promote friendships among graduate students. (Lushington and Luscri, 2001).

The following methods are proposed for university to help in reducing graduate student stress:

- The school authority should try to have more interactions with graduate students as well as create more opportunities for communications among members of the graduate students. This can be done by organizing informal social gatherings and various kinds of extra-curricula activities for graduate students with the aim to promote mutual

understanding and concern among graduate students. The university's principal should actively take part in these activities and try to establish a friendly and supportive relationship with the graduate students.

- Efforts should be made in university to see that graduate students have the opportunity to fulfill their needs in self-actualization, autonomy and esteem in order to avoid the feeling of strain. The university authority should help graduate students to develop their potential in researching by allowing them a higher degree of flexibility and independence in researching. Besides, the university authority should promote the image of graduate students as deserving respect.
- Orientation programs should be conducted for younger and inexperienced graduate students so that they can familiarize themselves with their study quickly and easily.
- Rules should be set to ensure that graduate students have authority and control over their own researching and have rights to participate in school decision making.
- The university should provide more aids and resources for different subjects so that graduate students can get more information handily.

Below are some means proposed for graduate students' organizations to help in reducing graduate students' stress:

- Graduate students' organizations should organize seminars and workshops to help graduate students cope with stress and reduce the feeling of strain. Graduate students should be encouraged to participate.
- They should arouse the awareness of graduate students towards the importance of social support especially from supervisors and coworkers and persuade them to seek support whenever stress and strain arise.
- They should try to fight for increasing the benefits of graduate students in terms of

monetary and non-monetary rewards so that graduate students' security needs can be fulfilled.

- They should provide counselling service to stressed and strained graduate students.

A person's attitude or frame of mind more or less determines how he or she perceives an event. An event may be experienced as either pleasant (positive stress), or distressing (negative stress), or neutral. Adopting a right attitude can help you to convert a potentially or actually negative stress into a positive one. A change of attitude and perception will frequently be of great psychological help in coming to cope more positively with the series of stresses in life. The following are some proposed methods to do so:

- Organize Yourself: Take better control of the way you are spending your time and energy so you can handle stress more effectively.
- Control Your Environment by controlling who and what is surrounding you: In this way, you can either get rid of stress or get support for yourself.
- Love yourself by giving yourself positive feedback: Remember, you are a unique individual who is doing the best you can.
- Reward yourself by planning leisure activities into your life: It really helps to have something to look forward to.
- Exercise Your Body since your health and productivity depend upon your body's ability to bring oxygen and food to its cells: Therefore, exercise your heart and lungs regularly, a minimum of three days per week for 15-30 minutes. This includes such activities as walking, jogging, cycling, swimming, aerobics, etc.
- Relax yourself by taking your mind off your stress and concentrating on breathing and positive thoughts: Dreaming counts, along with meditation, progressive relaxation, exercise, listening to relaxing music, communicating with friends and loved ones, etc.

- Rest yourself as regularly as possible: Sleep 7-8 hours a night. Take study breaks. There is only so much your mind can absorb at one time. It needs time to process and integrate information. A general rule of thumb: take a ten-minute break every hour. Rest your eyes as well as your mind.
- Be Aware of Yourself: Be aware of distress signals such as insomnia, headaches, anxiety, upset stomach, lack of concentration, colds / flu, excessive tiredness, etc. Remember, these can be signs of potentially more serious disorders (i.e., ulcers, hypertension, and heart disease).
- Feed Yourself / Do Not Poison Your Body: Eat a balanced diet. Avoid high calorie foods that are high in fats and sugar. Do not depend on drugs and / or alcohol. Caffeine will keep you awake, but it also makes it harder for some to concentrate. Remember, a twenty-minute walk has been proven to be a better tranquilizer than some prescription drugs.
- Enjoy Yourself: It has been shown that happier people tend to live longer, have less physical problems, and are more productive. Look for the humour in life when things do not make sense. Remember, you are very special and deserve only the best treatment from yourself.

Future direction

It is not infrequent that a research project raises more questions than it answers. The following are some proposed recommendations for future research:

- The study should be replicated in more universities, more disciplines, and results should be compared with that of the present study.
- Other stress factors as Type A / Type B personalities, role-based stress, job complexity,

organizational climate in working place, graduate students' participation in decision making, graduate students' expectation about learning, communication of graduate students with university authority and classmates, employer's leadership style and career development factors should also be taken into account in future stress research.

- The present study only examines one intervening variable, namely coping style and stress. Personality variables as Type A / B and hardiness or hardy personality as conditioning variables should be investigated in future research to see whether they are effective in buffering the stress relationship.
- Due to limitation of resources, the present research cannot include all measures of stress nor could the consequences of stress be studied. It is hoped that future research can pay attention to both behavioural and physiological stresses and their effects on illness, graduate student turnover, absenteeism, performance, quality of life of graduate students and students' academic achievement.
- The present study is basically a correlational study. It is hoped that causal models of graduate students' stress can be established in future research.
- The present research is a study on graduate students' perceived stress, perceived social support and perceived stress. It is crucial to obtain objective measures of stress, strain, and support, and to understand their relationship to each other and with perceived stress, strain, and support. It is worthy to include these areas of study in future research.
- Since social support plays an important role in alleviating stress and strain, future research should aim at constructing a model of support that not only predicts the effects of support, but to understand how it works the way it does. Such a model must include the concepts of information processing, psychological defenses, and coping and adaptation on one hand, and structural / environmental characteristics, such as role relations and networks of support, on the other.



- There should be more research on how to change stresses, how to improve the fit between the person and his / her graduate study, and how to increase participation and social support.
- Stress is always associated with burnout in literature. Further study can be linking up the relationship with stress and burnout of graduate students.
- It is recommended that future research should include direct observations and interviews rather than only depend on self-reported responses. It is also essential for future research to be expanded to include more sophisticated experimental and longitudinal procedures.

Conclusion

As a postgraduate student in counselling, the writer is aware of the warning signs which tell me that I am under stress. As a helper, I am to assist my classmate to overcome obstacles, to make use of resources to cope with stress and anxiety, and to deal with crisis if necessary. My relationship with my classmate already serves as a support for him or her in the midst of turmoil. Help him or her, and his / her family, to look for and accept professional help.

In summary, although stress can be either negative (distress) or positive (eustress), it is important to reduce stress to prevent impaired task performance, burnout, psychological problems, post-traumatic stress disorders (PTSD) or even crisis. The writer suggest that program administrators of the graduate programs might carefully consider methods for designing more effective stress management programs with respect to the specific difference in demographic profile, moderators of stress and coping strategies used by postgraduate students.

References

- 1) ARANDA, M. P. (2001). Stress, social support, and coping as predictors of depressive symptoms: gender differences among Mexican Americans. *Social Work Research*, 25, (1), 37-49.
- 2) BAUMEISTER, Roy F. (1984). Choking under pressure: Self-consciousness and paradoxical effects of incentives on skillful performance. *Journal of Personality and Social Psychology*, 46, 610-620.
- 3) BAUMRIND, Diana (1971). Current patterns of parental authority. *Developmental Psychology*, 4, 99-102.
- 4) BIGGS, John and WATKINS, David (1995). *Classroom learning: educational psychology for the Asian teacher*. Singapore: Prentice Hall.
- 5) BLANKSTEIN, Kirk R., FLETT, Gordon L. and KOLEDIN, Spomenka (1991). The Brief College Student Hassles Scale: Development, validation, and relation with pessimism. *Journal of College Student Development*, 32, 258-264.
- 6) CALLAGHAN, P. *et al.* (2000). Factors related to stress and coping among Chinese nurses in Hong Kong. *Journal of Advanced Nursing*, 31, (6), 1518-1527.
- 7) CANNON, W. B. and WASHBURN, A. L. (1912). An explanation of hunger. *American Journal of Physiology*, 29, 441-454.

- 8) CASSIDY, T. (2000). Stress, healthiness and health behaviours: an exploration of the role of life events, daily hassles, cognitive appraisal and the coping process. *Counselling Psychology Quarterly*, 13, (3)
- 9) CERNOVSKY, Z. Z. (1989). Life stress measures and reported frequency of sleep disorders. In T. W. Miller (Ed.), *Stressful life events*. Madison, CT: International Universities Press.
- 10) CHERNISS, Cary (1980a). Professional burnout in human service organizations. New York: Praeger.
- 11) CHERNISS, Cary (1980b). Staff burnout: Job stress in the human services. Beverly Hills, CA: Sage.
- 12) CHERNISS, Cary (1995). Beyond burnout: Helping teachers, nurses, therapists, and lawyers recover from stress and disillusionment. New York: Routledge.
- 13) COYNE, James C. and DOWNEY, Geraldine (1991). Social factors and psychopathology: Stress, Social Support, and Coping Process. *Annual Review of Psychology*, 42, 401-425.
- 14) CRONBACH, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297-334.
- 15) DAVIES, Jon, McCRAE, Byron P., FRANK, Joanne, DOCHNAHL, Annie,

- PICKERING, Tony, HARRISON, Brent, ZAKRZEWSKI, Mark and WILSON, Kirsten (2000). Identifying male college students' perceived health needs, barriers to seeking help, and recommendations to help men adopt healthier lifestyles. *Journal of American College Health*, 48, 259-267.
- 16) DORNBUSCH, S. M., RITTER, P. L., *et al* (1987). The relationship of parenting style to adolescent school performance. *Child Development*, 58, p. 1244-1257.
- 17) DUNLAP, Joe E., and STEWART, J. Douglas (1983). *Keeping the fire alive*. Tulsa: Penwell.
- 18) DYK, Patricia A. H. (1987) Graduate Student Management of Family Academic Roles. *Family Relations*, 36(3), 329-332.
- 19) ENDLER, Norman S. (1988). Hassles, health and happiness. In Janisse, M. P. (Ed), *Individual Differences, Stress, and Health Psychology*, p. 24-56. New York, NY: Springer.
- 20) ENDLER, Norman S. and PARKER, James D. A. (1990a). *Coping Inventory for Stressful Situations (CISS): Manual*. Toronto: Multi-Health Systems.
- 21) ENDLER, Norman S. and PARKER, James D. A. (1990b). Multidimensional assessment of coping: A critical evaluation. *Journal of Personality and Social Psychology*, 58, 844-85.

- 22) ENDLER, Norman S. and PARKER, James D. A. (1994). Assessment of multidimensional coping: Task, emotion, and avoidance strategies. *Psychological Assessment*, 6, 50-60.
- 23) ERDWINS, C. J. *et al.* (2001). The relationship of women's role strain to social support, role satisfaction, and self-efficacy. *Family Relations*, 50, 230-238.
- 24) EYSENCK, Hans Jürgen (1972). *Know your own personality*. London: Penguin Books, 1991.
- 25) FOLKMAN, Susan, LAZARUS, Richard S., GRUEN, R. J. and DeLONGIS, A. (1986). Appraisal, coping, health status and psychological symptoms. *Journal of Personality and Social Psychology*, 50, 571-579.
- 26) FRANKL, Viktor (1959). *Man's Search for Meaning*. Hodder & Stoughton.
- 27) FRANKL, Viktor (1965). *The Doctor and the Soul*. Alfred A. Knopf.
- 28) FRANKL, Viktor (1967). *Psychotherapy and Existentialism*. Washington Square Press.
- 29) FRANKL, Viktor (1969). *The Will to Meaning*. World Publishing.
- 30) FRANKL, Viktor (1978). *The Unheard Cry for Meaning*. Simon & Schuster.

- 31) FRIEDMAN, Meyer and ROSEMAN, Ray F. (1974). *Type A behaviour and your heart*. New York: Knopf.
- 32) GADZELLA, Bernadette M. (1991). *Student-life Stress Inventory (SLSI)*. Copyright, Commerce, Texas, Author.
- 33) GADZELLA, Bernadette M. (1994). Student-life stress Inventory: Identification of reactions to stressors. *Psychological Reports*, 74, 395-402.
- 34) GADZELLA, Bernadette M. (2001). Confirmatory factor analysis and Internal consistency of the Student-life stress Inventory. *Journal of Instructional Psychology*, 28, 84-95.
- 35) GERDES, Eugenia Proctor and PING, Guo (1994). Coping differences between college women and men in China and the United States. *Genetic, Social and General Psychology Monographs*, 120, 169-198.
- 36) GILLIGAN, Carol, LYONS, Nona and HANMER, Trudy (1990). *Making connections: The relational worlds of adolescent girls at Emma Willard School*. Cambridge, MA: Harvard University Press.
- 37) GRUEN, R. J. (1983). Stress and depression: Toward the development of integrative models. In L. Goldberger & S. Breznitz (Eds.), *Handbook of stress: Theoretical and clinical aspects*. New York, NY: Free Press.

- 38) HAMARAT, E. *et al.* (2001). Perceived stress and coping resource availability as predictors of life satisfaction in young, middle-aged, and older adults. *Experimental Aging Research*, 27, (2).
- 39) HARTMANN, E. (1985). Sleep disorders. In H. I. Kaplan & B. J. Sadock (Eds.), *Comprehensive textbook of psychiatry / IV*. Baltimore: Williams & Wilkins.
- 40) HAU, K. T. and SALILI, F. (1991) Structure and semantic differential placement of specific causes: Academic causal attributions by Chinese students in Hong Kong. *International Journal of Psychology*, 52, 44-9.
- 41) HEADY, B. and WEARING, A. (1989). Personality, life events, and subjective well-being: Toward a dynamic equilibrium model. *Journal of Personality and Social Psychology*, 57, 731-739.
- 42) HIGGINS, June E. and ENDLER, Norman S. (1995). Coping, life stress, and psychological and somatic distress. *European Journal of Personality*, 9, 253-270.
- 43) HILL, Reuben, STYCOS, J. Mayone, BACK, Kurt Wolfgang (1959). *The family and population control: a Puerto Rican experiment in social change*. Chapel Hill: University of North Carolina Press, 1959.
- 44) HOLMES, Thomas H. and RAHE, Richard H. (1967). The Social Readjustment Rating Scale (SRRS). *Journal of Psychosomatic Research*, 11, 213-318.

- 45) HUMPHREY, J. N., and HUMPHREY, J. H. (1986). *Coping with stress in teaching*. New York: AMS.
- 46) JENNISON, K. M. (1992). The impact of stressful life events and social support on drinking among older adults: A general population survey. *International Journal of Aging and Human Development*, 35, 99-123.
- 47) KENNEY, J. W. (2000). Women's 'inner-balance': a comparison of stressors, personality traits and health problems by age groups. *Journal of Advanced Nursing*, 31 (3), 639-651.
- 48) LAKEIN, Alan (1996). *How to Get Control of Your Time and Your Life*. New American Library.
- 49) LAZARUS, Richard S. and FOLKMAN, Susan (1984). *Stress, Appraisal, and Coping*. Springer, New York.
- 50) LAZARUS, Richard S. and FOLKMAN, Susan (1987). Transactional theory and research on emotions and coping. *European Journal of Personality*, 1, 141-169.
- 51) LAU, Patrick Siu Ying. (2002). *Teacher burnout in Hong Kong secondary schools*. A PhD dissertation of The Chinese University of Hong Kong. Hong Kong: The Chinese University of Hong Kong.
- 52) LEWIN, Kurt (1935). *A dynamic theory of personality*. New York: McGraw-Hill.

- 53) LUSHINGTON, Kurt and LUSCRI, Giuseppa (2001). Are Counselling Students Stressed? A Cross-cultural Comparison of Burnout in Australian, Singaporean and Hong Kong Counselling Students. *Asian Journal of Counselling, Vol. 8 No. 2*, 209 – 232.
- 54) LESTER, N., NEBEL, L. E. and BAUM, A. (1994). Psychophysiological and behavioural measurement of stress: Applications to mental health. In W. R. Avison & I. H. Gotlib (Eds.), *Stress and mental health: Contemporary issues and prospects for the future*. New York, NY: Plenum Press.
- 55) LLOYD, C., ALEXANDER, A. A., RICE, D. G. and GREENFIELD, N. S. (1980). Life events as predictors of academic performance. *Journal of Human Stress*, 6(3), 15-26.
- 56) LO, R. (2002). A longitudinal study of perceived level of stress, coping and self-esteem of undergraduate nursing students: an Australian case study. *Journal of Advanced Nursing*, 39, (2), 119-126.
- 57) LOCKE, S. E., HURST, M. W., HEISEL, S. J., KRAUS, L. and Williams, M. (1979). The influence of stress and other psychological factors on human immunity. Paper presented at the American Psychosomatic Society Annual Meetings, Dallas, TX, March, 1979.
- 58) LYNESS, S. A. (1993). Predictors of differences between Type A and Type B

individuals in heart rate and blood pressure reactivity. *Psychological Bulletin*, 114, 266-295.

59) MALATESTA, V. J. and ADAMS, H. E. (1984). The sexual dysfunctions. In H. E. Adams & P. B. Sutker (Eds.), *Comprehensive handbook of psychopathology*. New York, NY: Plenum.

60) MALLINCKRODT, Brent and LEONG, Frederick T. L. (1992). Social support in academic programs and family environments: Sex differences and role conflicts. *Journal of Counselling and Development*, 70, 716-723.

61) McNERNEY, W. J. (1974). *Stress*. Chicago, IL: Blue Cross Association.

62) MILLER, Neal E. (1944). Experimental studies of conflict. In J. M. Hunt (Ed.), *Personality and the behaviour disorders (Vol. 1)*. New York: Ronald.

63) MILLER, Neal E. (1959). Liberalization of basic S-R concepts: Extension to conflict behaviour, motivation, and social learning. In S. Koch (Ed.), *Psychology: A study of a science (Vol. 2)*. New York: McGraw-Hill.

64) MISRA, Ranjita and McKEAN, Michelle (2000). College students' stress and its relation to their anxiety, time management, and leisure satisfaction. *American Journal of Health Studies*, 16, 11-115.

65) NOWICKI, Stephen and DUKE, Marshall P. (1974). A locus of control scale for

noncollege as well as college adults. *Journal of Personality Assessment*, 38, 136-137.

- 66) PARKES, Katherine R. (1984). Locus of control, cognitive appraisal, and coping in stressful episodes. *Journal of Personality and Social Psychology*, 46, 655-668.
- 67) PIERCE, Gregory R., SARASON, Irwin G. and SARANON, Barbara R. (1996). Coping and social support. In M. Zeidner and N. S. Endler (Ed.), *Handbook of coping: Theory, research, applications*. (Pages 434-451). New York, NY: John Wiley & Sons.
- 68) PORTER, Laura S., MARCO, Christine A., SCHWARTZ, Joseph E., NEALE, John M., SHIFFMAN, Saul and STONE, Arthur A. (2000). Gender differences in coping: A comparison of trait and momentary assessments. *Journal of Social and Clinical Psychology*, 19(4), 480-498.
- 69) RAHE, R. H. and ARTHUR, R. H. (1978). Life change and illness studies. *Journal of Human Stress*, 4(1), 3-15.
- 70) ROCHA-SINGH, Indra A. (1994) Perceived stress among graduate students: Development and validation of the Graduate Stress Inventory (GSI). *Educational and Psychological Measurement*, 54(3), 714-727.
- 71) ROSS, Randall R., and ALTMAIER, Elizabeth M. (1994). *Intervention in occupational stress: a handbook of counselling for stress at work*. London: SAGE.
- 72) ROTTER, Julian B. (1966). Generalized expectancies for internal versus external

control of reinforcement. *Psychological monographs: general and applied*, 80 (1), 609.

- 73) SELIGMAN, Martin E. P. (1974). Depression and learned hopelessness. In R. J. Friedman & M. M. Katz (Eds.), *The psychology of depression: Contemporary theory and research*. New York, NY: Wiley.
- 74) SELIGMAN, Martin E. P. (1983). Learned hopelessness. In E. Levitt, B. Rubin, & J. Brooks (Eds.), *Depression: Concepts, controversies and some new facts*. Hillsdale, N. J.: Erlbaum.
- 75) SELYE, Hans (1936). A syndrome produced by diverse nocuous agents. *Nature*, 138, 32.
- 76) SELYE, Hans (1946). The general adaptation syndrome. *Journal of Clinical Endocrinology, Baltimore*, 6, 177.
- 77) SELYE, Hans (1950). *The Physiology and Pathology of Exposure to Stress: a Treatise Based on the Concepts of the General-Adaptation Syndrome and the Diseases of Adaptation*. Montreal: Acta Incorporated Medical Publishers.
- 78) SELYE, Hans (1953). *Einführung in die Lehre vom Adaptionssyndrom*. Thieme: Stuttgart.
- 79) SELYE, Hans (1956). *The stress of life*. New York, NY: McGraw-Hill.

- 80) SELYE, Hans (1971). *Hormones and resistance*. Heidelberg, New York: Springer.
- 81) SELYE, Hans (1974). *Stress without Distress*. Sevenoaks: Hodder & Stoughton.
- 82) SELYE, Hans (1976). *The stress of life* (Revised Edition). New York, NY: McGraw-Hill.
- 83) SELYE, Hans (1982). History and Present Status of the Stress Concept. In Goldberger, G. and Breznitz, S. (Eds.) , *Handbook of Stress: Theoretical and Clinical Aspects*. New York: Free Press.
- 84) SMITH, J. C. (1993). Personality and Illness. In J. C. Smith (1993), *Understanding stress and coping*. New York, NY: Macmillan.
- 85) SPRING, B. (1989). Stress and schizophrenia: Some definitional issues. In T. W. Miller (Ed.), *Stressful life events*. Madison, CT: International Universities Press.
- 86) STROBER, M. (1989). Stressful life events associated with bulimia in anorexia nervosa: Empirical findings and theoretical speculations. In T. W. Miller (Ed.), *Stressful life events*. Madison, CT: International Universities Press.
- 87) TAYLOR, Shelly E. and BROWN, Jonathon D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, 103, 193-210.

- 88) TAYLOR, Shelly E. and BROWN, Jonathon D. (1994). Positive illusions and well-being revisited: Separating fact from fiction. *Psychological Bulletin*, 116, 21-27.
- 89) Terman, Lewis M. (1925). *Genetic studies of genius: Volume 1. Mental and physical traits of a thousand gifted children*. Stanford, CA: Stanford University Press.
- 90) Terman, Lewis M. and Oden, M. H. (1959). *Genetic studies of genius: Volume 5. The gifted group at mid-life*. Stanford, CA: Stanford University Press.
- 91) Van Meter, M. J. and Agronow, S. J. (1982). The stress of multiple roles: the case for role strain among married college women. *Family Relations*, 31, 131-138.
- 92) Weaver, R. C. and Rodnick, J. E. (1986). Type-A behaviour: Clinical significances, evaluation, and management. *Journal of Family Practice*, 23(3), 255-261.
- 93) Weiner, B. (1986). *Human Motivation*. New York, NY: Holt, Rinehart & Winston.
- 94) Yerkes, Robert M. and Dodson, John D. (1908). The Relation of Strength of Stimulus to Rapidity of Habit-Formation. *Journal of Comparative Neurology and Psychology*, 18, 459-482.

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APPENDIX: Questionnaire

Consent Form

Dear Miss Wong See-yan,

I agree to participate in this survey.

Signature: _____

Name (In Block Letters): _____

Contact Number (Optional): _____



Stress and Coping in Graduate Students

The rapid changes in modern work-place environments often place demands on employees to undertake post-graduate study to upgrade qualifications and increase skills. These post-graduate students are often faced with the task of juggling between the completing demands of study, work, family and social obligations which are likely to increase stress levels.

While there has been some research done on stress associated with university study in undergraduate students, the study of stress in graduate students has been largely neglected. This study seeks to address the deficiency in the research by focusing on stress associated with post-graduate study in individuals who are largely juggling between competing commitments. Individual coping strategies, as well as personal and social factors that may buffer the stress will also be examined.

If you agree to participate, you will be asked to complete an anonymous questionnaire containing three scales and a total of 120 items. The questionnaire will take approximately twenty minutes to complete. All responses will be anonymous and no information that can lead to identification of any individual will be released. You are free to withdraw your participation at any time.

All information collected will be kept for 7 years in a locked storage room in the School of Psychology, at the University of South Australia.

If you have any further questions concerning this study you may call the principle



investigator on the following member Ms Josie Luscri +Aust (08) 83022441 or email josie.luscri@unisa.edu.au and Dr Kurt Lushington +Aust (08) 82227742 or email kurt.lushington@unisa.edu.au . Should you wish to talk to an independent person not involved in the project concerning the ethics of the project, you can contact Ms Eimear Muir-Cochrane of The University of South Australia Human Ethics Committee on +Aust (08) 83026611 or email eimear.muir-cochrane@unisa.edu.au .

Thank you for your interest and participation.

Ms Josie Luscri and Dr Kurt Lushington

Stress-Life Stress Inventory

To respond to the statements below circle the number that corresponds to your experience using the following scale:

1	2	3	4	5
Never	Seldom	Occasionally	Often	Most of the time

I. STRESSORS

A. As a student (*Frustrations, Possible scores 7-35*)

1. I have experienced frustrations due to delays in reaching my goals. 1 2 3 4 5
2. I have experienced daily hassles, which affected me in reaching my goals. 1 2 3 4 5
3. I have experienced lack of resources (money for car, books, etc.). 1 2 3 4 5
4. I have experienced failures in accomplishing the goals that I set. 1 2 3 4 5
5. I have not been accepted socially (became a social outcast). 1 2 3 4 5
6. I have experienced dating / relationship frustrations. 1 2 3 4 5
7. I feel I was denied opportunities in spite of my qualifications. 1 2 3 4 5

B. I have experienced conflicts which were (*Conflicts, Possible scores 3-15*)

8. Produced by two or more desirable alternatives. 1 2 3 4 5
9. Produced by two or more undesirable alternatives. 1 2 3 4 5
10. Produced when a goal had both positive and negative alternatives.

C. I experienced pressures (*Pressures, Possible scores 4-16*)

11. As a result of competition (on grades, work, relationships with spouse and/or friends).	1	2	3	4	5
12. Due to deadlines (papers due, payments to be made, etc).	1	2	3	4	5
13. Due to an overload (attempting too many things at one time).	1	2	3	4	5
14. Due to interpersonal relationships (family and / or friends, expectations, work responsibilities).	1	2	3	4	5
D. I have experienced (<i>Changes, Possible scores 3-15</i>)					
15. Rapid unpleasant changes.	1	2	3	4	5
16. Too many changes occurring at the same time.	1	2	3	4	5
17. Change which disrupted my life and / or goals.	1	2	3	4	5
E. As a person (<i>Self imposed, Possible scores 6-30</i>)					
18. I like to compete and win.	1	2	3	4	5
19. I like to be noticed and be loved by all.	1	2	3	4	5
20. I worry a lot about everything and everybody.	1	2	3	4	5
21. I have a tendency to procrastinate (put off things that have to be done).	1	2	3	4	5
22. I feel I must find perfect solution to the problems I undertake.	1	2	3	4	5
23. I worry and get anxious about taking tests.	1	2	3	4	5

1	2	3	4	5
Never	Seldom	Occasionally	Often	Most of the time

II. REACTIONS TO STRESSORS

F. During stressful situations, I have experienced the following

(Physiological, Possible scores 14-70)

24. Sweating (sweaty palm, etc).	1	2	3	4	5
25. Stuttering (not being able to speak clearly).	1	2	3	4	5
26. Trembling (being nervous, biting fingernails, etc).	1	2	3	4	5
27. Rapid movements (moving quickly, from place to place).	1	2	3	4	5
28. Exhaustion (worn out, burned out).	1	2	3	4	5
29. Irritable bowels, peptic ulcers, etc.	1	2	3	4	5
30. Asthma, bronchial spasm, hyperventilation.	1	2	3	4	5
31. Backaches, muscle tightness (cramps), teeth-grinding.	1	2	3	4	5
32. Hives, skin itching, allergies.	1	2	3	4	5
33. Migraine headaches, hypertension, rapid heartbeat.	1	2	3	4	5
34. Arthritis, over-all pain.	1	2	3	4	5
35. Viruses, cold flu.	1	2	3	4	5
36. Weight loss (can't eat).	1	2	3	4	5
37. Weight gain (eat a lot).	1	2	3	4	5

G. When under stressful situations, I have experienced *(Emotional,*

Possible scores 4-20)

38. Fear, anxiety, worry.	1	2	3	4	5
39. Anger.	1	2	3	4	5
40. Guilt.	1	2	3	4	5
41. Grief, depression.	1	2	3	4	5

H. When under stressful situations, I have *(Behavioural, Possible*

<i>scores 8-40)</i>					
42. Cried.	1	2	3	4	5
43. Abused others (verbally and / or physically).	1	2	3	4	5
44. Abused self (used drugs, etc).	1	2	3	4	5
45. Smoked excessively.	1	2	3	4	5
46. Was irritable towards others.	1	2	3	4	5
47. Attempted suicide.	1	2	3	4	5
48. Used (psychological) defense mechanisms.	1	2	3	4	5
49. Separated myself from others.	1	2	3	4	5
I. With reference to stressful situations, I have <i>(Cognitive, Possible</i>					
<i>scores 2-10)</i>					
50. Thought about and analyzed how stressful the situations were.	1	2	3	4	5
51. Thought and analyzed whether the strategies I used were most effective.	1	2	3	4	5

Coping Inventory for Stressful Situations

Instructions: The following are ways people react to various difficult, stressful, or upsetting situations. Please circle a number from 1 to 5 for each item. Indicate how much you engage in these types of activities when you encounter a difficult, stressful, or upsetting situation.

	Not at all Very Much				
1. Schedule my time better.	1	2	3	4	5
2. Focus on the problem and see how I can solve it.	1	2	3	4	5
3. Think about the good times I've had.	1	2	3	4	5
4. Try to be with other people.	1	2	3	4	5
5. Blame myself for putting things off.	1	2	3	4	5
6. Do what I think is best.	1	2	3	4	5
7. Become preoccupied with aches and pains.	1	2	3	4	5
8. Blame myself for having gotten into this situation.	1	2	3	4	5
9. Window shop.	1	2	3	4	5
10. Outline my priorities.	1	2	3	4	5
11. Try to go to sleep.	1	2	3	4	5
12. Treat myself to a favourite food or snack.	1	2	3	4	5
13. Feel anxious about not being able to cope.	1	2	3	4	5
14. Become very tense.	1	2	3	4	5
15. Think about how I solved similar problems.	1	2	3	4	5
16. Tell myself that it is really not happening to me.	1	2	3	4	5
17. Blame myself for being too emotional about the situation.	1	2	3	4	5
18. Go out for a snack or meal.	1	2	3	4	5
19. Become very upset.	1	2	3	4	5

20. Buy myself something.	1	2	3	4	5
21. Determine a course of action and follow it.	1	2	3	4	5
22. Blame myself for not knowing what to do.	1	2	3	4	5
23. Go to a party.	1	2	3	4	5
24. Work out to understand the situation.	1	2	3	4	5
25. "Freeze" and not know what to do.	1	2	3	4	5
26. Take corrective action immediately.	1	2	3	4	5
27. Think about the event and learn from my mistakes.	1	2	3	4	5
28. Wish that I could change when had happened or how I felt.	1	2	3	4	5
29. Visit a friend.	1	2	3	4	5
30. Worry about what I am going to do.	1	2	3	4	5
31. Spend time with a special person.	1	2	3	4	5
32. Go for a walk.	1	2	3	4	5
33. Tell myself that it will never happen again.	1	2	3	4	5
34. Focus on my general inadequacies.	1	2	3	4	5
35. Talk to someone whose advice I value.	1	2	3	4	5
36. Analyze my problem before reacting.	1	2	3	4	5
37. Phone a friend.	1	2	3	4	5
38. Get angry.	1	2	3	4	5
39. Adjust my priorities.	1	2	3	4	5
40. See a movie.	1	2	3	4	5
41. Get control of the situation.	1	2	3	4	5
42. Make an extra effort to get things done.	1	2	3	4	5
43. Come up with several different solutions to the problem.	1	2	3	4	5



44. Take some time off and get away from the situation.	1	2	3	4	5
45. Take it out on other people.	1	2	3	4	5
46. Use the situation to prove that I can do it.	1	2	3	4	5
47. Try to be organized so I can be on top of the situation.	1	2	3	4	5
48. Watch TV.	1	2	3	4	5
	Not at all		Very Much		

Adult Nowickie-Strickland Internal-External Control Scale (ANS-IE) – Short Form

Here are some questions about certain situations that you see happening around you every day. There are no right or wrong answers. If you **agree**, circle **YES**. If you **don't agree**, circle **NO**. Please make sure you do this for each question.

1. Do u believe that most problems will solve themselves if you just do not fool with them?	YES	NO
2. Are you often blamed for things that just are not your fault?	YES	NO
3. Do you feel that most of the time it does not pay to try hard because things never turn out right anyway?	YES	NO
4. Do you feel that most of the time parents listen to what their children have to say?	YES	NO
5. When you get punished does it usually seem it's for no good reason at all?	YES	NO
6. Most of the time do you find it hard to change a friend's (mind) opinion?	YES	NO
7. Do you feel that it was nearly impossible to change your parent's mind about anything?	YES	NO
8. Do you feel that when you do something wrong there is little you can do to make it right?	YES	NO
9. Do you believe that most people are just born good at sport?	YES	NO
10. Do you feel that one of the best ways to handle most problems is just not to think about them?	YES	NO
11. Do you feel that when a person your age is angry with you, there is little you can do to stop him or her?	YES	NO

12. Have you felt that when people were angry with you it was usually for no reason at all?	YES	NO
13. Most of the time, do you feel that you can change what might happen tomorrow by what you do today?	YES	NO
14. Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them?	YES	NO
15. Most of the time do you find it useless to try to get your own way at home?	YES	NO
16. Do you feel that when somebody your age wants to be your enemy there is little you can do to change matters?	YES	NO
17. Do you usually feel that you have little to say about what you get to eat at home?	YES	NO
18. Do you feel that when someone does not like you there's nothing you can do about it?	YES	NO
19. Did you usually feel that it was almost useless to try in school because most other children were just plain smarter than you are?	YES	NO
20. Are you the kind of person who believes that planning ahead makes things turn out better?	YES	NO
21. Most of the time, do you feel that you have little to say about what your family decides to do?	YES	NO

**Stress and Coping Questionnaire****Data Sheet**

Finally we would like to ask you for some information about yourself.

1. Your gender? (circle one)	M F 1 2
2. What is your age in years?	
3. What is your present occupation? (please give a title and description of your role)	
4. What is your employment status?	1. Unemployment 2. Part-time work 3. Full-time work
On average how many hours do you work in a _____ Hours week?	
5. What is your marital status (please circle one)?	1. Married 2. Never married 3. Divorced 4. Separated 5. Widowed Other (please state below)
Do you have children living with you?	1. Yes



(Please circle one)	2. No
6. <i>Perceived Social Support</i>	Not at all Very Much
When you have a problem how much support do u	_____ _____ _____ _____ _____
feel you usually get from people close to you (such	0 1 2 3 4 5
as family, friends or colleagues)?	
(circle one)	

7. What do you consider to be your <u>main</u> ethnic identity?	1. Chinese 2. Malay 3. Indian 4. Anglo Saxon 5. South European 6. North European Other (Please state below)
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Student Life Stress Inventory Scores

A	B	C	D	E	F	G	H	I	Total

Coping Inventory for Stressful Situations Scores

Task	Emotion	Avoidance	Distraction	Social Diversion

Adult Nowickie-Strickland Internal-External Control Scale

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**Handout: Instructions for Scoring of the three Measures****Student Life Stress Inventory****Sections A to H**

Work out the total for each section by summing the numbers you circled for each items in that sections.

You will have a separate total for each section (Section A to H).

For example:

To get the total for Section A you add up the numbers you circled for items 1, 2, 3, 4, 5, 6, & 7;

To get the total for Section B you add up the numbers you circled for items 8, 9, & 10.

Continue in this way until you have a total for each of the sections.

Write each total in the relevant boxes on the Data Sheet.

Section I

For this session you need to reverse the scores (1=5, 2=4, 3=3, 4=2, 5=1). This means that if you circled the number 1 for an item you give yourself a score 5 for that item, if you circled the number 2 you give yourself a 4 for that item and so on.

After you have reserved the scores add up the new scores and write the total in the box labeled I on that Data Sheet.

Coping Inventory for Stressful Situations

This measure yields 5 sub-scales (Task, Emotion, Avoidance, Distraction, Social Diversion). To get the total for each sub-scale transfer your answer to the corresponding blank space on the Scoring sheet provided with this handout. Sum the ratings for each column to get the total for the sub-scale.

The items for each sub-scale are as follows.

Task: Items 1, 2, 6, 10, 15, 21, 24, 26, 27, 36, 39, 41, 42, 43, 46, 47. (Possible scores 16-80)

Emotion: Items 5, 7, 8, 13, 14, 16, 17, 19, 22, 25, 28, 30, 33, 34, 38, 45. (Possible scores 16-80)



Avoidance: Items 3, 4, 9, 11, 12, 18, 20, 23, 29, 31, 32, 35, 37, 40, 44, 48. (Possible scores 16-80)

Distraction: Items 9, 11, 12, 18, 20, 40, 44, 48. (Possible scores 8-40)

Social Diversion: Items 4, 29, 31, 35, 37. (Possible scores 5-25)

Enter the scores for each sub-scale in the relevant boxes on the Data Sheet.

Adult Nowickie-Strickland Internal-External Control Scale

Items: 4, 13, 20.

For the above items give yourself a 1 point for each **NO** answer and a 0 for a **YES** answer.

Items: 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 21.

For the above items allocate 1 point for each **YES** answer and a 0 for a **NO** answer.

Add up all the 1s to get a total.

Enter the total in the relevant box on the data sheet.

Coping Inventory for Stressful Situations – Scoring sheet

Transfer your answers to the blank spaces on this sheet. To get the total for each sub-scale, sum the ratings for each column.

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46					
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48					
	Task	Emotion	Avoidance	Distraction	Social Diversion



Author Note

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