STRESS MANAGEMENT AND HEALTH PROMOTION BEHAVIOURS IN YOUNG MEN IN TERTIARY EDUCATION SETTINGS

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Student Declaration

"I, Mr. Nikom Moonmuang, declare that the thesis entitled "*Stress management and health promotion behaviors in young men in tertiary education settings"* is no more than 100,000 words in length, exclusive of tables, figures, appendices and references. This thesis contains no material, which has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work."

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Abstract

The concept of stress has been identified as being a major protagonist of ill health and poor sense of wellbeing amongst all ages groups. For example stress has been identified as being a strong correlate of anxiety and school refusal in primary aged children; depression, suicidal ideation and physical malaise in adolescents and poor general health (i.e., colds, headaches, pain and sensitivity, depression, suicidal ideation, cardiac events, stroke etc.) in older groups. One group which has been identified as being particularly vulnerable to high levels of stress is male tertiary students. The identified increase in stress amongst this population has been purportedly associated to the ever increasing demands and extra pressures that are placed on young men in relation to tertiary education. The purpose of this study was to test the relationships among stress and specificity of academic concerns amongst tertiary males. The current study sought to elucidate what were the particular avenues of concern which resulted in high levels of stress amongst these young men. Moreover, in order to extrapolate information on how best to address stress related concerns amongst these young men, a secondary purpose of the study was to examine the health-promoting behaviors utilized by young men, and identify areas which may be pertinent to future educational and clinical intervention and health promotion programs. The participants for this study comprised a cohort of 226 male students from four universities in Melbourne. The theoretical framework for this study was Pender's health-promotion model and Lazarus' stress adaptation model. Instrumentation included the Health-Promoting Lifestyle Profile II (HPLP II) and the Daily Stress Inventory (DSI).

Only two demographic factors, nationality and language spoken at home, were found to differentiate between levels of stress and impact. Students from non-Australian backgrounds and non-English speaking homes were found to report significantly more stress events in their daily lives. They were also found to report these events had a higher impact on them than Australian and English speaking students. Male students in the current study were also found to report a higher level of stressful events and greater sense of impact comparable to the normative data. The major factors identified by these young men were varied stressors and environmental hassles. Whilst issues such as academic stress associated with specific academic issues examinations and assessment were cited as sources of stress, these students also indicated that many sources of stress were also related to self imposed or other influenced pressures such as pressure to succeed, future career concerns, frustration over services, status and financial concerns were also major sources of stress which impacted on them strongly.

Analysis indicated that there are two factors related to health-promoting behaviors namely cognitive/emotional and physical health-promoting behaviors. The results also indicated that there was an inverse relationship between increases in the reported experience of stress and health-promoting behaviors, such that those young men who engaged in positive health-promoting behaviors, such as exercise, good nutrition, expression of emotions and social collaboration, were less likely to report a high incidence of impact from sources of stress. Of particular importance, a small proportion of students who reported higher impact of stress also reported having engaged in suicidal ideation. Interestingly, a majority of the stresses reported by students were not specific to academic life; rather they emanated from interpersonal dysfunction, specifically familial

disruption and intimate relationship breakdown. Similarly, several behavioral methods identified as coping mechanisms, such as alcohol use, cigarette smoking and drug ingestion, by these young men, whilst considered normative behavior, are in-fact contributing to their current identified stressful experiences.

The outcomes of the current study indicate that whilst attention needs to be placed on the promotion of study and academic related skills, young men require additional educational and social support in developing health promotion behaviors which are not deleterious, such as good nutrition, exercise, communication, and interpersonal skills. Ideologically the emphasis should be placed on prevention where possible, however the outcomes of the current study indicate that the majority of these issues are not specific to the individual but require a broader application of health promotion behavior across the community. Ongoing counseling throughout the education years is desirable, as are various programs, which address student concerns in relation to their tertiary studies. Similarly, more public health promotion is required in order to address specific issues related to interpersonal, gendered and in particular familial issues, which appear to be a major source of stress for these young men.

Introduction and background

1.1 Background

The concept of stress has been identified as a major syndrome of modern society. Even though some stress is helpful for individuals in meeting new challenges, persistently high and unrelieved stress can lead to psychological, physical, and behavioral ill health. Physical stress is primarily concerned with one's biological responses to an event; psychological stress focuses on one's cognitive and affective responses to the evaluation of threat, whilst social stress focuses on the resultant disruption of one's social system following an event. A high level of stress has been recognized as a predictor of depression and suicidal ideation in young people (Dixon, Heppner, Burnett, & Lips, 1993). Similarly, whilst physical ill health is caused by many factors, stress has also been found to be strongly associated with the onset of illness and perceived or actual deterioration in well-being (e.g. Byrne, 2000; Hong & Chongde, 2003; Reynolds, O'Koon, Papademetriou, Szczygiel, & Grant, 2001; and Sordi, 2004). Stress has been reported to lead to the development of negative affect and a reduction in psychological well-being (e.g. Beasley, Thompson, & Davidson, 2002; Lange & Byrd, 1998). In terms of behavioral and social stress systems, it appears that stressful experiences motivate individuals to engage in a variety of behavioral methods, many of which are considered to be negatively motivated.

Stress has also been found to contribute to physical illness, such as chronic illness and a decrease in immune functioning (Rawson, Bloomer & Kendall, 2001). In the short-term, stress affects the sympathetic nervous system leading to behavior change, including increased arousal and alertness (McNamara, 2000). With long-term exposure to stress, an

individual's eating, sleeping, drinking, smoking, physical activity and social functioning can be disrupted. Stress-related behavioral change includes risk-taking sexual activity, risky driving, antisocial behavior, and educational failure.

In the last two decades, many reports have indicated that the level of stress in young people is increasing dramatically (Hunter, 1999; McNamara, 2000; Moon, Meyer, & Grau, 1999). Recent research indicates that stress is highly prevalent in our adolescent and young adult populations. Current data (i.e. McNamara, 2000) indicated that 1 in 4 young men in the United States (US) are at serious risk of developing stress disease related illness. Fletcher, Higginbotham, and Dobson (2002) studied men's perceived health needs in Newcastle, Australia and found that the highest prevalence of felt needs for men was stress. Dinan (2001) reported that male university student with depression have an increased risk of coronary artery disease. As noted by McNamara (2000), one factor that makes young people highly prone to heightened stress levels is rapid changes in their physiological state, (e.g. biological and hormonal changes). Similarly pressure emanating from social change (e.g. increasing youth unemployment, career choices, and education) can impact strongly on the young person's sense of wellness and add to their stress levels. According to Heaven (1996), it is now widely accepted that the period of adolescence is stressful. It is a period when there is a serious risk of developing stress-related illness. It is a period when many psychosocial factors have the potential to severely disrupt their sense of wellbeing, their psychological adjustment and physical health. Heaven described adolescence and early adulthood as a time of 'storm and stress,' because it was a time of emotional turmoil and major change in all areas of functioning.

One population of adolescent, young adult groups, which has been identified as experiencing high levels of stress, is tertiary students. A study from Edwards, Hershberger, Russell, and Markert (2001) found that 30 per cent of the undergraduate students in Canada reported elevated psychological distress. Jameson and Jon (1996) found that an increased level of stress in university students had serious implications in relation to the students' academic performance, interpersonal relationships, and social activities. Gacad and Babiera (2002) point out that high level of stress will lead to low health promoting behaviors. This was particularly so if the student had a less well developed ability to resolve stressful life events when they arose. Many types of reasons have been proposed to account for the sex differences in health. Fourteen per cent of young people in Australia have mental health problems (Sawyer et al., 2000). Overall young men have a higher prevalence of mental health problems than young women by approximately 2:1 (Raphael & Martinek, 1996). In Australia and New Zealand, young men have one of the highest suicide rates in the world with a rate 4.2 times higher than young women (Australian Bureau of Statistic; ABS, 2000; Laws, 1998). The overall mortality rate for young men aged 15-24 yearly is nearly three times that of young women (ABS, 2000). Men in general are four times more likely to commit suicide than women, but in the 15-24 years age group men are five times more likely than women to commit suicide (ABS, 1994, 2000).

Martinelli (1999) indicated that during the tertiary education time, young men students would be confronted with situational and environmental influences that can impact on their entire adult life. Although majority of the studies indicated that females experienced higher stress levels than males, a study by Ranjina, Michaelle, Sarah, and

Tony (2000) showed that females perceived they had control of their time, set and prioritized goals, planned, and had a more organized approach to their studies than males. To date the research indicates that there is an increasing incident rate of stress in male university students (Deckro et al., 2002; Dowdy, 2001; Fagan, 1994; Lindop, 1999; Sax, 1997). A study by Day and Livingstone (2003) showed that females indicated that when they perceived stressful, they would turn to their partner and friends to a greater extent than men would. Females also reported that they would seek emotional support to a great degree than did man (Day & Livingstone, 2003; Renk & Creasey, 2003). Jon et al. (2000) reported that when young men in tertiary education settings experienced stress, they often resorted to drinking alcohol in order to relieve their stress. When they used alcohol in this context, their behaviors were not only a concern to themselves but were potentially harmful to others because they were more likely to engage in violent behavior and sexual assault. A Study from Lightsey and Hulsey (2002) showed that when non impulsive male university students with emotion-focused coping have high stress conditions, they were most likely to result in gambling.

To date, there is little understanding of the specific needs of young tertiary males in relation to other levels of stress. Of concern, whilst the literature does indicate the increasing prevalence of stress in young males within tertiary settings, little is known about the specific causes of this phenomenon. Moreover there has been limited research conducted into the development of an understanding of how to proactively work towards reducing the negative impact of life events on young men in order to reduce engagement in negative health promoting behaviors and improving their biopsychosocial wellbeing. It is by understanding how the individual perceives stress, the specific factors which

produce stress and the motivational behavior associated with coping with stress that we will have a stronger basis from which to develop appropriate preventative and intervention strategies. The purpose of the current study is to address these issues. Specifically the current study proposes that by developing a framework for understanding the specificity of stress as it relates to young men in tertiary education, and the relationship of this to health promotion behaviors, we will be more able to initiate proactive educational and social changes which can eliminate poor biopsychosocial health amongst this population.

1.2 Conceptual framework of the study

The health promotion model (HPM) is a framework that explores the biopsychosocial process (Gorin & Arnold, 1998). The model used in this research is Pender's Health Promotion (PHPM) framework, (Pender, 1996). This framework is derived from Social Learning theory and the Health Belief Model. PHPM is an attempt to explain the multidimensional nature of one's interaction with their environment in relation to their health and health promotion behaviors. PHPM provides detail about the factors that influence an individual's level of stress. In this framework, Pender identified three central domains: Individual Characteristics and Experiences, Behavior-Specific Cognition and Affect, and Behavioral Outcome, which result in people participating in health-promoting behaviors (refer to figure 1).

As noted by Lazarus and Folkman (1984) the concept of stress has been defined as the relationship between the person and environment that an individuals' perception of an event was a direct result of their cognitive appraisal of the event. Cognitive appraisal is the evaluative process used by the individual to determine why and to what extent a

particular transaction or series of person-environment transactions occur. This concept is in line with the conceptual framework developed by Pender, which focuses on the

Individual Characteristics And Experience	Behavior-Specific Cognition and Affect	Behavioral Outcome

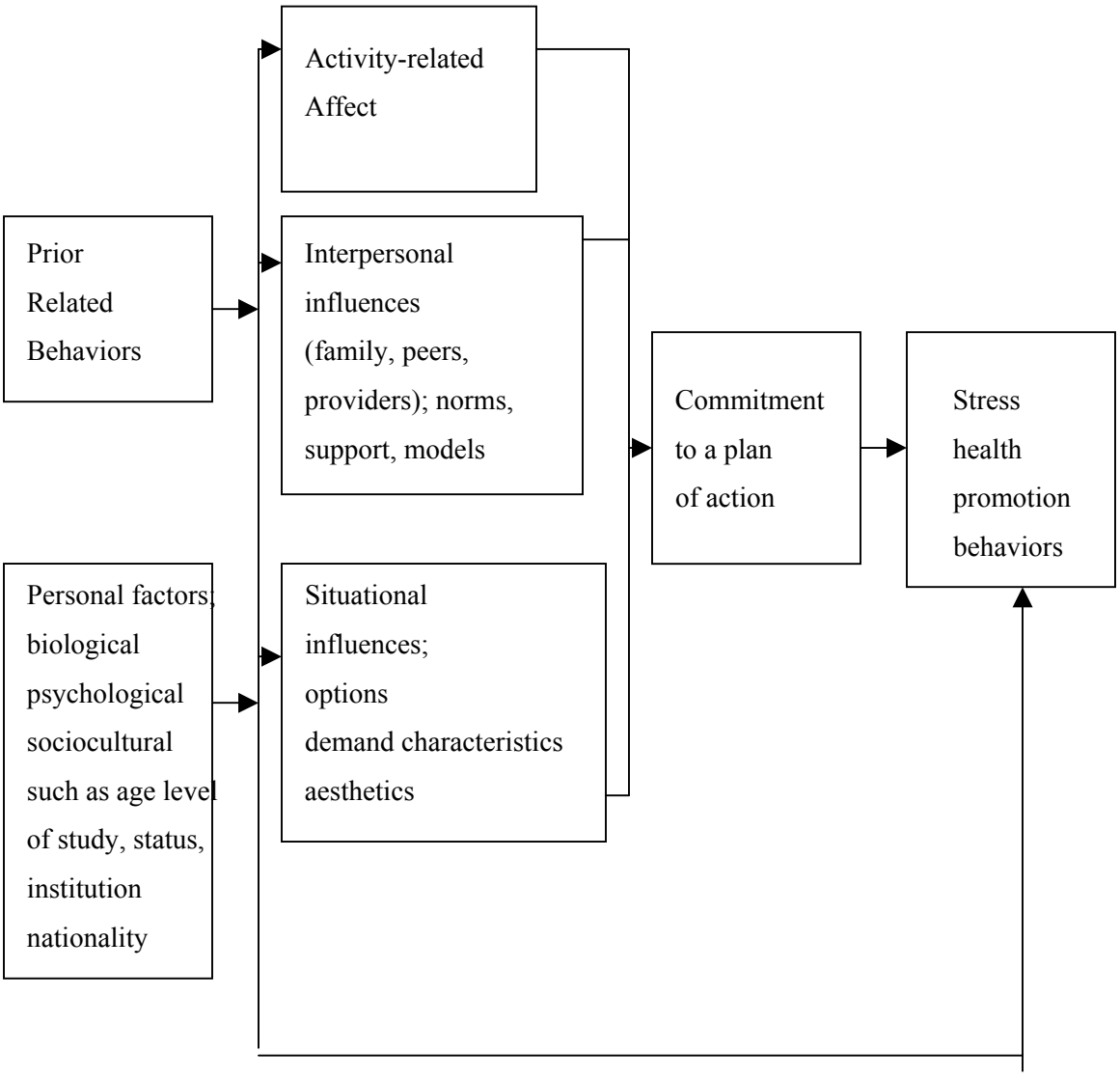

Figure 1 Conceptual framework of the stress health promotion of young people in tertiary education settings.

individuals' interaction with their environment in relation to health. Lazarus and Folkman (1984) stated that the judgment of whether a particular person-environment relationship is stressful depends on the cognitive appraisal by the individual. Lazarus described three types of cognitive appraisals – primary, secondary and reappraisal - that individuals use to evaluate their situation. Primary appraisal is the way they evaluate the situation in relevant to their own values, goal commitments, beliefs about self and the world, and situation intentions.

Secondary appraisal refers to the cognitive-evaluative process in which individuals evaluate their sources about what can be done with a stressful person-environment, particularly when primary appraisal of harm, threat, or challenge happen. Individuals will determine their ability to control or cope with the new situation by examining potential options for dealing with an event, which they judge as potentially stressful. After primary and secondary appraisal has been operationalised, reappraisal will occur. Reappraisal is the process of evaluating the stressful potential of a situation based on new information. The result of this process may resist or nourish the pressures in individuals. This can lead to an increase or decrease in stress. The above concepts and theories provide the framework for the current study. They act as a guide for the design and methodological basis of the study, and offer a perspective for the interpretation of the data.

1.4 Aims and objectives

- To explore the factors that influences the onset and management of stress in male tertiary education students.

- To explore the factors that influences stress health promotion behaviors in male tertiary education students.

This study of stress health promotion in male in tertiary education setting seeks to:

- Investigate the factors that affect the onset and management of stress in young men.
- Examine the health promoting behaviors that young men use to prevent the onset of stress.
- Investigate the health promoting behaviors that young men use to reduce the level of stress.
- Investigate the health promoting behaviors that young men use to help them cope with stress.

1.5 Significance of the study

The literature indicates that young tertiary aged males (i) have a higher morbidity and mortality rate than females, and stress is an important factor in these situations; (ii) engage in fewer health-promotion activities than females; (iii) are less likely to seek medical care than females; and (iv) engage in high risk behaviors to cope with stress.

In recent years, increasing prominence has been given to improving men's health. The outcomes of the current study will draw attention to the ways in which they maintain a healthier lifestyle to cope with, and prevent, stress. A further outcome of this study will be the development of a stress health promotion model that will benefit male tertiary education students by drawing attention to specific factor which are associated with perceived stress and the ways in which they can maintain healthier and less risky lifestyles. The results of the study will also provide valuable information for health

professional in primary health care contexts by offering them a practical framework for promoting the health of young males and tertiary education students; and inform future State and Commonwealth stress health promotion policy in identifying proactive strategies for encouraging positive health promotion in young men in tertiary education settings.

1.6 Contribution to knowledge

The proposed study of health promotion and stress management in male students in tertiary education settings will add to the existing knowledge base of the discipline of Health psychology, specifically in relation to health promotion and stress management. The expected outcomes of this study are to provide health professionals with:

- a detailed basis for designing programs sensitive to young men's needs in health promotion.
- Appropriate planning of health promotion activities related to masculinity as an importance in young men's health

Stress and stress management

Before starting to examine the stress and health promotion behavior of young males in tertiary education settings, it is important to understand what stress and stress management really mean. Hence, the aims of this chapter are to explore the explanations of stress and stress management around the following four foci. Firstly, stress will be defined in terms of its current meaning and conceptualization, as well as its historical situatedness. As stress is a threat to the quality of life, stress-related outcomes are proposed as the setting area for the study. Secondly, a detailed discussion is provided on the coping strategies that help alleviate stress. Thirdly, stress management, as a formal program to prevent stress will be discussed, together with the primary modes of intervention for stress management. Finally, particular stress-related disorders in young men will be discussed.

2.1 The concept of stress

2.1.1 Biological concept of stress

Selye, (1978) proposed that stress was a biological response: “the state manifested by a specific syndrome which consists of all the non-specifically-induced changes within a biologic system” (p.64). Selye (1978) pointed out that a state could be recognized only by its manifestations; for instance, the state of stress by the manifestations of the stress syndrome. He defined stress as an adaptive or defensive reaction to an event or stimulus. He has labeled the defense reaction or body’s response to stress as the General Adaptation Syndrome (G.A.S.), which occurs in three stages: the alarm reaction (A.R.), the alarm resistance (A.R.), and the stage of exhaustion (S.E.). The alarm reaction is a physiological response for alerting the defensive forces in the organism. In this stage,

blood is diverted toward the skeletal muscles in order to prepare them for action. If the stress exposure remains, the stage of resistance or adaptation will follow. According to Selye, this stage is quite different or sometimes the opposite of the alarm reaction. The longer this stage lasts the greater the danger to the person. If an individual accepts the source of stress as a necessary part of life, the stressor may persist indefinitely. The person then gradually becomes more susceptible to a wide range of stress-related problems and diseases, such as headaches, hypertension, and cardiovascular disease (Magill, 1993).

With long-term stress exposure, the individual will enter into the third stage, the stage of exhaustion. If the stressor is extremely intense and persists over a long period of time, the exhaustion stage sets in, and the risk of emotional and physical problems increases. In this stage, the individual experiences symptoms of exhaustion, such as loss of morale and feelings of loss of control (Rice, 1999), and a final collapse will occur.

In Selye's system, the precise nature of the source of stress is unimportant, as the physiological stress response does not depend on the nature of the stressor. Selye believed that if the event is stressful for individuals, the individuals' bodily reaction remains the same as the G.A.S stage. His opinion largely ignored psychosocial factors however, including the emotional component as well as individual interpretation of stressful events.

2.1.2 Cognitive concept of Stress

In contrast to the biological response definition of stress, Lazarus and Folkman (1984) proposed that an individual's perception of an event was a direct result of their

cognitive appraisal of the event. Two cognitive processes, appraisal and coping, are important to the person/environment transaction.

From this point of view, cognitive appraisal is a process of either consciously or unconsciously evaluating one's performance whilst interacting with the environment (Lazarus, 1999). According to Lazarus and Folkman (1984), cognitive appraisal is the evaluative process used by the individual to determine why and to what extent a particular transaction or series of person-environment transactions results in stress.

Simultaneously, cognitive appraisal is also a process through which an individual evaluates and manages their environment and their emotional and behavioral responses. The perceived demands and pressures produced within these ongoing interactions may result in varying levels of stress for many individuals. The individual's response to such perceived stresses can also vary greatly. For example, one person may respond with anger, another with anxiety, and still another feel challenged to engage and interact in a more constructive manner.

Lazarus (1999) proposed that increasing levels of dysfunctional stress occur when an individual perceives that they do not have the necessary interpersonal and/or physical resources to successful negotiate or cope with the demands or pressures emanating from the environment. From Lazarus's (1999) perspective, cognitive appraisal of the situation is an important factor within the stress situation. Lazarus and Folkman (1984) considered cognitive appraisal essential for understanding stress for two reasons: to understand variation factors among individuals under an event and the factors affecting this interaction, and secondly to distinguish between benign and dangerous situations in

which individuals survive and flourish. Before proceeding, some appraisal-related terminologies in the cognitive appraisal of stress should be clarified.

Lazarus (1999) described three types of cognitive appraisals – primary, secondary and reappraisal – that individuals use to evaluate their situation. Primary appraisal is an evaluation of what is at stake. Primary appraisal describes the way people evaluate a potentially stressful situation relation to their own goal commitments, values, beliefs about self and the world, and situational intentions. Goal commitment has been found to be a stronger factor influence on action than values (Lazarus, 1999). One can have values without acting in their interest, but the term goal commitment refers to the fact that an individual will attempt to attain a goal. If there is no goal commitment, a stress reaction will not occur because there is nothing of adaptational importance to interrupt the individual's routine. In contrast, if an individual perceives a situation as harmful, threatening or challenging, stress and its related emotions will occur. Lazarus (1999) concluded that as a result, when the condition of stress is occurring, an individual would make an appraisal.

In addition, Lazarus and Folkman (1984) have distinguished three kinds of primary appraisal namely: irrelevant, benign-positive, and stressful. Irrelevant appraisal is the transaction that carries no implication for an individual's well-being. In this kind of appraisal, individuals have nothing to lose or gain. Benign-positive appraisal occurs when the outcome of an encounter is perceived as a positive or pleasurable emotion such as joy, love, happiness, or peacefulness. Stress appraisals include harm/loss, threat, and challenge. Damage to an individual may be sustained in a situation of harm/loss, such as in debilitating injury or illness, recognition of social esteem damage, or loss of a loved or

valued person. Threats to central and extensive goal commitment are the most damaging life events for individuals.

Threat and challenge focuses on the future: those individuals have uncertainty about what will happen. According to Lazarus (1999), threat and challenge can occur in the same situation or in a continuing relationship, and the more individuals are confident in overcoming obstacles and dangers, the more likely they are to feel challenged rather than threatened. Threat appraisal is different from harm/loss appraisal as it permits anticipatory coping and threat concerns harm/losses that have not yet taken place (Lazarus & Folkman, 1984). Threat is characterized by negative emotions such as fear, anxiety, and anger. Furthermore, threat has an important inference for adaptation. Challenge appraisal is different from threat in that it is characterized by pleasurable emotions such as eagerness, excitement, and exhilaration. Moreover, challenge has important implications for adaptation. Lazarus and Folkman (1984) pointed out that challenged individuals are more likely to have better morale as they feel confident about demanding encounters. Threat or challenge varies greatly according to situational demands, constraints, and opportunities, which individuals are able to recognize.

Secondary appraisal refers to the cognitive-evaluative process in which individuals evaluate their resources for dealing with a stressful person-environment. Secondary appraisal also includes an evaluation of the likelihood that a given coping option will result in the satisfaction of that desire, as well as the likelihood that the individual can apply effective strategies (Lazarus & Folkman, 1984). At this point, Magill (1993) indicated that individuals would determine their ability to control or cope with the new situation by examining potential options for dealing with an event.

Secondary appraisal may occur during or after primary appraisal. It is not necessary that primary appraisal come first as it operates independently of secondary appraisal. According to Zohar, and Dayan (1999), both primary and secondary appraisal can exert a moderate effect on positive and negative moods. After primary and secondary appraisals are exerted, reappraisal will occur. Reappraisal is the process of evaluating the stress potential of a situation based on new information. The result of this process may resist or nourish the pressures felt by individual. This can lead to an increase or decrease in stress.

Coping is the second cognitive process that Lazarus and Folkman (1984) described in their concept of stress. The concept of coping will be explained in more detail in the later stage of this chapter. The psychological approach to stress from Lazarus and Folkman (1984) focused on cognitive appraisal of the situation as the most important factor. They argued that an individual's perception of an event plays a major role in the stress response. Individual perception is a combination of the perception of a threatening/challenging event and their perceived ability to cope with that event. This theory is similar to that of Cox (1987). According to these authors, stress is a dynamic system of interaction between the individual and their environment. Cox (1987) defined stress as a perceptual phenomenon arising when an individual assesses the demand to the situation in relation to their ability to cope. From this point of view, when perceived imbalance in this comparison occurs, an experience of stress and a stress response will occur. If the coping is effective, the stress should be reduced. In contrast, if coping is ineffective, a prolonged exposure to stress will occur and may lead to functional damage. Cox's system comprised five stages of stress.

As individuals have psychological and physical needs, the first stage is embodied by the sources of demand related to the individual and their environment. The fulfillment of these needs is important to determining behavior. If there is an imbalance between the individuals' perceived demand and the individual's perception of their ability to meet this demand, the second stage of stress arises. In this stage, cognitive appraisal plays a crucial role as it does in Lazarus and Folkman's theory (1984). If the individual has high demand and they can cope with it, they will not be stressed. If the individual has high demand and they perceive a limitation of their ability, then stress arises. For example, the stress may arise if the individuals' life style fails to match their aspirations. In the third stage, the response will be accompanied by physical, cognitive, and behavioral changes in an attempt to reduce the stressful nature of the demand. The fourth stage involves coping responses. Ineffective or inappropriate coping strategies may increase the experience of stress. The authors suggested that occurrences of prolonged or severe stress are often accompanied by functional and structural damage. Feedback is the fifth and last stage in this stress system. Feedback is an effective way of shaping the outcome at each of these stages and feedback will occur to all other stages in the stress system.

Cox and Mackay's stress model focused on the imbalance between the perceived demand and perceived capability to cope with situations. They also emphasized cognitive appraisal, similarly to the stress system offered by Lazarus and Folkman (1984).

The view of stress from both Cox (1987) and Lazarus and Folkman (1984) focuses on the concept of demand. A demand in their point of view means a request or requirement for physical or mental action, and implies some time constraint (Cox, 1987). A demand is an important concept and as Cox (1987) pointed out, stress may arise when

there is an imbalance between the perceived demand and the person's perception of his capability to meet that demand.

2.1.3 Social concept of stress

Slavin, Rainer, McCreary, and Gowda (1991) extended the cognitive appraisal theory of Lazarus and Folkman (1984) into a social stress theory by proposing a multicultural model of stress. Slavin et al. argued that the Lazarus and Folkman (1984) theory reflected a white or Euro-centric cultural bias in its basic assumptions by emphasizing individual goals and achievements. In contrast, other cultures focus on harmony and the well-being of the family, tribe, or group. Slavin et al. (1991) suggested that there are four ways that the cultural group affects the nature and frequency of certain stressors. Firstly, being a member of a minority group can increase the frequency of stressful events. Secondly, a member of oppressed groups has an increased likelihood of experiencing acts of discrimination. For example, gay students may be discriminated by their friends, family, and community. Thirdly, those who are of lower socio-economic status, poor, or lack political power face greater stress than advantaged groups due to monetary and lifestyle restraints. Finally, a social costume unique to the person's culture can result in prolonged perceived threat of discrimination, and the stressful conditions of poverty and racism can lead to a chronic state of hyper-attention and hyper-sensitivity to events. This model is offered as an extension to the cognitive appraisal theory, and may be useful in terms of conceptualizing the individual's interpretation of stressful events in relation to socio-cultural factors.

To sum up, Selye (1978) clearly focused on stress as a biological response of an individual to a wide range of stimuli. Selye emphasized the non-specific nature of the

stress response. In Selye's system, the precise nature of the source of stress is unimportant, as the physiological stress response does not depend on the nature of the stressor. The psychological approach to stress is best represented by the work of Lazarus and Folkman (1984). They claimed that cognitive appraisal is the key to stress responses. Lazarus and Folkman argued that it is the individual's perception of an event that plays a major role in the stress response. Individual perception is a combination the perception of threatening events and the perceived ability to cope with that event. Slavin et al. (1991) extended the cognitive appraisal theory into a social stress theory by proposing a multicultural model of stress. They suggested that membership of cultural groups can affect the nature and frequency of certain stressors and that a member of an oppressed groups has an increased likelihood of experiencing acts of discrimination. Also, those of lower socio-economic status, or who lack political power, or have social costumes unique to the person's culture, can have alternative forms of stress coping.

For the purposes of this study, stress is defined as the level of biopsycho-physiological response an individual has to either a given event, or culmination of life events. The severity of this response is in direct relation to firstly how threatening or distressing one perceives the events, and subsequently the perceived ability to cope. How an individual responds to a given event is determined by a complex interplay of physical (biological), emotional (affective), cognitive, and behavioral responses. Despite many opposing approaches to stress (Cox, 1987; Lazarus & Folkman, 1984; Selye, 1978; Slavin, et al., 1991), all of the theories discussed agreed that stress could increase the risk of illness. Although stress is not the sole cause of many disorders, it is a significant contributor to their development.

2.2 Stress-related outcomes

Notwithstanding these variations in the definition of stress, the consensus is that an excessive or ongoing level of stress significantly increases the individual's risk of health related symptoms and vulnerability to psychophysiological illness (Kenny, Carlson, McGuigan, & Sheppard, 2000). As noted by Kenny et al. (2000) and others (e.g., Dinan, 2001; Hong & Chongde, 2003; Sharpley & Scuderi, 1990) stress-related illness can manifest within one or a combination of three primary areas: the systemic or physical, the psychological or emotional, and the behavioral/social. Physical stress is primarily concerned with the biological responses. Psychological stress focuses on cognitive and affective responses to the evaluation of threat, whilst social stress focuses on the resultant disruption of one's social system following an event.

2.2.1 Systemic or physical stress-related responses

Stress can be seen as a positive effect in terms of being a motivational force for individuals in meeting new challenges. However, persistently high and unrelieved stress can lead to physical ill health (Sordi, 2004). Selye's (1978) concept of stress strongly supports the proposal that stress could be involved in a variety of physical illnesses. Indeed, the literature does provide strong empirical support for Selye's stress concept (e.g. Waldie, 2001; Sordi, 2004). According to Sordi (2004), both direct stress and indirect stress influence physical health outcomes. Directly, stress can impact on the functioning of the nervous, endocrine, and the immune systems. Indirectly, high levels of stress can lead to other health risk behaviors such as smoking, and alcohol use.

Interestingly, the literature suggests that stress is the most frequently identified cause of tension-type headaches, particularly when a high number of minor, everyday

stressors have been identified. For example, a study from Degges-White, Myers, Adelman, and Pastoor (2003) supported the hypothesis that high levels of stress are associated with headache problems. Degges-White et al. studied the differences between the perceived stress of a clinical headache patient group and a norm group. Not surprisingly, the results indicated that the clinical participants reported greater levels of perceived stress than the norm group (the PSS4 norm group [Cohen et al, 1983]). However, the study could not demonstrate directionality, that is, whether stress caused the headaches or whether the headaches caused the stress.

A study from Reynolds et al. (2001) supported the hypothesis that headaches are a common outcome of stress. Reynolds and colleagues examined the impact of stressful life experience on low-income urban youth. The results indicated that heightened rates of stressful life experiences were associated with heightened rates of somatic complaints among low-income urban youth. The results also indicated that the most frequently endorsed somatic symptom in this group was headaches and stomachaches. In addition, a longitudinal cohort study from Waldie (2001) has found further support for the relationship between stress and headache problems.

Waldie (2001) suggested that headaches in childhood were a risk factor for headaches and migraines in adolescent and young adulthood. Waldie also used his longitudinal cohort study to examine whether childhood headaches were associated with the appraisal of adolescent stress, and to determine whether primary headaches in young adulthood could be predicted on the basis of adolescent stress. Moreover, Waldie examined whether the relationship between adolescent stress and primary headaches diagnosed in adulthood is mediated by chronic childhood headache. The results of this

study indicated that participants who had had a history of childhood headache were significantly more likely to report adolescent stress than those without such a history. It also indicated that high-intensity stress during mid adolescence increased the likelihood of having a migraine diagnosis in young adulthood. Similarly, stress experienced during mid adolescence was positively associated with migraines and headaches diagnosed in young adulthood. Due to Waldie's longitudinal design, this study supported a multidirectional relationship in which stress causes headaches and vice versa, which previous cross-sectional studies could not sustain.

Infectious disease is another illness, which affects people who are under stress. Stone, Reed, and Neale (1987) supported the hypothesis that stressful life events are related to infectious illness. These authors studied the relationship between daily events and physical symptoms. The results indicated that a stressful life event often predicted infectious illness. In addition, many authors have proposed that life stress is positively associated with common colds and upper respiratory illness (e.g. Cohen, Frank, Doyle, Skoner, & Rabin, 1998; Reid, Mackinnon, & Drummond, 2001). For example, a study of stressors that increase susceptibility to the common cold in healthy adults by Cohen et al. (1998) indicated that severe chronic stressors were associated with a substantial increase in risk of upper respiratory diseases. Based on a sample of 276 volunteers (125 men and 151 women) who were required to be free of disease based on examination and laboratory testing, participants had to return to the hospital at both 4 and 5 weeks after screening to have a variety of assessments. (i.e., blood drew for assessment of cell activity and antibody to the challenge virus, the Bedford College Life Events and Difficulties Schedule questionnaires [LEDS; Brown & Harris, 1989; Harris, 1991]). This

study indicated that the participants who reported chronic stress were more likely to have a greater susceptibility to common colds. Moreover, there were some indications that the longer the duration of stressor, the greater the risk for colds.

Interestingly, recent research has suggested that as well as direct stress, an interaction between stress and risky health behaviors can lead to severe physical illnesses such as cardiovascular disease (Sordi, 2004). For example, Byrne (2000) indicated that, a combination of smoking and stress elevates cardiovascular disease to a degree greater than either smoking or stress alone. Thus, the risks of physiological stress outcomes are greater when combined with negative health behaviors. Similarly, Dinan (2001) suggested that depression was a common outcome from chronic stress and can lead to cardiovascular disease, as well as a 4-5 fold increase in the risk of myocardial infarction. Moreover, Sharpley and Scuderi (1990) reported that subjects with high levels of stress were at risk of developing atherosclerosis.

In summary, several studies have indicated that there is a strong relationship between stress and disease. Stress plays a major role in the development and recovery from several physical illnesses including headaches, common cold, and cardiovascular disease. There are both direct and indirect stress influences, which can produce disease. Direct stress effects occur through the effects of stress on the nervous, endocrine, and the immune system. Indirect effects occur through the development of health risk behaviors and lifestyle.

2.2.2 Psychological or emotional stress-related responses

As noted, physiological and psychological stress-related outcomes may overlap. Many studies show that stress can negatively affect psychological well-being (e.g., Hong

& Chongde, 2003; Lange & Byrd, 1998). For example, a study from Hong and Chongde (2003) supported the hypothesis that stress can have a negative affect on psychological well-being. Hong and Chongde studied the impact of college stress on psychological well-being (academic hassles, personal hassles, and negative life events and confirmed that college stress was inversely related to psychological well-being. Similarly, a study from Lange and Byrd (1998) found that financial distress, one of the major stressors for university students, was negatively related to psychological well-being. Lange and Byrd (1998) examined the relationship between university students' levels of daily financial stress, chronic financial strain, perceived levels of financial understanding and control, and their perceived levels of psychological well-being. The results showed that the level of daily financial stress was associated with individuals' perceptions of manage-ability and internal control regarding their financial situation. These factors, in turn, directly influenced the students' levels of psychological well-being. Moreover, chronic financial strain was shown to have related to students' psychological well-being. Although the results of this study focus on current financial situations that affect student well-being, it should be noted that students often have long-term financial concerns.

Moreover, Beasley et al. (2002) indicated that negative life events directly affected psychological well-being. They tested the relationship between negative life events or traumatic events (life stress) and psychological and somatic distress. The results clearly supported a significant association between the negative life events and psychological symptoms.

To sum up, an individual perception of an adverse event is very important in relation to stress. This perception involves a combination of the individuals' perception

of the adverse event and their ability to cope with this event. Stress will occur when individuals perceive that they have not enough ability to cope with the situation. As a result, the symptoms of emotional (psychological) stress, such as anxiety, depression, and anger are more frequent in highly stressed subjects.

Common Symptoms of emotional stress

According to Schafer (1996), the eight common symptoms of emotional stress are anxiety, depression, anger, fear, sadness, frustration, guilt, and shame. Anxiety and depression are the most common outcome of ongoing emotional stress (McNamara, 2000: Rice, 1999).

The moderate or middle ranges of anxiety are a normal part of living, and are a positive influence on achievement in sports, career, and academic performance. In terms of high levels of anxiety, Poltavski, Ferraro, and Dakota (2003) stated that the greater a subjects stress levels, the higher the anxiety and probability of illness. Schmeelk-Cone and Zimmerman (2003) supported the idea that individuals who reported chronic levels of stress, reported more anxiety and depression. D'Angelo and Wierzbicki (2003) also reported from the study of the relation of daily hassles with both anxious and depressed mood in 34 college students in the United State of America. The results indicated that the daily hassles were significantly related to both depression and anxiety.

Depression has multi-faceted symptoms. Feeling dull, tired, empty, and/or sad, are all examples of emotional symptoms. Thus, depression is not just an emotional state, but also a physical and behavioral state. Dixon et al. (1993) indicated that a high level of stress strongly relates to depression. Ciarrochi, Dean, and Anderson (2002) supported the idea that stress was associated with reported depression, hopelessness, and suicidal

ideation among people with high emotional perception. Moreover, Flett et.al. (1997) studied on personality, negative social interactions, and depressive symptoms and found that the negative social interactions were correlated significantly with the depressive symptoms in the university students.

Schafer (1996) categorized anger as a secondary stress emotion that is led by other emotions, thoughts, actions, or circumstances. The results of unexpressed and unresolved anger will result in the same symptoms as anxiety, such as damage to tissues and organs. Fear is a stress emotion of apprehension about some perceived threat. Sometimes fear is not based on reality, particularly in cases of phobia, paranoia, and low levels of confidence. Fear is one of the symptoms of stress-related outcome (Rice, 1999). Sadness as a primary stress emotion and its dark feeling relates to real, imagined, or anticipated loss. Frustration is the primary stress emotion caused by irritation, anger, or a blocked goal commitment. High expectation without expression can result in chronic excitation of the stress response and can lead to frustration symptoms. Guilt comes from the belief that someone has done something wrong or inadequately. Sometimes guilt is entirely rational, reasonable, and justified, but often that guilt includes unwarranted self-criticism, regret, and self-punishment that can lead to temporary stress in individuals. Shame is a feeling of disgrace or humiliation and can be a threat to health. Schafer (1996) stated that shame is based on the individuals' perception of their internal image and the individuals' perception that one has a negative image in others' eyes.

All of these eight symptoms are commonly occurring psychological stress outcomes. According to Schafer, the signs of emotional stress are often bizarre symptoms such as, fuzzy symptoms, forgetfulness, mental block, difficulty organizing thoughts,

inability to concentrate, nightmares, etc. Thus, stress not only affects one's emotional state, but also one's physical and behavioral manifestations as well.

Much evidence indicates that cumulative stress is significantly related to psychological health problems (Beasley et al., 2002; Hong & Chongde, 2003; Lange & Byrd, 1998). Several researchers also believed that psychological stress leads to the same bodily changes, which Selye observed as a result of tissue damage (Greenberg, 1996; McNamara, 2000; Stroebe, 2000).

2.2.3 Behavioral and social stress-related responses

Behavioral stress is the response or reaction of behavior generated by the stressor. The stressful experience motivates the individual to engage in a variety of behavioral coping methods.

Schafer (1996) divided the behavioral stress symptoms into two types, direct and indirect symptoms. The examples of direct symptoms are as follows: irritability, compulsive behaviors, not staying with one activity too long, talking faster than usual, being short-tempered, difficulty sitting still, and being withdrawn. Indirect symptoms such as health risk behaviors may also arise from the stressful event. A study by Haddad and Malak (2002) supported the hypothesis that the reason for smoking is often stress-related. This study aimed to estimate the prevalence of smoking and to describe the habits, attitudes, and practices related to smoking among students of Jordan University of Science and Technology. They found that the main reasons for starting smoking were pleasure, stress, and curiosity.

Moreover, Watson and Sinha (2000) investigated the relationship between personality disorders and coping with stressful situations across a variety of life events.

The results indicated that stress and negative emotions were associated with personality disorders.

Other examples of indirect symptoms are increased alcohol consumption, increased coffee or tea consumption, use of prescribed medication to reduce tension, use of illegal drugs, and more (Schafer, 1996). These indirect symptoms also have an effect on individuals' social interaction with their environment. The assumption that individuals who are under stress are more likely to engage in unhealthy behavior patterns was supported by findings from Steptoe, Wardle, Pollard, Canaan, and Davies (1995). They examined the relationship between academic examination stress and health behavior in university students in London. The results indicated that emotional distress and stress were higher in the exam-stress group than the control group. Time spent in physical activity was also significantly less in the exam-stress group. Moreover, the emotional impact of examinations was greater among students with low levels of social support.

Under some conditions, stress can also lead to social withdrawal. Flett, Hewitt, Garshowitz, and Martin (1997) indicated that when young people have depressive symptoms, they are at risk of having more negative social interactions. Social interaction is a very important means for individuals to cope with stress. Flett et al. examined the association between the frequency of negative social interactions and depressive symptoms in 176 university students, York University, USA. Interestingly, the result showed that higher depression symptom scores correlated significantly with the frequency of negative social interactions.

In turn, social interaction directly affected the availability of young people's coping methods. According to McIntyre and Dusek (1995), students whose parents had

an authoritative child-rearing style (high levels of warmth, acceptance, and nurturance) used more social support and problem-focused coping and less emotion-focused coping than did other students.

In conclusion, stress can affect not only physiological and psychological well-being, but also indirectly effect behavioral/social characteristics. These effects create a stress interaction that affects health outcomes.

2.3 The concept of coping

Lazarus and Folkman (1984) defined coping as an individual's efforts to manage internal/external demands from the environment that are appraised as taxing or exceeding their resources. The coping process is complex, and an important ingredient in Lazarus' theory of stress is the ability or inability to cope with a stressful situation. Generally, a stressor must be appraised before selecting a coping strategy. This cognitive process of appraisal consists of a continuous and evaluative process of categorizing the encounter (Lazarus & Folkman, 1984). After evaluating the stressful encounter, coping attempts to make a response to these stress appraisals. Kenny et al. (2000) pointed out that psychological stress negatively influences cognitive functioning, and may lead to a reduced capacity to deal effectively with the stressor.

The concept of traditional coping can be explained from two different theoretical backgrounds. Lazarus and Folkman (1984) indicated that these two backgrounds are the traditional animal experiment and the psychoanalytic ego psychology model. They described coping in the animal model as the acts that control evasive environmental conditions in order to avoid, escape, or overcome threat conditions. In the animal model, coping focuses on avoidance and escape behaviors and a lack of cognitive-emotional

complexity, which is normally an integral part of human functioning. The same authors described coping in the psychoanalytic ego psychology model as realistic and flexible thoughts and acts that solve problems and reduce stress. The psychoanalytic ego psychology model focuses on the person's relationship with the environment in terms of perceiving and thinking; the animal model describes the biological processes involved in the person's relationship with the environment.

Moreover, the psychoanalytic ego psychology model focuses on coping as a style or trait rather than as a dynamic ego process. According to Lazarus and Folkman (1984), coping traits refer to personality characteristics that dispose individuals to react in certain ways. Styles refer to broad ways of relating to particular types of people or situations.

Lazarus (1999) pointed out that an understanding of coping strategies could help us understand the constant effort of some individuals to adapt themselves to chronic stresses due to changing life conditions. Additionally, coping has been viewed as motivated by emotion. Coping flows from emotional distress, and directly follows an initial appraisal of harm, threat, or challenge. Coping can also influence the quality and intensity of subsequent emotions (Lazarus, 1999).

According Monat and Lazarus (1991), coping aims to change the conditions of the emotion or the emotion itself and affects the emotion process in two ways. First, the coping process changes the actual relationship. Coping occurs when an individual obtains information about the resource and mobilizes to change the troubled person-environment relationship. If the coping process can solve the problem, the emotional distress should reduce. Sometimes the coping activity fails to reduce the source of stress and this leads to further stress. This type of coping has been described as problem-focused coping

(approach-oriented coping), which aims at changing the source of the stress. For example, if a student is stressed about an upcoming exam, the problem-focused approach for the student would to devote more time for studying. The student may also ask friends and teachers for help. This method is called problem-focused coping. Secondly, coping can be utilized to alter the perception of the person-environment relationships. This type of coping aims toward reducing or managing the emotional distress related to a situation and is described as emotion-focused coping (avoidance-oriented coping) or cognitive coping strategies. For example, some students might release the stress state by going to see a movie.

Nou (2002) studied the stress, social support, coping, and psychosocial adjustment of the college students in Khmer University, Cambodia. The results showed that using an emotion-focused coping style was related to psychological symptoms, lower psychological well-being, somatic symptoms, and lower quality of life.

As stated earlier, coping strategies are important in terms of coping effectively with stressful situations. Fromme and Rivet (1994) tested trait coping styles as a predictor of alcohol use in young adults. The researchers studied the coping styles of young adults' as a predictor of their alcohol use and response to daily events. The results indicated that both emotion-focused and avoidant coping students were found to consume more alcohol than students with coping styles characterized as non-avoidant. Furthermore, poor emotion-focused coping, which represents a failure to cope with the negative emotions associated with stress, seems to be an important determinant of young people's alcohol use and misuse.

Watson and Sinha (2000) investigated the relationship between personality disorder and coping strategies across a variety life event. Interestingly, the results indicated that stress and negative emotion were associated with personality disorders. The results also indicated that a personality disorder was positively related to escape-avoidance and negatively associated with problem-solving and positive reappraisal. In examining these two kinds of coping strategies, it appears that the problem-focused coping approach is generally more effective than emotion-focused coping. More importantly however, the effectiveness or functionality of the coping strategy used is most important in determining stress and health outcomes.

2.3.1 Gender difference in coping styles

Many studies have examined gender differences in problem-focused and emotion-focused coping (e.g. Day & Livingstone, 2003; Renk & Creasey, 2003). For example, a study from Day and Livingstone (2003) supported the idea that females seek and use more emotional support than men. Day and Livingstone examined gender differences in perceptions of stressors and utilization of social support among university students. The results indicated that when students were stressed, women reported that they would utilize emotional support (friend and family) to a greater degree than men.

A study from Renk and Creasey (2003) indicated that females used emotion-focused coping strategies more than their male counterparts. The results confirmed that females endorsed greater use of emotion-focused coping strategies than males. The results further indicated that late adolescents who were high in masculinity tended to use higher levels of problem-focused coping than those who were low in masculinity do. Also, they documented that males used more problem-focused coping strategies and that

females used more emotion-focused coping strategies. The researchers pointed out those young males may have remained reluctant to use emotion-focused coping strategies because of gender stereotypes related to these strategies. Based on this study, gender identity was a more valuable predictor of coping strategies than gender.

Ager and MacLachlan (1998) explored the psychometric properties of the Coping Strategy Indicator (Amirkhan, 1990) amongst 415 the first year undergraduate students at Chancellor College, the University of Malawi. The results of this study indicated that male students had scored higher on problem solving and female students higher on avoidance. The researchers pointed to traditional sex-role stereotypes (men as 'active', women as somewhat more 'passive') for explanation.

In contrast, Beasley et al. (2002) found that males and females did not differ significantly on their use of emotion-focused and problem-focused coping strategies. They studied the resilience in response to life stress of 187 undergraduate and postgraduate students studying at the University of Tasmania. This cross-sectional study found no significant gender differences in coping style. This finding is contrary to those obtained from other studies, where males used more problem-focused coping strategies than females. It seems that while gender is associated with coping strategy, gender identity is a better predictor of coping style.

2.3.2 Personality risk factor

Personality as a coping style focuses on behavior rather than ego processes. Type A personalities are time driven, impatient, insecure of status, highly competitive and aggressive, generally hostile, and incapable of relaxing (Rice, 1999). The type A personality walks fast, talks fast, and is easily angered. This kind of person always has a

sense of time urgency. The type B person is just the opposite with a relaxed and easygoing personality and never seems in a hurry to do anything.

The literature on type A personality was first discussed by Rosenman and Friedman (1974), who pointed out that this personality type is associated with increased stress, and increase risk of heart disease. Since then, many researchers have attempted to explore the implications of this personality type (e.g., Fichera & Andreassi, 2000; Kirkcaldy, Shephard, & Furnham, 2002). For example, a study by Kirkcaldy et al. (2002) studied the influence of type A behavior and locus of control upon job satisfaction and occupational health in 332 German managers. The results from this study showed that a type A personality and an External locus of control were associated with greater perceived stress levels when compared to managers with a type B personality and an Internal locus of control.

Heilbrun and Friedberg (1987) studied the relationship between type A personality and stress in 53 male undergraduate university students. The participants responded to the Jenkins Activity Scale and a stress rating symptom rating form. The results showed that type A personality reported more stress over the previous year than type B personality.

Kirkcaldy, Cooper, and Furnham (1999) studied the relationship between type A personality, emotional distress and perceived health. Two hundred and fifty-five European managers responded to the Occupational Stress Indicator scales and explored the impact of personality factors on subjectively perceived job stress, satisfaction at work, and physical and psychological health. The results showed no significant relationship between personality, work satisfaction, and general health. This finding is contrary to

those obtained from most other studies, where the type A personality is associated with increased stress and increased risk of heart disease.

Moreover, Guyll and Contrada (1998) examined trait hostility and social interaction in relation to ambulatory cardiovascular activity in 40 male and 39 female undergraduate students. The participants wore ambulatory blood pressure monitory and completed diary entries while engaged in everyday activities. The results indicated that hostility was associated with higher systolic blood pressure during social interaction, particularly in men. The researchers concluded that these effects were mediated by psychological processes and supported the hypothesis that there was a relationship between hostility and coronary disease. This study was in line with a study from Fichera and Andreassi (2000), who studied cardiovascular reactivity during public speaking as a function of personality variables in 86 men and women aged 17-45 years. The experiment was conducted to assess the effects of a real-life stressor (public speaking) upon cardiovascular reactivity by measuring the change in blood pressure and heart rate from baseline to task. The participants had a six minute oral presentation. Their professors and classmates evaluated the presentation. The results indicated that personality did not play a role except in the case of a high hostile personality.

Based on empirical evidence it seems that not all type A personality characteristics are associated with stress and diseases. Although type A personality is correlated with increases in blood pressure, cardiac reactivity, blood cholesterol and cigarette smoking, as well as poorer diet and exercise habits (Merz et al., 2002), it is the hostility and anger component of type A personality that produces an increased risk of stress and disease.

2.4 The concept of stress management

Coping strategies aim to treat the stress problem by managing internal/external demands from environment, which individuals appraised as endangering their resources. In McNamara's conception (2000), coping strategies are defined as the defense mechanisms aimed at resolving internal conflict. According to Lazarus and Folkman (1984), stress management referred to the formal programs to prevent or ameliorate debilitating stress for people in general. Monat and Lazarus (1991) described stress management as a general treatment approach to a wide variety of adaptations and health problems. Stress management, as a treatment, is universal with no one for whom treatment is unneeded or inappropriate. Edelman and Mandle (1998) stated that stress management is a critical component of a healthy lifestyle. They stated that healthy behaviors, such as good nutrition and exercise, might help strengthen individuals' resistance to stress. Peiffer (2001) indicated that dealing with stress in a positive way is another way for managing stress. From all of the viewpoints, coping strategies are focused on reactions to stressed outcomes. In contrast, stress management is focused on not only dealing with stress as it occurs but also building resilience and preventing stress. There are a wide variety of stress management strategies for individuals to use.

Sutherland and Cooper (2000) described a tripartite approach to stress management within an organization. Primary level stress management is 'stress directed' and aims to prevent stress by controlling the source of stress, such as engaging in sporting activities. Secondary level stress management is a 'response directed' strategy that helps individuals respond to stress in a way that is not harmful to them. It suggests that using techniques aimed at improving stress coping processes could minimize stress. This level

is concerned with increasing self-awareness, improving stress management skills, such as education, training to develop stress resistance, and coping strategies. Tertiary level stress management is 'symptom directed' and aims to rehabilitate the stressed person. Tertiary level stress management is a curative approach for individuals that are suffering from the effects of exposure to stress, which might involve counseling services.

Pender (1996) divided the primary modes of intervention for stress management into three groups: minimizing the frequency of stress-inducing situations, increasing resistance to stress, and counter conditioning to avoid physiological arousal

2.4.1 Minimizing the frequency of stress-inducing situation

Minimizing the frequency of stress-inducing situation consists of four subcategories, namely: changing the environment, avoiding excessive change, time blocking, and time management. Many environmental conditions are hazardous to individuals' health with direct physiological and psychological effects that lead to stress. If possible, environmental management is the best approach to minimize the frequency of stress-inducing situations. According to World Health Organization (WHO, 1988), a commitment at all levels of government is required to ensure achieving a supportive environment. Avoiding excessive change means that any unnecessary changes should be avoided during a period of life change as this can result in a negative tension state. Time blocking technique is a set time for an individual to adapt to various stressors. Individuals use this time to consider specific changes and to develop strategies to modify it. Sutherland and Cooper (2000) indicated that in the concept of stress management, developing a personal sense of time was important.

2.4.2 Increasing resistance to stress

In these strategies, Pender (1996) focused on both physical and psychological conditions. Physical condition focuses on promoting exercise and psychological health. Many researchers indicated that exercise gives rise to positive effects, such as better health, higher quality of life, lower distress, and control of stress (e.g., Edelman & Mandle, 1998; Schafer, 1996). According to Pender (1996), there are three ways that exercise promotes positive effects. Firstly, cardio-respiratory fitness improvement can promote psychological changes. Secondly, "changes in exercise-related self-efficacy and mastery generalize to other situations, resulting in improvements in the self-concept and coping ability" (Pender, 1996 p.243). Finally, exercise can reduce a stress response by blunting a person's psychophysiologic responsiveness to stressors. The author stated that further research is needed to determine in what conditions exercise can actually enhance stress-resistance.

Besides promoting exercise, promoting psychological well-being indicators, such as enhancing self-esteem, enhancing self-efficacy, increasing assertiveness, developing goal alternatives, and building coping resources are other important strategies for preventing stress (Pender, 1996). For example, self-efficacy is a better predictor of performance than actual ability. Bandura (1977) indicated that the stronger the efficacy is, the more active the efforts are. Bandura pointed out that enhancing self-efficacy could be achieved through facilitating performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. Pender (1996) indicated that assertive behaviors could increase the individual capacity for psychological stress resistance. During assertiveness behaviors, individuals can share their perceptions and feelings with

other people that are facilitating personal or group productivity. In developing goal alternatives, individuals should develop goals in which accomplishment will be rewarded. They also should be flexible so if one goal is not completed; other options are available to permit achievement.

2.4.3 Counterconditioning to avoid physiological arousal

Counterconditioning aims to assist individuals to attain willing control of physiological responses to stressful events. By providing a set of stress management strategies, counterconditioning's target is to relax muscle tension and increase parasympathetic functioning. To accomplish this strategy, three interventions are regularly used, relaxation training, biofeedback, and imagery. According to Pender (1996), deep relaxation slows the metabolism and all the physical processes related to it, including a decrease in the body's oxygen consumption, a decreased respiration rate, a decreased heart rate, decreased muscle tension, decreased blood pressure, increased alpha brain waves, and enhanced immune functioning. Schafer (1996) indicated that this technique creates a physiological response directly opposite to the stressful situation. Biofeedback can help individuals to learn to lower their arousal. Health professionals frequently utilize techniques such as electromyographic feedback (EMG), electroencephalograph (EEG), galvanic skin response (GSR), while individuals can use more simple devices. Schafer (1996) described imagery (visualization or guided daydreaming) as a method of using image to reduce rational mental activity and induce deep relaxation. This stress management technique involves imaging something very pleasant as a way of relaxing the mind.

Pender (1996) suggested a range of strategies for stress management. The decision regarding the uses of each these strategies or a combination of strategies is based on individual characteristics, the sources of stress, and the patterns of stressful response.

2.5 Gender differences

Currently, men's health is of increasing concern. Men have motor vehicle accidents at a rate 171 per cent higher than women do. Men have shorter life expectancy than women do (6.1 years), and men commit suicide at a rate 223 per cent higher than women. Furthermore, the ischemia heart disease affects 253 per cent more men than women. According to Australian Institute of Health and Welfare (AIHW) (1999), men use 40 per cent less health services than women. Moreover, men have many different health risk behaviors, such as drinking alcohol, smoking, drugs, speeding, stealing, and sexual addiction. These all are high-risk behaviors related to stress in men.

A great number of reports showed stress to be increasing in young people (Heaven, 1996; Hunter, 1999; McNamara, 2000). Although many reports pointed that females have higher levels of stress than males (Baker, 2003; Day & Livingstone, 2003; Forteza, Snyder, Palos, & Tapia, 1996; Hunter, 1999), females have better health promotion behaviors to cope with stress than men (Misra & McKean, 2000). For example, when young people perceive stress, females are more likely to seek emotional support (Day & Livingstone, 2003). Baldwin, Harris, and Chambliss (1997) and Dwyer and Cummings (2001) found that when perceiving stress, women reported receiving greater social support from friends than males did. Hunter (1999) indicated that females are also socialized to be more emotionally expressive than males. Furthermore, when males perceived stress, males had a greater likelihood of turning to alcohol/drug use

(Cervi, 1998; Hunter, 1999) and smoking (Vollrath, 1998) to cope with stress. Females exhibited more positive health-related behaviors with respect to health responsibility than males (Cervi, 1998). Males also used the adaptive coping style significantly less than females did (Hunter, 1999).

As a result, young men are a standout high-risk group. Furthermore, the previous studies of stress in young men in tertiary education settings (e.g. Adlaf, Gliksman, Demers, & Newton-Taylor, 2001; Hong & Chongde, 2003) rely heavily on quantitative studies. Therefore, there is need for qualitative studies. The next chapter will focus on stress in young male university students in particular.

Stress in young men and male university students

The aims of this chapter are to give a detailed explanation of stress in young men in general and male university students in particular following five foci. Firstly, men's health is discussed as an issue of concern. As the research focuses on young men in particular, it is necessary to explore the origins and reasons for gender differences. Reports of increasing stress, ignorance of health-promoting behaviors, and a marked reluctance to visit a doctor –have all led to a growing debate about the state of men's health. Secondly, young men's health in particular is being identified as a crucial issue in society. Contemporary young men must cope with a set of health risks ranging from stress, mental disorder, and suicidal depression. It is thus crucial to understand all aspects of young men's health. Thirdly, as now it is widely accepted that stressful events in young men's lives are increasing rapidly, the sources and stress related outcomes in young men are also represented. Finally, a literature review of stress in male university students is conducted to highlight the importance of researching this group.

3.1 Men's health

It is widely known that men have a shorter life expectancy than women do. According to the ABS (2000), in developed countries men can generally expect to die eight years earlier than women. Australian Institute of Health and Welfare (AIHW, 1999) indicated that men have motor vehicle accidents at an overall rate that is 171 per cent higher than women. Men also use 40 per cent less health services than women. In recent years, suicide has emerged as a major public issue in Australia. For example in 1998, there were 2,683 registered suicides, 2,150 were males and 533 females, or 23.1 males and 5.6 females per 100,000 persons respectively (ABS, 2000). According to ABS

(2000), throughout the period 1921-1998, the male suicide death rate was higher than the female rate by nearly five to one. The gender difference between men and women may be due to a combination of biological and socio-behavioral factors.

3.1.1 Nature: Physiological differences

During adolescence, the male body size and proportion will dramatically alter. At this time, sexual characteristics develop, and reproductive maturity is achieved. Generally, boys enter puberty at age 10-11, a little later than girls. The physical changes during adolescence are influenced by the endocrine system in which hypothalamus and pituitary gland plays a major role. The hypothalamus will release gonadotropins, which stimulates the anterior pituitary gland to release gonadotropins, follicle-stimulating hormone (FSH), and luteinizing hormone (LH). The gonadotropins stimulate the male and female gonads, which in turn secrete sex steroids, estrogens and progesterone from the ovaries, and testosterone from the testes (Edelman & Mandle, 1998). The sex steroids produced by the maturing gonads are primarily responsible for the biological changes of puberty. During adolescent time, both primary and secondary sex characteristics develop. Primary sex characteristics involve the organs necessary for reproduction, such as the enlargement of the testes, the penis grows larger and longer, and more hair appears at its base. Secondary sex characteristics are external features that differentiate males from females but are not essential for reproduction, for example pubic hair growth and lowering of the voice. The first noted during adolescence is the musculoskeletal system. The average boy grows at least 10 cm per year during this phase (Harrison & Dignan, 1999). Body proportion change also occurs during this phase, with parts such as the head, hand, feet, and other extremities preceding growth of the trunk.

Genetic diseases and abnormalities also affect men's health. Examples of genetic diseases include achromatopsia, hemophilia A and B, Becker muscular dystrophic, Duchenne muscular dystrophic, Lesch-Nyhan syndrome, fragile X syndrome, and testicular feminization. As Harrison and Dignan (1999) have indicated, Achromatopsia, known as color blindness, affects eight per cent of all male births, and this is a cause of vehicle accidents in men. Hemophilia types A and B affect the efficiency of blood coagulation. According to the statistics, type A affects 1 in every 10,000 men and type B affects 1 in every 50,000 men (Harrison & Dignan, 1999). Hemophilia disease results in prolonged bleeding which causes severe bleeding, not only external trauma, but also internal hemorrhage. Duchenne muscular dystrophy is the most common type of muscular dystrophy and affects approximately 1 in 3000 male births. Becker muscular dystrophy affects approximately 1 in 20,000 males.

Apart from genetic diseases, the hormone changes can affect men's health. At birth, boys and girls have the same level of male hormones. Nine or ten years later, the changing hormone levels make boys' bodies different from girls. Most change occurs during puberty, which matures the sex organs, body shape, tissue distribution, and hair distribution. The male hormones also increase muscle mass, lengthen bones and create body odor. Testosterone hormones directly result in sexual interest and sexual drive. These hormones normally decline between late fifties and early sixties. For some people, the decline will occur in their late thirties. In the case of testosterone decline before the fifties, hormone replacement therapy (HRT) can be used for treatment, but the results are regressive in men.

3.1.2 Nurture: Socialization

Gender socialization involves the gradual learning of societal values, beliefs and behaviors particular to each sex. In society, males are socialized to develop their respective gender identities and conform to gender role expectations (Harrison & Dignan, 1999). Culture here signifies a complex set of ideologies and imperatives evolved through the history of a particular population, and society may be understood as signaling the structures by which members of that population interact with one another, and the set of practices which enables them to do so (Commonwealth Department of Health, Housing and Community Services, 1993). According to Harrison and Dignan (1999), social gender in individuals comprises two bodies, the social body and the physical body. They argued that the social body constrains how the physical is perceived and experienced. For this reason physical strength, competitive and risk-taking behavior is associated with the male physical body. The social gender role as a cultural construction can be viewed as fulfilling the requirements of acting masculine. The requirements of gendered masculinity influence men's attitudes and behaviors. According to Welch (1986), the typical male is concerned with notions of self-reliance; dominance, competition, power, control, restrictive emotionality, and a strong need for achievement. According to Bain (1993), masculinity always represses its stress instead of expressing it appropriately. Contemporary societies believe that men must be objective, striving, tough, goal-oriented, unsentimental, and emotionally inexpressive (Welch, 1986). Men are not exposing their secret and inner selves in order to avoid showing weakness and vulnerability. The masculine role in contemporary social expectation is to be unsentimental and unemotional.

Alcohol and cigarette use are behaviors that are often used to validate masculinity. It is well documented that there are many effects from drinking alcohol and smoking cigarette, such as bronchitis, emphysema, bronchogenic carcinoma, and coronary heart disease from smoking cigarette. Also an emphasis on the external male body rather than the internal body has resulted in poor nutritional habits particularly in adolescent and young adult men. Poor nutrition over a prolonged period of time can result in illnesses such as obesity and diabetes mellitus (Harrison & Dignan, 1999). Risk-taking behaviors are considered to be masculine pursuits. Sabo and Gordon (1995) stressed that men are often in danger of injury due to dangerous, combative, and competitive activities and sports, such as high-speed and reckless driving. Type A personality characteristics, such as goal focused activity, a need for professional success, competitiveness, an aggressive approach to work and to life in general, show some similitude to the stereotyped male gender role (Harrison & Dignan, 1999). Many studies have shown an associated between type A personality and increased stress and increased risk of heart disease (Kirkcaldy et al., 1999; Rosenman & Friedman, 1974). Professional health care avoidance is another risk behavior associated with masculinity. Many men may be aware that they are ill, but decide not to seek help in order to avoid being labeled sick. Sickness is often perceived as an expression of weakness. As a result, men may seek help too late or may play down symptoms causing underestimates of male health problems. Many studies have reported that females are more concerned with matters of health than males (Bagwell & Bush, 1999; Martinelli, 1999).

In summary, it is clear from a review of the literature that males: (i) have a higher morbidity and mortality rate than females, and stress is one of the important

contingencies in morbidity; (ii) engage in fewer health-promotion activities than females; (iii) are less likely to seek medical care than females, and (iv) engage in high risk behaviors to cope with stress. Men's health problems result from both biological changes and the development and maintenance of a masculine image and identity.

3.2 Young men's health

Young males, as defined in this study, are undergoing or have recently been through a life period characterized by physiological, psychological, and social change associated with the transition from adolescence to adulthood. This incorporates an age range of about 17-25 years. Adolescence is a period of rapid development in terms of physical, psychological, sociocultural, and cognitive changes. Healey (2002) pointed out that the range of developmental tasks for young Anglo-Australians includes physical, cognitive/moral, and psychological adjustments. This transition is complex and generally involves a variety of developmental tasks including: i) independence from parents and family; ii) accepting one's physical appearance and sexuality, such as heterosexuality, homosexuality, and bisexuality; iii) preparing for a career and entering the job market; iv) interpersonal development including the ability to have a mature, intimate relationship, and v) developing mature peer friendships. Each of these developmental tasks help to prepare adolescents for different types of stressors that they may experience throughout their lifetime. If young people have trouble achieving the tasks described above, they may have difficulty with the transition into adulthood. Unfortunately, DiClemente, Hansen, and Ponton (1996) argued that transition into adulthood is fraught with many health risks that result from risk-taking behaviors, which are the most serious threat to young male's health and well-being.

The causes of young male morbidity and mortality in Australia are largely preventable. According to AIHW (1999), there are about three male deaths to every one female death among young Australians. The suicide rate for young men is increasing and has the potential to significantly affect the overall level of youth mortality. The age-specific pattern of suicide has changed over the past 20 years. During the 1970s, suicide rates tended to increase with age in both males and females. In contrast, in the 1980s and 1990s, this pattern was changed by an increase in the suicide rate for young males. Between 1988-1992, suicide claimed around 17 lives per 100,000 people. In 1992, the suicide rate of young people was 16 per 100,000 people (a dramatic increase from 6 per 100,000 persons in 1921-1925 to 17 in 1996-1998). As a proportion of all causes of deaths, male suicides in the 15-24 age group increased from 3.3 per cent to 27 per cent in the period from 1921-1925 to 1996-1998. Data from the ABS (2000) showed that there were 2,683 suicides registered of which 2,150 were males and 533 were females. Within this age group, the ABS (2000) pointed out that the overall suicide increase was largely due to the increase in the young male age group.

ABS (1994, 2000) data also revealed that the youth suicide rate in Australia is higher than in many other countries. Men in general are four times more likely to commit suicide than women, but in the 15-24 years age group men are five times more likely than women to commit suicide (ABS, 2000). According to the ABS (1994), the possible causes of increases in suicide rates include family breakdown, unemployment, and financial distress. As a result, these risk-taking behaviors often remain a major contributor to health problems in the transition process from adolescence to adulthood. McNamara (2000) suggested that risk behaviors are covariation factors according to the

complex interrelationship among behaviors. The risk-taking behaviors can be divided into three causal types: physiological /biological, psychological/cognitive, and environmental/social.

Biologically based theories attribute risk-taking behaviors to genetic and hormonal influences, which affect young men's lives both directly and through puberty timing. For instance, male coital debut was related to the rise in testosterone levels during youth (McNamara, 2000).

According to McNamara (2000), psychological/cognitive theories of risk-taking behaviors examine the roles of cognitive ability, personality traits, and dispositional characteristics, such as self-esteem, cognitive immaturity, affective disequilibrium, or high sensation seeking in risk-taking behaviors. These theories focus on the perceived risk in individuals and cognitive decision making regarding risk behaviors.McNamara noted that social/environmental theories relate to family and peer interaction, community and societal norms and institutions, which affect risk-taking behaviors in young males. Young males are more likely to smoke cigarettes if their parents, siblings, or friends smoke (Bobo & Husten, 2000). Family and parents play a major role in determining involvement in risk behaviors. It is clear that the parent-child relationship has an influence on the characteristics of young male's risk-taking behaviors (Skara & Dent, 2001). Skara and Dent examined the social, behavioral and intrapersonal aspects that predict regular cigarette use among high school students. The results indicated that regular smokers reported experiencing significantly more family conflict, and were more likely to have experienced an act of violence, and higher perceived stress than did experimental smokers.

Similarly Fischer, Kittleson, and Ogletree (2000) examined the relationship between collegiate adult children of alcoholics and adult children from dysfunctional families. The results indicated that both collegiate adult children of alcoholics and adult children from dysfunctional families were at significantly greater risk stress, with a dysfunctional family history being the best predictor of stress.

Under stressful conditions, young people will seek safety. If parents are unable to meet the requirements of protection, normal development in young people might be impeded. Therefore, parental relationships can affect the development of emotional problems in young males. For example Kraaijj et al. (2003) studied negative life events and depressive symptoms in late adolescence. Based on the 1,310 students attending an intermediate vocational educational school, the result clearly indicated that adolescents with a poor parental bonding relationship were more vulnerable to depressive symptoms in the face of adverse life events than adolescents with more optimal bonding styles.

Peer group influence is an etiological factor in young people's behaviors. It may diminish parental influence on adolescents and increase their risk behaviors. According to Heaven (1996), peer group pressure can be very influential in decisions to adopt a wide range of risk behaviors that are considered normative within the group.

Societal influences also play a crucial role in determining health risk behaviors in young men (i.e., Bobo & Husten, 2000). Beautrais, Joyce, and Mulder (1998) studied youth suicide attempts in New Zealand by using a case control design with 129 young people (aged 15 to 25 years old) who had made serious suicide attempts contrasted with 153 randomly selected community controls. The results of the demographic characteristics of personal income showed that the individuals with low income (less than

$10,000) had 8.5 times the suicide attempt rate of those high-income participants. Not only do socio-economic factors affect health risk behaviors, but they also affect physical health. Edwards et al. (2001) indicated that negative social interaction was associated with poorer physical and psychological health.

From these three major influences on the behavior of young men, and the predisposing factors have been found to be associated with their behaviors, it is clear that many of these behaviors can be prevented. Biological development is accompanied by physiological changes. On the other hand, cognitive development may occur in unity with physical development. Similarly, society/environment has a significant role in risk behaviors. All of these three causes of risk-taking behaviors are dynamic and related to each other and in order to improve the health of young men research should focus on dynamic models that accommodate the changing physiological/biological, psychological/cognitive, and environmental/social contexts.

3.3 Stress in young men

In recent years, young men have had to adapt to an increasingly changing world. Moon, Meyer and Grau (1999) reported that in mid 1998 the number of Australians aged 12-24 years was estimated to be 3,470,000. The ABS (1996) projected that the number of young people in this age group would increase to 3,675,000 by 2001 and account for 21.7 per cent of the total population. Within this population, males slightly outnumber females at each year of age due to a greater birth rate of about five per cent. The neonatal death rate is 3.4 per thousand live births for males, compared with only 2.5 per thousand for females in 1996 (ABS, 1996). These differences so early in life must find their explanation in biological differences, but the role of sociocultural factors is demonstrable

in other causes of death. According to ABS (1996), the major Burden of Disease for young men aged 15-24 years in 1996 was from non-communicable diseases and the greater part of this manifested in years lost due to disability rather than years lost due to premature death. Stress in young men has been found to be increasing at an alarming rate (McNamara, 2001) and is related to many diseases and illnesses (i.e., Dinan, 2001; Hong & Chongde, 2003; Sharpley & Scuderi, 1990).

The literature is still unclear regarding gender differences in relation to stress. Although a majority of studies have shown that young females perceived more stressful events than their young male counterparts (Baker, 2003; Day & Livingstone, 2003; Hunter, 1999; Poltavski et al., 2003), some studies have shown no gender differences or in fact that young males have greater perceived stress (Cervi, 1998).

Mental disorder dominated the 1996 Burden of Disease in young men. Najman and Jorm (1995) pointed out that stressful and unpleasant situations are major factors associated with mental disorder. Sawyer et al. (2000) indicated that fourteen per cent of children and adolescents experienced psychological problems and that only 50 per cent received professional help. The prevalence of depressive disorders, conduct disorders, and attention-deficit/hyperactivity disorders (ADHD) in young males were 4.2, 4.4 and 15.4 per cent respectively, whereas the prevalence rate in young females was 3.2, 1.6 and 6.8 per cent (Sawyer et al., 2000). Young men with mental health problems also have associated health risk behaviors, such as drinking alcohol, smoking, illicit drug use, and a high suicide rate. Young men with depressive disorders feel that life is difficult, may be irritable and aggressive, lack energy to do normal activities, feel hopeless about the future, and may contemplate suicide.

According to McNamara (2000), depression is one of the most common psychological outcomes and is strongly linked to stress. Adlaf, Gliksman et al. (1998) studied the prevalence of elevated psychological distress among Canadian undergraduate students. The results indicated that 30 per cent of the students in the sample reported elevated psychological distress. The results also indicated that elevated distress was significantly higher among the students than among the general population.

Mkize et al. (1998) studied the prevalence of depression in a university population attending the Unitra Health Service, Umtata, University of Transkei. Two hundred and fifty students were randomly selected over a two-month period during their first visit to the health centre for various ailments. Each student completed the 21 items Beck's Depression Inventory questionnaire (Beck & Beamsderfer, 1974). The results of the study showed a high prevalence of depression among this selected student population with a total percentage of mild to severe depression of about 53 per cent. Depression is multi-faceted, and can manifest emotional, physical, and behavioral effects.

Suicide is a common result of persistent and high levels of stress (McNamara, 2000). It is often preceded by psychosocial difficulties, which are related to depression and psychosocial stress or behavioral problems. As previously mentioned suicide was almost five times more likely to occur in young men than women and had an incidence of nine per cent in the former compared with two per cent in the latter (ABS, 1994). Data from the Australian Institute of Health and Welfare (1999), which surveyed the health of young people aged 12-24 years, showed that the young male suicide rate increased significantly over the period 1979-1997. Suicide and self-harm were leading causes of the Burden of Disease in young males.

From the literature reviewed, it is very clear that young men are potentially vulnerable to many health problems, particularly mental disorder. The rapid changes in young men's physical, cognitive, and social worlds, if not faced in a stable and pro-active manner, can lead to an exacerbation of these problems.

3.3.1 Sources of stress in young men

As previously stated, young men are in a period of rapid change from childhood to adulthood. The multiple changes incorporate physical, cognitive, and social changes. Physical changes include biological and hormonal changes within the body. Cognitive change refers to the ability to think abstractly and is an important developmental change in young people. Social changes refer to events, such as the transition to tertiary education. The three changes both separately and interactively can lead to stress in young men.

McNamara (2000) classified three categories of stressors affecting young people: normative, non-normative, and daily stressors. Normative stressors are composed of generic developmental challenges including physical changes, school transition, emergent sexuality, peer relation changes, and parent negotiation. Non-normative stressors represented unexpected demanding events including parental divorce, parental mental illness, physical disability, and family deaths. Finally, daily hassles are defined as irritable minor events in everyday life, which accumulate and lead to psychological symptoms.

(1) Normative stressors

Edelman and Mandle (1998) stated that young men are in a period of multiple physical changes culminating in peak physical fitness. The author stated that physical

growth in men should be completed by age 21 incorporating the maximal physical attributes of height, strength, endurance, coordination, and speed of response. It is important to prolong this optimal period of physical development. McNamara (2000) suggested that physical changes in puberty could lead to stressful situations, such as dissatisfaction with their physical appearances.

Besides from physical changes, transitions can lead to stress in young men. The transitions can be described as presupposing vulnerability at any age, particularly the development from childhood to adulthood. The school transition can be stressful due to the difference in atmosphere between secondary and tertiary environments. If young men have difficulties at university, this can cause significant stress as well as have an effect on their prospects for personal and career development at later stages. The university stressors are concerned with teachers, grade, homework, rule and discipline, peer pressure, sex, and uncertainty about the future.

According to McNamara (2000), as children become young adults, sexual relations become more prominent and contribute to increased levels of vulnerability within the sexual domain. Societal norms, restrictions and expectations contribute greatly to emerging sexuality and these lead to stress in young people. The same author stated that young people often engage in sexual activities against their will. Also intolerant or religious attitudes towards autoerotic or homosexual behaviors by friends, family, and society can lead to stress.

Peer groups and relations are influential in determining the stressful life events for young men (Saunders, 1998). Within these peer groups, young men are expected to rebel against limitations, break down barriers, and try new things. Common and dangerous

forms of peer group pressure encourage risk behaviors such as smoking, alcohol, drugs, speeding in cars, stealing, dating and sexual experimentation.

Apart from peer groups, parental characteristics affect stress in young men. Peterson (1999) suggested that conflict with parents or the generation gap might have an effect on encouraging young people's autonomy, as well as promoting cognitive and personality growth. The conflict may come from family members using force or attacking one another verbally or physically with the aim of inflicting emotional or bodily injury. The use of leisure time, health habits, and cleanliness are common sources of disagreement between young men and their parents or guardians.

Many researchers consider unemployment as a powerful source of stress in this group (i.e., Ager & MacLachlan, 1998; McNamara, 2000). Uncertainty regarding future work situations can cause stress for young men. If young men fail to find employment, they might become disaffected, frustrated, and rebel against society. Furthermore, there is a link between youth unemployment and poor psychological adjustment and social isolation (i.e., Roberts, Golding, Towell, & Weinreb, 1999). These is also some evidence which has shown that finding difficulty in one's first employment situation can aggravate the identity formation process, increasing negative outcomes, and impeding positive self-esteem (McNamara, 2000).

(2) Non-normative stressors

McNamara (2000) defined non-normative stressors as unexpected or unusual stressful events including family disruption, divorce, and marital separation. Some studies have shown that parental divorce is associated with poor mental health in young people (McNamara, 2000; Saunders, 1998). Young people from divorced families are

more likely to suffer from problem behaviors and delinquency, anxiety, stress, depression, inattention, and low educational attainment. According to Pender (1996), from the Life-Change Index, divorce, death of a close family member, change of health of a family member, and personal injury or illness are all high on the scale of life stress determinants.

(3) Daily hassles

Daily hassles are irritating, frustrating, and distressing demands that differentiate everyday transactions. Daily stress is more likely to predict psychological and somatic symptoms in young people than life events (McNamara, 2000). Randall (2001) studied the relationship between stress, coping resources, and quality of life in a sample of 92 graduate students in USA. The researcher measured the daily hassles, coping resources, and the quality of life. The finding indicated that hassles are significant inversely related to quality of life. Moreover, a study from D'Angelo and Wierzbicki (2003) was along the same line Randall' studies. D'Angelo and Wierzbicki studied the relations of daily hassles with both anxious and depressed mood in 34 university students. The researcher used the Inventory of College Students' Recent Life Experiences, State-Trait Anxiety Inventory, and Beck Depression Inventory as the research instruments. The finding indicated that daily hassles were significantly related to both depression and anxiety.

As noted above, several sources of stress in young men are related to rapid changes in physical and cognitive processes of development, and ongoing environmental influences such as social change. The effects of this stress can be deleterious and result in manifest behaviors that endanger well-being; resulting in a variety of biopsychosocial dysfunction.

Physiological stress-related outcomes

Human internal organs are controlled by the autonomic nervous system (ANS), which is composed of two kinds of nerves: the sympathetic and parasympathetic nervous system. Physical outcomes are activated by the sympathetic nervous system. However, as Peiffer (2001) has indicated, the mind plays a significant role in determining how the body responds to changes depending on an individual's attitude and beliefs. The arousal of the sympathetic nervous system can be beneficial when it is not too excessive. According to Schafer (1996), without the stress response, positive stress would be unavailable. The signs of the body preparing for physical action include: pupil dilation, quickened and shallow breathing, increased heart rate, cooling skin, chills running up and down the spine, and many more. When the sympathetic nervous system is over-stimulated repeatedly and over a long period of time, the body system may get overloaded and break down. In the longer term experience of stress, Peiffer (2001) pointed out that more severe warning signs of physical stress symptoms will occur, such as dizziness, headache, exhaustion, stomach-ache and butterflies in stomach, indigestion, diarrhea, and sleep problems.

A blood pressure response is an example of a physiological response to a stressful situation. Dolan, Sherwood, and Light (1992) examined the relationship between real-life stress and associated blood pressure responses. In this study 10 high and 10 low self-focused-coping (a combination of behavioral tendencies to blame oneself and keep to oneself in situations that are considered stressful) male university students were tested with ambulatory BP monitoring on two typical school days and an examination day. The results indicated that the high self-focused-coping subjects showed higher BP responses

than the low self-focused-coping subjects. Further, the high self-focused-coping subjects showed higher BP during the exam but also had BP elevations that were sustained during other activities throughout the same day, including evening rest. As a result, a high cardiovascular reactivity to behavioral stressors has been hypothesized to be marker of or a potential contributor to later development of established hypertension (Dolan et al., 1992). These physical outcomes were also linked with psychological outcomes.

Psychological stress-related outcomes

According to McNamara (2000), one-third of youth's experience some form of psychosis, emotional disturbance, or depression. Depression is the most common psychological outcome. As noted previously, many studies have shown that depression is significantly linked to stress (i.e., Kenny et al., 2000; Schafer, 1996).

McNamara (2000) stated that depression prevalence rates in young males had increased relative to other psychiatric disorders in recent decades, and that depressive outcomes in young men are a direct reflection of increased stress. McNamara indicated that 60 per cent of youth suicides in England and Wales had been attributed to clinical depression. Indeed, personality plays a part in the way individuals react to depression (Schafer, 1996). A distress-prone personality or the particular styles in which a person thinks, feels, and acts contribute to personal distress.

The type A personality and a hostility personality are common predictors of personal distress. Greenberg (1996) pointed out that type A personality pattern is a complex of personality traits, including excessive competitiveness, aggressiveness, impatience, and time urgency. This personality pattern has a relationship with psychosomatic health. Unfortunately, the social conception of masculinity is closely

related to type A personality. Men are expected to be self-reliant, dominant, competitive, powerful, and ambitious. There are many possible outcomes from this personality pattern, including distress syndrome, depression, emotional tension, and time-related stress.

Schafer (1996) described hostility as cynicism toward another's motives and values, easily aroused anger, and a proneness to expressing that anger towards others. In addition, hostile persons frequently enunciate their anger and distress towards others. This hostility causes health problems such as somatic symptoms, anxiety/insomnia, social dysfunction, and depression.

Suicide is a failure in coping and the extreme response to stress. In the past two decades, suicide in young people has risen, particularly in men (i.e., ABS 2000; Heaven, 1996; McNamara, 2000). Young men aged between 15 and 24 are more than four times more likely to commit suicide than young women (AIHW, 1999; Heaven, 1996; McNamara, 2000). The factors associated with suicide in young men includes drug and alcohol abuse, emotional problems, physical and emotional abuse, school and peer problems, unemployment, the loss of a relationship, previous experience of suicidal behaviors, parental absence or abusiveness, and depression (Heaven, 1996; McNamara, 2000). Furthermore, McNamara (2000) stated that cumulative stress has been linked to suicide.

Behavioral stress-related outcomes

Several studies have shown that stress is linked with behavioral outcomes in young men, for example, Vollrath (1998) studied smoking, coping, and health behavior among 726 Swiss university students. The results from the study showed that both heavy and light smokers reported more total stress problems, in particular more stress related to

frustrations with their studies and to difficulties in study. Both smoking groups displayed higher negative affectivity than non-smoking students did. The results also showed that heavy smokers used less active coping (problem-focused coping) than non-smoking students.

The results of this study supported those of Coogan, Geller, and Adams (2000). They examined the prevalence of smokeless tobacco use and the relationship with risk behaviors in young adolescents in Connecticut, USA. Based on the 31,861 students, the participants completed a questionnaire developed by the researchers. The results showed that indicators of stress were the highest among the smoker students. Interestingly, the results further supported the finding that males were more likely to report other risk-taking behaviors and more psychological distress than were female students.

Moreover, a study from Skara and Dent (2001) found that smoking behaviors are linked to stress in young people. Skara and Dent examined regular cigarette use among high school students. The results indicated that regular smokers reported experiencing significantly more family conflict and higher perceived stress than non-smokers did. The results also indicated that males were more likely than females to become regular smokers.

Alcohol is the other risk behavior that is associated with stress. A study from Fromme and Rivet (1994) supported the hypothesis that stress is related to young men's alcohol use. Rivet investigated coping style as a predictor of alcohol use in young people. The results indicated that poor emotion-focused coping, which represents a failure to cope with stress, was associated with young people's alcohol use and associated with the development of problem drinking in adulthood.

Kim (2002) examined the relationship between depression, health risk behaviors, and health perceptions in Korean university students. The results indicated that students were mildly depressed and that depression was associated with alcohol consumption and physical health.

To sum up, stressors in young people can be categorized into normative, non-normative, and daily stressors. Normative stressors included physical changes, transitional periods, emergent sexuality, peer relation changes, and parental and family characteristics. Non-normative stressors are unexpected or unusual stressful events including family disruption, divorce, and marital separation. Daily hassles are everyday occurrences that are perceived as stressful. Many stress-related outcomes in young men are the result of an interaction between physiological, psychological, and behavioral phenomena. Young men in tertiary education settings in particular have been found to have an increasing incidence of stress, and stress related health problems.

3.4 Stress in male university students

Stress is a major issue for college students as they grapple with a variety of academic, personal, and social pressures. Several reports have found an increasing incident rate of stress in male university students (Deckro et al., 2002; Dowdy, 2001; Lindop, 1999; Sax, 1997). Greenberg (1996) believes that the university years to be the most stressful in our lives. According to Hirsch and Ellis (1996), 39 per cent of male university students in their study experienced high levels of stress. Moreover, Michie, Glachan and Bray (2001) reported that male undergraduate students have a high incidence of emotional stress and depression. Tyssen, Vaglum, Gronvold and Ekeberg (2001) reported an increased prevalence of stress in male and female medical students.

Furthermore, Schafer (1996) reported that the university years present such as enormous clustering of life changes that around 80 per cent, both male and female, will experience a degree of anxiety, stress or turmoil. According to Deckro et al.' study (2002), the college students reported experiencing high levels of stress with more than two thirds (69 per cent) reporting "having excessive stress" and nearly two third rated themselves as being "more anxious than most people".

Moreover, the increasing incident of distress in university students is supported by a study from Fagan (1994). In this study, Fagan surveyed the social well-being of 101 undergraduate university students at a Private Liberal Arts University, USA. The General Well-Being Schedule (Dupery, 1978) was used as an instrument to assess students' mental and physical health. Interestingly, the results indicated that one-quarter (28 per cent) scored in the moderate distress category, while about one-third (34 per cent) were in the severe distress category. Furthermore, the results also indicated that the low social well-being was most closely associated with a student who is in university for primarily financial reasons, was forced by parents to attend, or lacked job options.

Similarly, Tyrrell and Smith (1996) measured levels of psychological distress among undergraduate occupational therapy students at Trinity College, Dublin. The 102 students completed the General Health Questionnaire (Szulecka et al., 1986). The results indicated that over 40 per cent of the sample scored within the range for psychiatric cases on the General Health Questionnaire. The results also indicated that university students had much higher levels of symptomatology than the non-university peer group.

Young men in tertiary education settings have many stress related mental health problems. Simons, Aysan, Thompson, Hamarat, and Steele (2002) pointed out that when

university students reported a high level of stress, they reported a low level of life satisfaction. Hong and Chongde (2003) have studied the impact of college stress on psychological well-being and found that college stress, academic hassles, personal hassles, and negative life events all exerted a negative impact on psychological well-being.

Stress also produces behavioral and physiological problems. Jon et al. (2000) postulated that young men of university age who experience stress are more likely than women to engage in risky behaviors, such as using illicit drugs and alcohol, engaging in risky sexual behaviors, and dangerous driving. From the same study, when university men experienced stress, they were reluctant to seek medical care. This has been attributed to the socialization of masculine traits that impress independence and the concealment vulnerability. They also engaged in less health-promotion behavior, and had less healthy lifestyles than females. Furthermore, university men perceived less personal vulnerability than women for a variety of health concerns. There are two factors that help explain the gender differences in the response to stress: gender-role stereotypes and the socialization of young males. Laws (1998) explained that young male stereotype of being strong, self-reliant and aggressive shed light on why stereotypes constrain men from being more open and willing to express their weakness and to seek help.

3.4.1 Student stressors

Tertiary education environments present students with many new transitional pressures. It is time for young men to take responsibility for their career and professional identity. Many students also find that it is a time of loneliness as friends and family members are no longer available. Some are confronted with money and time management

issues that demand self-efficacy. Ross, Niebling, and Heckert (1999) determined the major sources of stress among 100 undergraduate students at a mid-sized Midwestern university. The results indicated that the major sources of stress were intrapersonal, environmental, interpersonal, and academic, with intrapersonal sources of stress being the most common source of stress.

Furthermore, Chamberlain and Zika (1990) indicated that the minor stressors are just as salient as major life-events. The researchers examined everyday minor events as a stress measure in 4 groups; university students, adults from local city area, mothers, and elderly people. The results indicated that the ten most endorsed hassles by students were not having enough time, too many things to do, troubling thoughts about the future, too many interruptions, misplacing or losing things, health of a family member, social obligations, concerns about standards, concerns about getting ahead, and too much responsibility.

Given this context, the university years are full of uncertainty, ambiguity, and stress. Therefore, the major university student stressors come from many causes.

(1) Lifestyle change

During the life changes associated with university years, students are expected to assume more responsibility. Some of them have to leave familiar friends and community surroundings. In new environments, they have to develop new friends as well as become familiar with new ethnic and social-class groups. They are also confronted with greater academic competition than in secondary school. There is less external monitoring to make sure they are keeping up with their assignments compared to their high school days. Students have to manage time and money by themselves. Furthermore, Greenberg (1996)

indicated that students are confronted with the following tasks: competence development, emotional management, interpersonal relationship development, purposed development, truthful development, identity development, and autonomous development. If students can make these transitions smoothly, they will be following normal paths to mature adulthood. For a large number of students, university is a very stressful period.

Many studies have shown that male university students are at risk of developing health risk behaviors. For example, a study from Peltzer (2002) indicated that secondary school students engaged in more health promotion behaviors than university students. Peltzer investigated health-promoting lifestyle in black South African students. The researcher suggested that students in transition to university are a group in jeopardy of not making the transition into adulthood with healthy lifestyles.

Misra and McKean (2000) argued that earlier stage university students had higher stress levels than the later stage students. Also, freshmen and sophomore students had higher stress levels than juniors and seniors. The results also showed that female students perceived better control of their time, could better set and prioritize goals, plan, and had a more organized approach to tasks and workspace than male students.

(2) Loneliness.

Blair (1989) described loneliness as an unpleasant experience where an individual's social relationships and social network is significantly deficient both in quantity and quality. As Rice (1999) has indicated, many students feel loneliness during transition to university life. This depends on personal and external factors. Personal factors refer to personality traits, interpersonal style, and social skills. External factors refer to the types of activities and services provided by the university.

Young university students were found to be at high risk of loneliness (Le Roux & Connors, 2001). These researchers examined the loneliness amongst university students in Australia and South Africa and found that students aged 15-19 years experienced the greatest loneliness while students aged 20-24 years had the second highest percentage. The results also showed that Australian students were significantly lonelier than their South African student counterparts.

In another study by Wiseman and Guttfreund (1995), male students were significantly higher in loneliness than female students during the university year. This loneliness can affect psychological well-being and physical health and result in depression, dependence on drugs to escape loneliness, and higher blood pressure.

(3) Financial pressures

Financial pressure is one of the major stressors for university students. The pressure comes from not only paying university expenses including books, registration fees, tuition fees, and accommodations, but also essentials and wants such as fashion items, and electronic equipment. Schafer (1996) pointed out that the majority of university students work in paid employment, while many work long hours to meet their needs. This can result in time pressures, sleep erosion, and less time devoted to exercise, healthy activities, study, and friendship. Current trends suggest that these financial pressures on students are likely to grow, placing increasing numbers under stress and at risk of dropping out of higher education (Roberts et al., 1999).

Ager and MacLachlan (1998) indicated that male students rated financial stress as the highest type of stressful event during their university year. Roberts et al. (1999) supported this finding. Roberts et al. (1999) examined the effects of economic

circumstances on British students' mental and physical health. The results indicated that just under half of the sample (47.50 per cent) was found to be currently in debt. A large majority (72.8 per cent) of the students experienced some difficulty in paying bills, with 16 reporting great or very great difficulty in doing so. More than half (53.60 per cent) of the students in the sample (N = 193) were working in addition to studying, with their average working week amounting to 17.62 hours. The results also indicated that the level of health was significantly below population norms. Poorer mental health was also related to longer working hours outside the university and difficulty in paying bills.

In term of gender differences Henry, Weber, and Yarbrough (2001) revealed that female students were more likely to have a budget than men were. Based on the findings, the researchers concluded that university students were vulnerable to financial crisis and associated stress and illness.

Simons et al. (2002) indicated that there was a significant correlation between economic well-being and life satisfaction in university students. If students were faced with financial pressures, they reported lower life satisfaction and greater perceived stress.

(4) Grades

Grades are very important for university students. Greenberg (1996), reported that seven in eight students were concerned with their grades. Abouserie (1994) pointed out that the sources of evaluation stress in university students were academic stress, examinations, and results.

This is not surprising considering grades are important for scholarships and job applications. The grading system sometimes motivates many students toward higher levels of achievement and good grades rather than focusing on simply learning.

Individuals' grade pressure can also lead to distress. Schafer (1996) stated that fear of failure is a common difficulty for students. And while fear of failure can help motivate individuals to prepare and perform well, extreme fear of failure can cause individuals to become emotionally and physically distressed.

Yi, Lin, and Kishimoto (2000) also found that grades were of primary concern. The researchers examined the utilization of counseling services by 563 international students at a major university in Texas. The results indicated that academics/grade, anxiety, and depression were the top three concerns for undergraduate students.

Similarly Nwadiani and Ofoegbu (2001) explored the level of perceived academic stress among first semester undergraduates in Federal Universities in Nigeria. The researchers developed a questionnaire, the Academic Stress Questionnaire to assess the data. The study revealed a very high level of perceived academic stress among first timer undergraduate students. In contrast, the finding from the study indicated that gender, academic field of study, and socio-economic background did not significantly influence academic stress.

Moreover, a study from Baldwin, Chambliss, and Towler (2003) supported the association between grades and stress. The researchers examined the role of life event stress on African-American college students in the southern part of the United States. There was found to be a significant positive association between academic stress and perceived stress. The results also indicated that academic stress for freshman and sophomores was significantly greater than for juniors and seniors.

Furthermore, Owen (2003) examined the extent to which age and GPA were related among 158 students attending Haywood Community College and South Western

Community College. The results indicated that there was a significant positive relationship between age and GPA, with age increasing as GPA increased. This study is also in line with a study from Walker and Satterwhite (2002). The results indicated that age appeared to be strongly related to academic performance. The results also indicated that the more pressure students felt from parents, the lower their GPA's. Moreover, the results revealed that females performed better than their male counterparts.

Arising from these investigations is the conclusion that the level of perceived academic stress is very high among undergraduate university students.

(5) Daily hassles

As previously stated, daily hassles have been defined as frustrating, and distressing demands that differentiate everyday transactions. The more negative daily annoyances that students face, the greater their emotional difficulties.

Li and Kam (2002) indicated that the major types of stress for university students were academic hassles, daily hassles, and negative life events. Schafer (1996) developed the Daily Hassle Index to measure the sources of irritation in students' lives. The author listed the ten most irritating daily hassles as too little money, too little time, constant pressure of studying, writing term papers, taking tests, future plans, boring instructors, getting up in the morning, weight, and parking problems around campus.

The hypothesis that everyday minor hassles can predict psychological well-being was supported by a study from Chamberlain and Zika (1990). Chamberlain and Zika examined daily hassles as a stress measure in four different samples; university students, adults, mothers, and the elderly. The results indicated that time pressure was a significant hassle for the university students group. There was a strong association between daily

hassles and mental health and well-being in all four sample groups. In contrast, life-events were not significantly associated with mental health and well-being. This finding showed that minor stressors are an important influence on mental health and well-being.

(6) Role difficulties

Role difficulties are another key challenge during the university years. These roles come from the expectation related with social position. According to Schafer (1996), the role difficulties can be divided into four foci: role overload, role conflict, role strain, and role ambiguity. As stated before, many students have to work part-time, particularly students with financial problems. From this aspect, chronic overload is endemic in the university year. Role conflict may come from students facing unsuitable expectations with two or more different roles, such as student-daughter and student-friend. As a result of the role conflict, students may become confused, anxious, tense, unable to perform, irritable, and even ill. Role strain comes from the conflict between personal performance and one's own or another's expectation of performance. Finally, role ambiguity comes from being not clear as to what is expected. There are many sources of role ambiguity for male university students, including rapid cultural changes, and the transition period from adolescence to adulthood. Role ambiguity can heighten distress and increase stress related illness, emotional disturbance, and risk taking behaviors.

(7) Love and sex

Love and sex can be an important source of satisfaction, but at the same time, a common source of worry, anxiety, guilty, and frustration. 'Being in love' is very much a part of collegiate life. According to a study from Knox, Schacht and Zusman (1999), 94 per cent of the sample group had experienced a love relationship. Brantley, Knox, and

Zusman (2002) studied the gender differences in saying “I love you” among 147 undergraduate students at a large south eastern university. The results indicated that all respondents reported having dated and 16 per cent reported having lived with someone.

From these results, it is clear that the concept of love is a very important part of university life. Many students come to university life expecting an unrestricted sexual life and intimacy, but several of them find that intimate relationships are difficult to form. As a result, this may lead students into frustration, anger, sadness, and stress. Knox, Zusman, Kaluzny, and Cooper (2000) indicated that when male students were recovering from a broken love relationship, they reported more emotional distress than did women suggesting they were slower to recover from a broken heart. Knox and colleagues examined on the college student recovery from a broken heart.

Sleep disturbance is often a side effect of relationship problems among university students. Kelly (2003) studied the worry content associated with decreased sleep-length among 300 university students and found that worry about relationships was the best predictor of decreased sleep-length.

3.5 Summary

Reports of increasing stress, ignorance of health-promoting behaviors, and a marked reluctance to visit a doctor have all led to a growing debate about the state of men’s health. Three causes (biological, cognitive, and society/environment factors) were discussed as predisposing factors that play a major role in stress and engaging in risk taking behavior for young men. As stress in young men has increased dramatically, three categories of young people’s stressors (normative, non-normative, and daily stressors) were discussed. Finally, stress in male university students is presented as the main issue

for this research project. Given this context, students' stressors were composed of seven major causes; lifestyle change, loneliness, financial pressure, grades, daily hassles, the role difficulties, and love and sex. In the next chapter, the researcher will focus on health-promoting behaviors in male university students in particular.

Health promotion

As previously stated, the purpose of this study is to explore the factors related to stress and health promotion among young male tertiary students. The literature therefore is reviewed in light of the health promotion area following four foci. Firstly, health and health promotion are defined in terms of meaning and concept. Secondly, some health promotion models are presented as background to the health promotion field. Third, Pender's HPM is presented in detail as the framework for the current study. Finally, health promotion behaviors in male university students are discussed.

4.1 Concept of health and health promotion

What is the meaning of 'health'? Before proceeding, it is important to understand what health really means. Different groups such as governments, social workers, health professionals, and farmers have defined health from many perspectives. Therefore there is no agreed upon on definition of health promotion.

One of the most often cited definitions of health comes from the World Health Organization (WHO). The WHO (1947) defined health, as "…a state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity." From this perspective, health is more than the absence of disease, illness, sickness, and injury. It is a positive state of physical, mental, and social well-being. Mackintosh (1996) proposed that health was a human value and holistic concept that each individual perceives differently. In this point of view, the meaning of health focuses on individuals' perception and varies in meaning. Parker, Patterson, and Hearne (2003) expanded the meaning of health by including spiritual dimensions. Spiritual health infers a religious involvement or a sense of being part of a world.

Thus, health is a state of well-being, which is a result of complex interactions between physical, social, emotional, and spiritual states. Health is dynamic as its perceived dimensions are continually changing both quantitatively and qualitatively. Health can also be defined in terms of an interaction between multiple dimensions of human life. Health, therefore, as a dynamic process and a positive construct, is necessary for the attainment of human values, human rights, and positive well-being. Health promotion therefore is one of the most important strategies for individuals, families, and communities.

Sigerist (cited in Terris, 1984) first used the term health promotion in 1945. Sigerist defined the role of medicine in four dimensions: (i) the promotion of health (ii) the prevention of illness (iii) the restoration of the sick, and (iv) rehabilitation. In 1974 Lalonde issued The Lalonde Report that divided the health field concepts into four elements: human biology, environment, lifestyle, and health care organization. The basis of health promotion is still found in the WHO definition of health, which focused on holistic well-being. The Declaration of Alma Ata (WHO, 1978) conference reaffirmed that health was fundamental for human rights and attaining the highest level of health. The Alma Ata event also derived a new force field for health, which integrated social action, health advocacy, and public policy (WHO, 1978). In 1979, the WHO adopted the concept of 'Health for All by the Year 2000' as the global strategy for health as part of the Alma Alta Declaration. The declaration focused on a number of important principles for action. Principles such as equity and social justice, intersectoral collaboration, community participation, particular empowerment, and health promotion were highlighted (O' Connor & Parker, 1995). The Health for All concept recognized that the

pre-requisites for health include access to adequate food, education, water, sanitation, housing, secure work, and a useful role in society (Commonwealth Department of Health, Housing and Community Services, 1993).

Further clarification of health promotion concepts came from The Ottawa Charter for Health Promotion from the first International Conference on Health Promotion in 1986. The Ottawa Charter defined health promotion as:

> *…the process of enabling people to increase control over, and to improve their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspiration, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy life-styles to well-being*.

Health promotion plays a significant role not only in asserting people's skill but also creating a supportive environment. The principle concepts embedded in the Ottawa Charter were as follows: (i) Healthy public policy (ii) Creating supportive environments (iii) Strengthened community action and participation in health promotion (iv) Developing individual skills in health promotion by providing information, education, and enhancing life skills (v) Reorienting health services to enable individuals, community groups, and health care professionals to work together in pursuit of health. These concepts have been constantly redefined by subsequent conferences.

The second international conference on health promotion was held in Adelaide, South Australia, 5-9 April 1988, and focused on public health policy and establishing a supportive environment to enable people to lead healthy lives (WHO, 1988).

A third international conference on health promotion was held at Sundsvall Sweden, June 1991, which called for supportive environments for health (WHO, 1991). Environments refer to both the physical and the social aspects of our surroundings. This conference highlighted four aspects: the social dimension, the political dimension, the economic dimension, and women's skill and knowledge.

A fourth international conference on health promotion was held in Jakarta, Indonesia, 21-25 July 1997, which came at a critical moment in the development of international strategies for health (WHO, 1997). This conference was the first to be held in a developing country and the first to involve the private sector as a health promotion partner. It identified directions and strategies needed to address health promotion in the 21st century. In short, the Jakarta Declaration stated four important principles of health promotion: Equity, empowerment, community participation, and the reorientation of the health services. Health inequalities between and within nations were viewed as intrinsically unacceptable. Equity is the achievement of preventive medical outcomes and equitable distribution of resources. Empowerment is an essential means of ensuring that individuals and communities are able to make healthy choices. To achieve this goal, a supportive environment, which was composed of sound public policy and strengthened individual capacity, must be supported at every level. Active community participation was another essential principle to sustain efforts. Health must not be left to the medical

profession alone. Medical services should be reformed in term of intersectoral collaboration.

A fifth international conference on health promotion was held at Mexico 5-9 June 2000. This conference focused on improving the lives of economically and socially disadvantaged populations by addressing the social determinants of health (WHO, 2000).

To summarize, the six principles of health promotion that were derived from the international conferences were promoting social responsibility for health, increasing community capacity and empowering the individual, increasing investments for health development, securing an infrastructure for health promotion, strengthening the evidence base for health promotion, and reorienting health systems and health services.

4.2 Health promotion model (HPM)

Gorin and Arnold (1998) proposed several different health promotion models. Gorin and Arnold divided health promotion models into two levels: macro or societal levels, which refer to the group, community and population, and micro or individual levels which include the individual and family.

Examples of macro level focus are global policy, national policy, PRECEDE-PROCEDE model, and social responsibility. Global policy is based on the WHO definition of health and was derived from the first conference at Alma Ata, Switzerland. In this conference, the committee set up the goal “Health for All by the Year 2000” and Primary Health Care was represented as a strategy to enable individuals, families, and communities to attain productive lives (WHO, 1988). Australia’s government adopted the WHO strategy of “Health for All” as the national policy. For instance, the Victoria Health Promotion Foundation had developed health promotion policies by the end of 1992.

At a micro focus level, health promotion models are focused on the individual and family. Models include the health belief model, social learning theory, and the health promotion model, which emphasizes alterations in attitudes, beliefs and/or behaviors. According to Gorin and Arnold (1998), the health promotion model is a framework that explores the biopsychosocial processes. One model used in the health field is the health promotion framework, which was derived by Pender (1996).

According to Pender (1996), the Health Promotion Model (HPM) first appeared in nursing literature in the early 1980s. In 1987, the HPM appeared again with slight revisions (Pender, 1987). In this model, the goal is to increase the level of well-being and self-actualization in both individuals and groups. According to Pender (1987), the HPM is derived from Social Learning theory and the Health Belief Model. HPM is an attempt to explain the multidimensional nature of individuals' interactions with their environment in relation to health. Health-protective action is another important framework that having in theoretical differences from health promotion. First, heath promotion in not illness, but heath-protective is focus on the illness. Second, health promotion model is focus on the approach motivated, whereas health-protective action is avoidance motivated. Third, health promotion model seeks to expand positive potential for health, whereas health-protective action is being tailored to particular clients. For all of these reasons, HPM is more useful model for this thesis.

Pender divided this model into two factors that result in people participating in health-promoting behaviors: Cognitive Perceptual Factors and Modifying Factors. The Cognitive Perceptual Factor is composed of the sub-factors: Importance of Health, Perceived Control, Perceived Self-efficacy, Definition of Health, Perceived Health

Status, Perceived Benefits of health-promoting behaviors, and Perceived Barriers of health-promoting behaviors. The Modifying Factors consist of: Demographic Factors, Biological Characteristics, Interpersonal Influences, Situation Factors, and Behavioral Factors.

The likelihood of individuals undertaking health-promoting action depends on activating cues of internal origin or those emanating from the environment. The intensity of the cues depends on the readiness of individuals or groups to take on health-promoting behaviors. For example, internal cues for behaviors might have "feeling happy" as a result of a good interpersonal relationship with a friend. After the Health Promotion Model (1987) appeared, Pender and colleagues (Pender, 1996) conducted research to test the HPM and found some limitations in this framework. As a result of testing the HPM (1987) Pender (1996) found that perceived self-efficacy, barriers to health promotion, and perceived benefits were the strongest components of the Individual Characteristics factor. While Perceived health status could predict the target behaviors of a health-promoting lifestyle. Interpersonal influences, situational factors, and behavioral factors also played a part in many studies. In contrast, the importance of health and perceived control of health failed to explain specific health behaviors. Moreover, the definition of health could predict two of nine specific health promotion behaviors. As a result, Pender revised this HPM (1987) and updated it in 1996. The goal of the model was to increase the level of well-being and self-actualization in both individuals and groups, and to explain the multidimensional nature of individuals' interactions with their environment in relation to health.

The revised model, thereafter referred to as PHPM (Pender's Health Promotion Model – 1996), focused on a person's environment in three central domains: Individual Characteristics and Experiences, Behavior-Specific Cognition and Affect, and Behavioral Outcome. The model can be applied to stress health promotion studies as it takes account of the multidimensional nature of the individual interacting with the environment. As the Ottawa Charter for Health Promotion (WHO, 1986) has indicated, the environment plays a significant role in enhancing or placing barriers to the well-being of individuals. The PHPM is appropriate for use in the health area as it provides detailed factors that influence individual stress. Additionally, the model focuses on the individual's environment, which affects health-promoting behaviors, and can be used to gauge the likelihood of a person engaging in stress health promotion behaviors.

4.2.1 Individual characteristics and experiences factors

The first factor of the PHPM is Individual Characteristics and Experiences. Individual characteristics and experiences are defined as individual perceptions, such as prior experience and individual background. Each individual has different characteristics and experiences that affect behavior. In the revised PHPM, Individual Characteristics and Experiences are divided into two items, Prior Related Behaviors and Personal Factors.

(1) Prior related behaviors

Research showed that the best predictor of behaviors is the regularity of the same, or similar, past behaviors (Pender, 1996). Preceding behaviors have both direct and indirect power over health behaviors. The direct effect comes from the habit or conditioning of these behaviors to be automatic. The indirect effect influences health-promoting behaviors through perception of self-efficacy, benefits, barriers, and activity

related affect. Both positive and negative affect will be stored in the memory and positive affect is likely to be replicated in behaviors.

(2) Personal factors

In the revised PHPM, Pender (1996) divided the Personal factors into 3 items: biology, psychology, and sociocultural. Biological factors comprise variables such as age, gender, menopause status, and body mass index. Psychological factors consist of variables such as self-esteem, self-locus of control, self-efficacy, and personal competence. Sociocultural factors include variables such as race, education, career, income and socio-economic status. Personal factors are intended as a direct influence on both behavior-specific cognition and affect, and health-promotion behaviors. (For the purpose of this thesis, this variable was assessed using age, level of study, status, resident, nationality, home language, living arrangement, source of income for education expenses, and working status).

4.2.2 Behavior-Specific cognition and affect factors

The second factor in the PHPM is Behavior-Specific Cognition and Affect. Behavior-Specific Cognition and Affect is regarded as a major motivation and is represented by social influence and individual demography. These variables consist of six items and are of major motivational significance.

(1) Perceived benefits of action

Regular behaviors will occur when individuals believe in the benefits or outcomes of such behaviors. The benefits of actions or behaviors may be intrinsic or extrinsic. Intrinsic is more powerful than extrinsic and perceived benefits directly motivate

behaviors. Perception of long-term benefits better determines frequency of participation and predisposes individuals to continue health-enhancing behaviors.

(2) Perceived barriers to action

Perceived barriers have an effect on intention through cognitive perception. In health promoting behaviors, barriers may be imagined or real. They consist of perceptions concerning the unavailability, inconvenience, high cost, expense, difficulty, or time-consuming nature of an action. When a barrier is high and the willingness is low, behavior rarely takes place. In contrast, when the barrier is low and the willingness is high, behavior is likely to take place.

(3) Perceived self-efficacy

Bandura (1977) defined self-efficacy as the judgment of personal ability to organize and execute a particular course of action. Self-efficacy is a judgment of the possible outcome of individual behavior. Both perceptions of skill and feeling efficacious are more likely to stimulate action than feeling inept and unskilled. Individuals' perception of self-efficacy is based on four types of information: (i) performance success and performance evaluation related to self-standards or external evaluations. (ii) explicit experience from others' performance related to self-imposed standards or external evaluation. (iii) verbal persuasion from others performance related to self-standard or external evaluation. And (iv) physiologic state judgments from others. In the PHPM, perceived self-efficacy is influenced by activity related affect. If an individual has more positive affect, the individual has greater efficacious perception. In contrast, self-efficacy may be a perceived barrier to action.

(4) Activity-related affect

In each action, feeling states occur prior to, during, and following behaviors based on the stimulus properties of the behavior itself. These emotions, mild, moderate, or strong will be stored in memory. Affective responses in specific behavior comprise 3 components: activity-related, self-related, and context-related. Positive affect is likely to result in repetition of behavior, and negative affect in avoidance.

(5) Interpersonal influences

Interpersonal influences are defined as primary affects on health-promotion such as family, peers, and health care providers. These influences are cognitions concerning the attitudes, beliefs, and behaviors of others. According to Pender (1996), interpersonal influences include norms, social support, and modeling. Personal influences are likely to be behaviors that are admired and socially reinforced.

(6) Situational influences

In the revised PHPM, situational influences including perception of options available, request of characteristics, and visual features of the perspective have been reconceptualized as direct and indirect influences on health-promoting behaviors.

4.2.3 Behavioral outcome

The third factor in HPM is the Behavioral Outcome. The behavioral outcome is defined as the participation in health promoting behaviors (likelihood of action). In each individual, environments are the cues to engage in health promotion behaviors.

(1) Commitment to a plan of action

Commitment to a plan of action implies the cognitive processes of: (i) commitment to do a specific action at a given time and place and with specified persons

or by themselves, irrespective of contending partiality and (ii) identification to define strategies for eliciting, functioning, and reinforcing.

(2) Immediate competing demands and preferences.

Immediate competing demands and preferences are seen as alternative behaviors that interrupt a plan of health-promoting behaviors. Competing demands are viewed as threats to self-efficacy due to environmental influences such as friends and family. In contrast, competing references are intrinsically produced. The way a person refuses or accepts competing preferences depends on self control and self-efficacy.

(3) Health–promotion behavior

Health–promotion behaviors are the outcomes of the PHPM; a person adopts healthy lifestyles and these results in positive health throughout the lifespan.

4.2.4 Testing Pender's health promotion model

In testing of the HPLP II, several research reports found demographic characteristics to be predictors of health-promoting behaviors. However, others have not been able to document a relationship between demographic characteristics and health-promoting behaviors. For example, Larouche (1998) found that perceived health status was a significant predictor of total HPLP in exercise, stress management, and spiritual growth.

Furthermore, Kagee and Dixon (2000) studied the worldview theory related to health-promoting behaviors. According to Kagee and Dixon, the worldview theory can in fact be understood as part of an encompassing scheme describing the interaction between a system or self and the world or environment. This system is conceptualized as a control system, which tries to achieve its goals by initiating the right actions that compensate for

the disturbances produced by the environment. For this reason, the worldview theory helps to understand how particular events cause other events. Kagee and Dixon found that there was no relationship between socioeconomic status and worldview. The results also indicated no significant direct relationship between sex and health-promoting behaviors.

Misener, Phillips, and McGraw (2000) used Pender's PHPM to examine the relationships among select demographic variables such as psychosocial development, and self-reported anticipation in a health-promoting lifestyle. The results showed that education level was significantly related to health promotion lifestyle. In contrast, age, socioeconomic status, employment status, and marital status failed to correlate significantly with health promotion lifestyle.

Wu, David, and Pender (2002) used the PHPM II to examine the relationships among interpersonal influences, behavior-specific cognitions, competing demands, and physical activity in Taiwanese adolescents. The results indicated that perceived self-efficacy was the most important predictor of physical activity. Interpersonal influences did not directly affect physical activity, but had indirect effects on physical activity through perceived benefits and perceived self-efficacy.

Hamilton, Kives, Micevski, and Grace (2003) studied the health-promoting behaviors in a cardiac rehabilitation population. The sample size consisted of 74 patients from the heart and circulation program at the University Health Network (UHN) in Toronto, Canada. The results indicated that none of the socio-demographic (sex, marital status, income, education, and ethnocultural background) variables were significantly

related to the HPLP II, although age was positively related to greater self-reported nutrition.

Wang (2001) studied and compared the two models of Health-Promoting Lifestyle using the two age groups of rural elderly Taiwanese women. Based on the conceptualizations of Pender's health promotion model, a theoretical model of health-promoting lifestyle was proposed for this study. Two models of health-promoting lifestyle were tested with path analysis, using the Linear Structural Relation 8 program. The resultant models indicated that the two models fit the data well.

Wu and Pender (2005) studied the panel study of physical activity in Taiwanese youth to explore activity pattern of students. Based on the revised health-promotion model of Pender's health promotion, this study used 2 wave panel data to test a structural model of how individual characteristics, cognitions, and interpersonal influences predicted physical activity of students. The results suggest that gender, social support, modeling, self-efficacy, and perceived benefits and barriers to performing physical activity directly and indirectly.

4.3 Health promotion behaviors and male university students

Contemporary health promotion literature has been directed at the life style of health. Singer (1982) defined the concept of life style as a way of living or the manner in which individuals conduct their day-to-day activities. Health as a dynamic process aimed at attaining a state of well-being is an individual expression that is directed towards an optimal outcome. The HPLP II, which the researcher will use as the research instrument, is composed of six subscales to measure the components of a healthy lifestyle: 1) health responsibility, 2) physical activity, 3) nutrition, 4) interpersonal relations, 5) spiritual

growth, and 6) stress management. The literature regarding the health promotion behaviors of male university students will follow these six foci:

4.3.1 Health responsibility

The aspect of health service use is one of the crucial factors for good health. Some evidence has indicated that young men are less likely to seek health services than young women are.

Attitudes toward health services affect young people's decision on seeking health care services. Recent research has found that gender differences in help-seeking behavior exist with females being more open to seeking professional help. For example, Leong (1999) investigated the relationship between undergraduate students' beliefs about mental illness and their attitudes toward seeking professional help at a large American university. The results indicated that females had more positive attitudes toward seeking help than males.

As well as attitude, knowledge of health is a crucial factor for health-promotion behaviors. Bagwell and Bush (1999) indicated that women scored significantly higher on health responsibility and interpersonal support than men.

In terms of health promotion behaviors, one study indicated that secondary students engaged in more health promoting-behaviors than tertiary students did. Peltzer (2002) investigated health-promoting lifestyle in black South African students. The results indicated that (first year) university students engaged in fewer health-promoting lifestyle behaviors than secondary school students did. As a result, the researcher suggested that students in transition to university are the group in most jeopardy of not making the transition into adulthood with healthy lifestyles.

Similarly, Patrick, Covin, and Fulop (1997) examined health risk behaviors among 3,810 students in California. In their study, 36.7 per cent of the students had binged at least once while drinking; 25.3 per cent had driven after consuming alcohol; 32 per cent had ridden in a car with someone who had been drinking; 17.6 per cent had used marijuana; and six per cent had carried a knife, gun, or club. More than half of the students who were sexually active and not married or living with a primary partner had not used a condom the last time they had sexual intercourse. Only five per cent of regular bicycle riders wore a helmet. Less than half (44 per cent) reported aerobic physical activity on three or more of the preceding seven days. The results of this study indicated a substantial amount of health risk behavior among college students.

Gender also has a strong direct influence on health promotion behaviors, in particular, females are more concerned than their male counterparts with matters of health (i.e., Martinelli, 1999; Bagwell & Bush, 1999). For example, Martinelli (1999) studied the health promotion behaviors of smoking and non-smoking college students in America. The results indicated that females reported greater health responsibility, better nutrition habits, and greater interpersonal support than their male counterparts.

In terms of health behaviors in young male students, data has indicated a dangerous array of health risk behaviors. For example, a study from Stock, Wille, and Kramer and Condey (1992) stated that males were more likely to engage in risky health behaviors than were females. Male students were significantly more likely to engage in drug-taking behaviors, referring to alcohol and cannabis use. The results further indicated that preventive behaviors with respect to healthy nutrition and dental hygiene were reported more often in females.

Schumacher, Usdan, McNamara, and Bellis (2002) identified gender differences in the risk of impaired driving of 782 undergraduate students in the Southeast United States. The results indicated that 26.2 percent of participants were moderate risk drivers while 15.9 per cent of were defined as high-risk drivers. The results also clearly indicated that high-risk students were more likely to be male.

Moreover, Wiley and James (1996) examined the health behaviors in 1,408 college students enrolled in 23 intuitions of Texas, America. The results showed that 89 per cent had consumed alcohol at least once, and nearly one third considered themselves as regular smokers. More than 81 per cent reported they had had sexual intercourse at least once, and one quarter of the sexually active men had had more than 10 partners. However, of the 1,148 students who were sexually active, only 40.1 per cent reported using a condom during their most recent intercourse. Almost 59 per cent of the students surveyed had never been taught about HIV or AIDS in any of their college classes.

Patrick, et al. (1997) indicated that male university students had significantly more health risk behaviors than females. Patrick et al. examined the health risk behaviors among 3,810 undergraduate university students in California. The results of the California Youth Risk Behavior Survey for College Students (California College Health, 2000) indicated that males outnumbered women in every aspect of health risk behavior. These health risk behaviors included tobacco use, alcohol use, marijuana use, cocaine use, sexual partners, condom use, HIV/AIDS education and information, seat belt use, helmet use, physical fights, and dietary behaviors. For example, men (26.10 per cent) were significant more likely than women (16.20 per cent) to have consumed alcohol on 10 or more occasions during of the past 30 days.

Davies et al. (2000) studied male college students' perceived health needs and barriers to seeking help. They used a focus group methodology to identify these problems and revealed that the majority of the sample used alcohol for building social confidence and coping with stress, anger, and loss. Depression was a common phenomenon for this group. The results also revealed that when participants experienced stress or depression, smoked cigarettes and alcohol were the most popular methods of dealing with stress. For most of the participants seeking help from the counseling centre was a last resort.

4.3.2 Physical activity

Physical activity is particularly important for adolescents as they are still growing and developing. Although nearly every country promotes physical activity in order to prevent illness and to improve quality of life, the lifestyle of many university students is still inactive. For example, a study from Pinto (1995) indicated that 46 per cent of the students were inactive. Similarly, Green, Grant, Hill, Brizzolara, and Belmont (2003) assessed the risk of coronary heart disease in college men and women in America and the results indicated that half the sample exercised less than three times per week, with 11.2 per cent exercising less than one time per week. The results also revealed that those students who exercised at least three times per week rated their risk of having a heart attack significantly lower than those who exercised less than three times per week.

In terms of gender differences, many studies have reported that male students engaged in less physical activity than female students. For example, a study from Suminski, Petosa, Utter, and Zhang (2002) used a cross-sectional design to compare the physical activity among 2,836 American college students (aged 18-35 years) by using self-report responses (The Self-report of Physical Activity [Jackson & Ross, 1997]). The

results indicated that 40.3 per cent of male students did not engage in vigorous physical activity and 11.3 per cent did not engage in any physical activity.

In contrast, many studies have shown that female students engaged in less in physical activity than male students did. For example, Patrick et al. (1997) examined the health risk behaviors among 3,810 undergraduate university students in California. The results of the California Youth Risk Behavior Survey for College Students (California College Health, 2000) indicated that males were more likely than women to have exercised were.

Many researchers have tried to establish a relationship between mental health problems and a lack of physical activity. For example, Allgower, Wardle, and Steptoe (2001) studied depressive symptoms, social support, and personal health behaviors in 2,091 male and 3483 female university students from 16 countries. The results showed that depressive symptoms were significantly associated with a lack of physical activity, not eating breakfast, and irregular sleeping hours in both male and female university students.

Brown (2002) examined the relationship between physical activity, sports participation, and suicidal behavior among 4,728 college students, using data from the 1995 National College Health Risk Behavior Survey. The results showed that men in the low activity group were at twice the risk of reporting suicidal behaviors than men in the active group. Furthermore, men who did not participate in sport were 2.5 times more likely to report suicidal behaviors than men who were sports participants were.

4.3.3 Nutrition

Individual good health depends on the amount and type of food in one's diet. Food is absorbed by the body and used for energy, growth, repair, and maintenance of health. Diet for young people is very different from adults as they are still growing. During puberty young people require more energy, protein, vitamins and minerals and obtaining this often depends on familial and social support.

Fat intake is required for a range of body functions, but over consumption is problematic as fat will store in the blood stream and cause weight gain. Furthermore, fat excesses in the blood in the form of cholesterol can lead to atherosclerosis. An unhealthy diet can also affect the levels of psychiatric symptomatology. A study form Tyrell and Smith (1996) measured the levels of psychological distress among undergraduate occupational therapy students at Trinity College, Dublin. The results indicated that the students who had unhealthy diets or who smoked had significantly higher levels of psychiatric symptomatology.

Resent evidence has suggested that obesity in male university students is on the increase. Stephens, Schumaker, and Sibiya (1999) studied the eating and dieting behavior among Australian (192 students) and Swazi (129 students) university students. The results indicated that 34.04 per cent of male students considered themselves to be overweight. The results further indicated that 10.64 per cent were currently on a weight loss diet.

Many researches have indicated that females have better nutritional health habits than their male counterparts (i.e., DeBate, Topping, & Sargent, 2001; O'Dea & Abraham, 2002). According to Oakes and Slotterback (2000/2001), who surveyed nutritional habits

and motivations to eat in 149 undergraduate students, females were more likely to report reading nutritional labels, eating healthy meals, as well as consuming less fatty foods than males.

Moreover, a study from DeBate et al. (2001) found that male university students had poorer nutrition intake than their female counterparts. DeBate et al. examined the gender differences in weight status and dietary practices among 630 U.S. university students. The findings of this study indicated that a very small percentage of students consumed the recommended serving of vegetables (1.3 per cent) and grain products (6.9 per cent). The results also indicated that 44.2 per cent never or rarely consumed breakfast. Males were also significantly unhealthier than females in their dietary practices.

O'Dea and Abraham (2002) in line with DeBate et al., investigated eating and exercise disorders in 93 undergraduate university male students at the University of Sydney. The results indicated that 18 per cent of young male students reported eating only 2 meals each day. Approximately one fifth of the students had significant worries about their weight and shape and regularly employed restrictive eating behaviors. The results indicated that 20 per cent of students displayed eating attitudes and behaviors characteristic of eating disorders and disordered eating. Interestingly, although male students believed they had problems with disordered eating, weight control, and binge eating, not a single male participant had ever sought treatment for these problems.

Furthermore, a study from Stock, Wille, and Kraemer (2001) found that males were less likely to eat healthy food than females. Stock et al. used a cross-sectional design and a sampler of German university students. The results further indicated that

preventive behaviors with respect to healthy nutrition and dental hygiene were reported more often in female students than in male students.

4.3.4 Interpersonal relations

It is widely accepted that good interpersonal relations and a supportive social network are an important buffer against the effects of stress. Kato (2002) noted that interpersonal stress coping directly affected the availability of social support. The researcher examined the role of social interaction in the interpersonal stress process in two groups of university students in Japan: group one was 61 males and 89 females and group two was 128 males and 171 females. The results of a path analysis showed that interpersonal stress coping directly affected the availability of social support. Pleasant social coping behavior increased social support and decreased loneliness, whereas unpleasant social coping behavior reduced social support and increased loneliness.

Hamilton et al. (2003) studied the health-promoting behaviors in a cardiac rehabilitation population. The results indicated that the spiritual growth and interpersonal relations subscales were the domains in which this population engaged in the greatest number of health-promotion behaviors.

A study from Day and Livingstone (2003) supported the idea that female university students seek and use more emotional support than men. Day and Livingstone examined the gender differences in perceptions of stressors and utilization of social support among university students. The results indicated that when students were stressed, women reported that they would utilize emotional support (friend and family) to a greater degree than men would.

4.3.5 Spiritual growth

Moberg, Carney, and Peterson (1990) defined spirituality as "the inner resources of people, their ultimate concern around which all other values are focused, their philosophy which guides their conduct" (p.113). Pender (1996) defined spirituality health as the ability to develop one's spiritual nature to its fullest potential to learn how to experience love, joy, peace, and fulfillment. Pender indicated that beliefs about spirituality, life after death, and purpose in life are important dimensions of high-level wellness. Beliefs to which individuals subscribe affect their interpretations of their response to other important life events. Daily interactions with others, goals, and feeling about self-worth are related to spiritual beliefs and life philosophy. In her opinion, spiritual health also included how to help ourselves and others achieve their fullest potential. For this reason, it is critical to appraise the spiritual growth of university students.

Adams, Bezner, Drabbs, Zambarano, and Steinhardt (2000) developed a well-being model composed of six dimensions; physical, social, spiritual, psychological, emotional, and intellectual. They defined the spiritual domain as a positive sense of meaning and purpose in life. Spiritual well-being is a reflection that the spirit is healthy. Many studies have tried to represent positive spirituality in relation to wellness (i.e., Mulkana & Hailey, 2001; Hamilton et al., 2003). For example, Adams et al. (2000) examined the measurement of the spiritual and psychological dimensions of wellness in 112 undergraduate students. The results indicated that a higher score on life purpose was significantly related to a higher score on perceived wellness.

Furthermore, Mulkana and Hailey (2001) found that for male students spiritual growth was amongst the highest scoring subscales on the health-promotion behaviors index. Mulkana and Hailey also examined the relationship between levels of optimism and spiritual growth. The results indicated that spiritual growth was the most important factor for these students associated with an optimistic outlook. Moreover, spiritual growth and interpersonal relations were the domains in which subjects engaged in the greatest number of health-promoting behaviors.

4.3.6 Stress management

According to Lazarus and Folkman (1984), stress management referred to the formal programs to prevent or ameliorate debilitating stress for people in general. Monat and Lazarus (1991) described stress management as a general treatment approach to a wide variety of adaptations and health problems. Stress management, as a treatment, is universal with no one for whom treatment is unneeded or inappropriate.

Sutherland and Cooper (2000) described a tripartite approach to stress management within an organization. Primary level stress management is ‘stress directed’ and aims to prevent stress by controlling the source of stress, such as engaging in sporting activities. Secondary level stress management is a ‘response directed’ strategy that helps individuals respond to stress in a way that is not harmful to them. It suggests that using techniques aimed at improving stress coping processes could minimize stress. Tertiary level stress management is ‘symptom directed’ and aims to rehabilitate the stressed person. Tertiary level stress management is a curative approach for individuals that are suffering from the effects of exposure to stress, which might involve counseling services.

Stress is an individual perception of adverse events and their perceived ability to cope with these events in their environment. The major sources of stress experienced by male university student originate from lifestyle change, financial pressure, academic pressure, daily hassles, and love and sex. Stress is linked to many problems in the physical, psychological, and social domains. Stress management is a critical component of a healthy lifestyle. Peer groups and relatives are also very important stress buffers for individuals.

Trice (2002) studied the frequency and content of emails to parents in first year college students. The results indicated that students increased their email use during stressful periods, and women were somewhat more likely to use email than were men.

This study is in line with a study form Utsey and Ponterotto (2000). The researcher studied racial discrimination, coping, life satisfaction, and self-esteem among African American college students. In general, seeking social support was the most effective buffer against racism related stress.

Misra and McKean (2000) studied college students' academic stress and its relation to anxiety, time management, and leisure satisfaction at a Midwestern university. The results indicated that leisure activities significantly reduced academic stressors, particular in male students.

4.4 Summary

In this chapter, health promotion was defined as a process that can motivate people to maintain healthy behaviors. In the field of health promotion, Pender's PHPM (1996) is represented in detail and is the framework for the current study. PHPM is an attempt to explain the multidimensional nature of individuals' interactions with their

environment in relation to health. This concept is in line with the conceptual framework proposed by Lazarus and Folkman (1984) that an individual's perception of an event was a direct result of their cognitive appraisal of the event. From this point of view, cognitive appraisal is a process of either consciously or unconsciously evaluating one's performance whilst interacting with the environment (Lazarus, 1999). The cognitive appraisal is also a process through which an individual evaluates and manages their environment and their emotional and behavioral responses. The PHPM focuses on the person environment in three central functions: Individual Characteristics and Experiences, Behavior-Specific Cognition and Affect, and Behavioral Outcome. Individual Characteristics and Experiences are defined as individual perceptions such as prior experience and individual background. Behavior-Specific Cognition is represented as social influence and individual demographics. Behavioral Outcome is defined as an individual's likelihood of undertaking health promotion behaviors. Finally, as Pender's PHPM composed of six subscales to measure the components of healthy lifestyle, the health promotion behaviors of male university students were discussed in relation to these six foci. Research has indicated in comparison to females, males have less functional health promotion attitudes, knowledge, and behaviors, particularly within the university student demographic. In general male students are inactive, have poor nutrition intake, and are reluctant to utilize emotional support (friend and family). The results of several studies also indicated that spiritual growth was associated with health-promoting behaviors and was a stress buffer in many men's lives. Finally, stress management was discussed as an important method in reducing stress in university life. All of the literature review will use as the conceptual framework in using for the next methodology chapter.

Methodology

The aim of this chapter is to give a detailed explanation of the methodology used in this research project. Firstly, the reasons for using both quantitative and qualitative methods will be discussed. Secondly, the quantitative method is presented as a means to gather data from a large number of participants. Finally, the qualitative method is presented as a way to gain a deeper understanding of the young male university students.

5.1 Research design

The researcher chose both quantitative and qualitative methodology to enable the development of a conceptual model of stress health promotion in male tertiary education students.

5.1.1Quantitative method

Quantitative methods are appropriate for obtaining data from a large number of subjects. Using a quantitative method in this project resulted in gathering demographic data such as sex, age, and nationality. Quantitative data was also collected for the prevalence of stress, the sources of stress, and health-promoting behaviors. This was derived from six subscales namely, health responsibility, physical activity, nutrition, interpersonal relations, spiritual growth, and stress management in male tertiary education students.

5.1.2 Qualitative method

As quantitative data can often lack in-depth information and lived experience, the researcher needed to supplement the survey method with in-depth interviews. Qualitative methods are an important way of shedding light on a person's experiences and give more detail about phenomena that are difficult to convey with quantitative methods (Strauss &

Corbin, 1990). Another reason for using a qualitative approach to data collection is the actuated nature of the research problem, which qualitative methods can be used to illustrate, clarify, and give detail to a health promotion strategy (Strauss & Corbin, 1990). As a result, a multi-method approach enhanced the validity of the study by supplementing each method (Polit & Hungler, 1995).

As was discussed earlier, qualitative research attempts to capture individuals' meanings, definitions, and descriptions of events. In this study, the researcher chose in-depth interviewing as it provides a context to discover the meaning and the essence of the participants' experience (Minichiello, 2000). Participants discussed the factors related to stress, how they cope with stress, and the health-promoting behaviors they undertake.

5.2 Quantitative method

5.2.1 Instruments

The researcher used a self-report survey to collect data on stress and health-promoting behaviors. The questionnaire comprised three parts: (i) Demographic data (ii) Daily Stress Inventory (DSI) and (iii) the Health-Promoting Lifestyle Profile II (HPLP II) instrument. DSI focuses on stress in everyday life, and the HPLP II explores the health-promoting behaviors that individuals use to cope with stress. Using these questionnaires the researcher investigated stress and health-promoting behaviors in male tertiary education students. The details of the questionnaires are as follows:

Demographic data

The demographic data composed of 10 items as follows:

- age
- level of study (first, second, third, and fourth year)

- status
- resident
- nationality
- home language
- living arrangement
- source of income for education expenses
- working status

Daily Stress Inventory

The DSI (Brantly & Jones, 1989) is composed of 58 items. The items of the DSI are divided into five content areas:

- Interpersonal Problems (IP)
- Personal Competency (PC)
- Cognitive Stressors (CS)
- Environmental Hassles (EH)
- Varied Stressors (VS).

Subjects are asked to use a seven-point rating scale: Not stressful (rating of 1), caused very little stress (rating of 2), caused a little stress (rating of 3), caused some stress (rating of 4), caused much stress (rating of 5), caused very much stress (rating of 6), and to caused me to panic (rating of 7). Subjects indicate for each day the number of minor, annoying events that occurred and how stressful they believed a given event to be. For scoring one-day administration, the researcher counted the number of items that received a rating and enters this number as the labeled “Event”. Sum the item ratings and enter this

number as the labeled “Impact”. Divide the Impact score by the Event score and enter the result as the labeled “I/E Ratio”.

Event score provide objective measures of the frequency of stressful events experienced by the respondent and directly reflect the level of the respondent’s involvement in the environment. A high score suggests that the respondent has experienced many of the common stressful events that individuals experience in various areas of their personal environment. By definition, a high score implies a certain level of involvement in the environment. High scores may reflect overloaded daily schedules, poor organization of time and activities or an aggravating environment.

An impact score is made up of composite scores that are influenced by the number of daily events as well as an individual’s personal appraisal of daily events. Impact scores represent the best indicators of an individual’s personal experience of stress. I/E Ratio is an indicator of the average amount of stress. High score may be indicative of an individual who is vulnerable to stressful events and who is less able to cope with stress than the average individual.

Content Clusters contain items that appear to have a common theme, such as interpersonal problems and personal competency. Examination of individual items within contents clusters can help to define more specifically the nature of stressful events being experienced by the respondent.

The inventory’s alpha coefficient for reliability is above .80 (see for example: Brantly, Waggoner, Jones & Rappaport, 1987; Brantly & Jones, 1989). Evidence for the validity of DSI has been provided by Brantley et al. (1987). Brantley collected global ratings of daily stress from the 418 pilot sample subjects with DSI (GR scale) rating. The

GR scale is a rating scale that requests subjects to rate the daily experience of stress on a scale of 0 to 10. Correlations between the GR and the Event, Impact, and I/E Ratio scores of the DSI were .13, .35, and .49 respectively. All three correlations were significant. These correlations were similar in magnitude to those obtained in another study from Brantley et al. (1987). Brantley collected GR scale and DSI data from 35 adults who participated in a 28-day study on headaches. The average correlations between GR ratings and DSI Event, Impact, and I/E Ratio scores were .07, .04, and .25 respectively.

Health-Promoting Lifestyle Profile II

The HPLP II questionnaire is derived from Nebraska's Health Science Center, University of Nebraska Medical Center, in the US. The HPLP II is used to measure health-promoting behaviors, conceptualized as a multidimensional pattern of self-initiated actions and perceptions that serve to maintain or enhance the level of wellness, self-actualization, and fulfillment of individuals. This questionnaire is composed of 52 items and contains six subscales of health-promoting lifestyle, which are intended to measure a healthy lifestyle:

- Health responsibility
- Physical activity
- Nutrition
- Interpersonal relations
- Spiritual growth
- Stress management

Items in the profile are worded as positive actions or perceptions directed toward enhancing health and well-being such as "Getting enough sleep" "Take some time for

relaxation each day" rated from 1=never, 2=sometimes, 3=often to 4=routinely. The items are clearly oriented toward avoidance or prevention of illness. Scores are produced for the HPLP II as well as for each of the six subscales, with higher scores meaning more frequent performance of the behaviors. Scores may range from 52 to 208. It is appropriate for use in research within the framework of the Health Promotion Model (Pender, 1996) as it is provides a valid scale for measuring health-promotion lifestyle.

The α reliabilities of the six subscales were reported by Walker, Sechrist, and Pender (1987) to range between 0.70 and 0.90. These results were obtained from an administration of the HPLP to a sample of 952 adults in Midwestern communities. The instrument was found to have high internal consistency, with an α coefficient of 0.92. The test-retest reliability with a 2-week interval was calculated as 0.93 for the total scale and ranged between 0.81 to 0.91 for the subscales (Walker et al., 1987). These psychometric properties fall within the acceptable range for describing health-promoting behaviors.

The overall α reliability of the HPLP II in the current study was .94 which falls within the acceptable scale for describing health-promoting behaviors.

5.2.2 Sample size

According to ABS (1996), there were 311,400 male students of higher education. Assumed the level of alpha set at .05 and the presence of medium effect size ($\varepsilon = .25$) and that the statistical power of the study was 80 per cent. According to Bezeau and Graves (2001), a sample size of 102 is required to achieve Cohen's recommended power of .80 for detecting a medium effect with a two group $p < .05$ two-tailed t-test in this study (3 independent variables). In terms of ANOVA, Assumed the level of alpha set at .05 and the presence of medium effect size and that the statistical power of the study was 80 per

cent. A sample size of 99 (Cohen [1988] suggested from the table that 11 participants per each independent variable) is required to achieve Cohen's recommended power of .80. A total sample size of 211 young male students in a Melbourne setting (undergraduate course, aged 17-25 years, Australian citizens or permanent residents) is required to achieve Cohen's recommended power of .80, the level of alpha set at .05 and the medium effect size. Data was collected from four universities in Melbourne, Victoria: The University of Melbourne, Latrobe University, RMIT, and Victoria University of Technology.

5.2.3 Procedure

Ethics approval was obtained to conduct the study, and permission was sought from the appropriate lecturer to distribute the questionnaire to students at mutually agreed times. The researcher explained the project to the students, summarized the conditions of consent, and answered any questions. The questionnaire was then distributed to the students by the researcher. Students completed the questionnaire and returned it to the researcher via reply paid envelopes. In some situations, the researcher distributed the questionnaire at a place where students came together, such as at the Student Union or Cafeteria. The researcher directly contacted the students and asked them to complete the questionnaire at their convenience. The students completed the questionnaire and returned it to the researcher by reply paid envelope. Return of the questionnaire was interpreted as consent to participate in the quantitative component of this study. A cohort of the same group of students who were asked to complete the questionnaires could volunteer to take part in the in-depth interviews.

5.3 Qualitative Method

5.3.1 Instruments

In this study, the researcher chose in-depth interviewing as the strategy and content analysis as the preferred qualitative method. The researcher developed five discussion questions that assessed the three core research questions (The sources of stress, how they cope with their stress, and health-promoting behaviors). The interview questions were:

(1) What sorts of hassles do you experience on a day-to-day basis?

(2) What sorts of physical change you are not happy with?

(3) What are the main problems you are unhappy at university?

(4) What kinds of things do you unhappy with your friends and relatives?

(5) What types of methods do you use to cope with stress?

5.3.2 Sample Size

In the qualitative part of the study, 13 male tertiary education students participated in in-depth interviews drawn from four tertiary universities in Melbourne (young male students in a Melbourne setting, undergraduate course, aged 17-25 years, Australian citizens or permanent residents). The participants were the intending students who sign in expression of interest form that is included with the questionnaire.

5.3.3 Procedure

In the case of interviews, intending students signed the consent form to participate in the study. The researcher then made contact with students to arrange the interview. Before starting the interview, the researcher explained the project, summarized the conditions of consent, and informed students about confidentiality, and the subject's right

to participate, and their right to terminate their participation at any time. Completion of the questionnaire was not a condition of participant consent to be interviewed or vice versa. During the interview, the students could refuse to answer any specific questions or decide to terminate the interview at any point.

Tape-recorded, in-depth interviews were carried out in a relaxed manner, in a private setting. The audiotape was used to reduce the risk of recorder bias. The interviewer used open-ended questions for a period of about 45 - 60 minutes. The purpose of the interviews was to identify issues about the causation of stress factors, which increase and decrease stress, health-promoting behaviors that help them prevent and cope with stress, and health-promoting behaviors that help prevent stress. The participants were encouraged to discuss the open-ended questions privately with the researcher.

The general theme was pilot tested on three male university students, and appropriate amendments were made to enhance clarity and understanding. The pilot testing also enabled the interviewer to practice and refine interview techniques. The general theme meant each participant was taken through an identical set of themes that were asked in the same way. The in-depth interview was divided into five sections:

(1) Introduction: This section included a general introduction to the project with the intention of establishing rapport and orienting participants to the interview process. During the introduction, it was emphasized that the interview is about their stress experiences and how they cope with their stress as a university student.

(2) Sources of stress: Participants were asked to describe sources of stress that arise during study in tertiary education. Further, participants were informed that sources

of stress could be general sources (e.g., finance, family) or sources particular to their academic settings (e.g., exam, report).

(3) Method of coping with stress and health promotion behavior: Participants were asked to describe coping strategies they used to reduce and prevent stress as well as any health promotion behaviors they performed.

(4). Summary: The researcher thanked each participant for his co-operation. The interview lasted between 45 and 60 minutes. Participants were sent a copy of their transcript for verification that it was a true reflection of their experiences.

To protect student confidentiality, the interview was transcribed into an anonymous form before it was distributed for analysis.

Trustworthiness of data was obtained through inter-rater reliability of the transcripts, and auditing with a sub-group of participants.

Study One: Quantitative analysis

Stress management and health-promoting behaviors in male tertiary students

All data was entered into the Statistical Package for Social Sciences (SPSS), Version 10. This chapter is a quantitative analysis of the male university students' scores on the Daily Stress Inventory (DSI) and the Health Promotion Lifestyle Profile II (HPLP II).

In regards to the DSI, three scores were calculated for each student. The event score refers to the frequency of stressful events experienced by the respondent and indirectly reflects the level of the respondent's involvement in the environment. Higher scores represent a greater number of stressful events. The impact score represents a personal appraisal of stressful events and indicates an individual's personal experience of stress. Higher scores represent greater perceived stress. The Impact/Event Ratio (I/E Ratio) represents the average amount of stress associated with weekly events. High scores represent greater perceived stress relative to the frequency of stressors in an individual's environment. Low scores indicate either greater coping, less frequent stressful events, or the perception of fewer stressful events. The I/E Ratio gives the best indication of a participant's functioning in relation to stress and thus was used as the dependant variable in statistical analysis. The DSI contains the five subscales of interpersonal problems, personal competency, cognitive stressors, environmental hassles, and varied stressors.

The HPLP II consists of one total score representing the total frequency of a respondent's health promotion behaviors (Total HPLP II). Higher scores indicate greater participation in health promotion activities. The HPLP II contains within it six subscales,

Health responsibility, Physical activity, Nutrition, Interpersonal relations, Spiritual growth, and stress management.

There are four sections relating to four hypotheses.

The first section used t-tests to determine the representativeness of the current sample by comparing it to a normative university student sample. Thus, the current DSI scores were compared to a normative sample studied by Brantley and Jones (1989). The current HPLP II scores were compared to a normative sample studied by Deckro et al., (2002).

The second section used ANOVA analysis to determine if any of the demographic variables (age, level of study, status, resident status, nationality, home language, living arrangement, source of income for education expenses, and working status) significantly affected DSI scores and also HPLP II scores.

The third section used factor analysis to determine whether any of the five subscales of the DSI (interpersonal problem, personal competency, cognitive stressors, environmental hassles, and varied stressors) were particularly salient for the current male university student sample. Also whether any of the six subscales of the HPLP II (health responsibility, physical activity, nutrition, interpersonal relations, spiritual growth, and stress management) was particularly salient for the current sample.

The fourth section analyses the relationship between the DSI and the HPLP II, that is, whether a relationship exists between perceived daily stress and health promotion behaviors.

6.1 Is the current sample a normative male university student cohort?

As seen in Table 1, the findings indicated that male university students in the current sample reported significantly more stressful events in their daily lives than a normative sample ($t(225) = 5.79$, $p < .05$). It was concluded that the current sample had more stressful events in their life than a normative male university student and also had a greater involvement with their environment (reference table 1: Brantley & Jones, 1989).

The findings also indicated that the current sample perceived a significantly greater amount of stress than a normative sample ($t(225) = 4.96$, $p < .05$). It was concluded that the male university students appraised greater stress in their personal experience that a normative male university student (reference table 1: Brantley & Jones, 1989).

There was not a significant difference between the I/E Ratio scores of the current sample to those of a normative sample. It was concluded that in respect to interpreting stressful events the current sample was normative. The current sample had more stressful events in their lives and therefore this stress resulted in greater impact scores. Thus, the I/E Ratio was not significantly different from the normative sample (reference table 1: Brantley & Jones, 1989).

In terms of the frequency of the students' health promotion behaviors (HPLP II), the current sample did not differ significantly from the normative group. It was concluded that current samples' performance of health promotion behaviors was not significantly different in quantity to the normative male university student. This lack of difference parallels the lack of difference between the two groups in I/E Ratio (reference table 1: Deckro et al., 2002).

Table 1 t-test statistic for sample size (N = 226)

Content	Sample		Normative college students		Sig. (2-tailed)
	M	SD	M	SD	
DSI					
Event	20.46	8.20	17.30	7.83	0.00
Impact	62.63	34.81	51.14	33.65	0.00
I/E Ratio	2.82	0.92	2.85	1.03	0.60
HPLP II	1.36	0.34	2.44	0.50	0.50

6.2 Do demographic variables affect stress (DSI) and health promotion behaviors (HPLP II)?

For demographic data, there were nine independent variables: 1) age, 2) level of study 3) status, 4) resident status, 5) nationality, 6) home language, 7) living arrangement, 8) source of income for education expenses, 9) working status. The results are based on the questionnaire responses of 226 study participants from four universities in Melbourne, Australia (The University of Melbourne, Latrobe University, RMIT, and Victoria University of Technology). The dependant variables are the DSI event, impact, and I/E ratio scores, and the overall health promotion behavior score (HPLP II). Following is the numbers and percentages of students in each category in which the researcher divided into two tables for each of the variables listed above: Table 2 is represented age, level of study, status, resident status, living arrangement, source of income for education expenses, and working status variables and table 3 is represented

the nationality and home language as these two variables had a significant with dependent variable.

As seen in Table 2, the population age ranged from 18 to 41 years, a mean age of 21(SD = .94). The majority of participants were in the early stages of the tertiary studies. The highest proportion of participants was single. 2/3 of participants still resided with their parents. The majority of young men in this study was employed on a part-time/casual basis, and was self-supporting or had parental support with their education expenses. As seen in Table 3, the highest proportion of participants had Australian citizenship/nationality or permanency status. English was the predominant language spoken at home. The results of this study revealed that the demographic variables of age, level of study, status, resident status, living arrangement, source of educational income, or work status did not have a significant effect on any of the stress indicators or health promotion behavior.

Table 2 Demographic characteristics and one way ANOVA for sample size (N = 226)

Characteristics	Percentage	DSI (Ratio)		HPLP II	
		F	Sig.	F	Sig.
Age					
< 20	34.10	1.11	0.33	0.23	0.79
20-24	55.70				
› 24	10.20				
Level of study					
First year	47.30	1.59	0.19	0.57	0.63
Second year	23.00				
Final year	26.50				
Post graduate student	3.10				
Status					
Single	88.10	0.05	0.95	0.53	0.59
Married/de facto	8.80				
Divorce/separate	3.10				
Resident status					
Australian permanent/citizenship	91.20	1.22	0.27	0.49	0.48
non-permanent resident	8.80				
Living arrangement					
With parents	66.80	0.11	0.73	0.39	0.54
Independent	33.20				
Source of income for educational expenses					
Self	70.80	1.96	0.12	1.91	0.13
Parents	23.45				
Loans	5.75				
Work status					
Employed, full-time	3.10	1.80	0.14	1.29	0.28
Employed, part-time/casual	67.30				
Unemployed, looking for full-time work	26.10				
Unemployed, looking for part-time/casual work	3.50				

As seen in Table 3, the results showed that the mean event score for the Australian nationality students was 19.47 (SD = 8.38) and for non-Australian nationalities it was 22.44 (SD = 7.47). With alpha set at 0.5, a one-way ANOVA showed that non-Australian students had a significantly higher DSI event than Australia students

($F(225) = 6.71$, $p < 0.05$). It was concluded that non-Australian students had greater frequency stressful events than Australian students. In other words they had a greater experienced many of the common stressful events in various areas of involvement in the environment.

The results showed that the mean impact score for the Australian nationality students was 56.75 (SD = 34.61) and for non-Australian nationalities it was 74.46 (SD = 32.27). With alpha set at 0.5, a one-way ANOVA showed that non-Australian students had a significantly higher DSI impact than Australian students did ($F(225) = 13.71$, $p = 0.00$). It was concluded that non-Australian students had greater individual's personal experience of stress than Australian students.

The results showed that the mean I/E ratio for the Australian nationality students was 2.68 (SD = .92) and for non-Australian nationalities it was 3.09 (SD = .86). With alpha set at 0.5, a one-way ANOVA showed that non-Australian students had a significantly higher DSI ratio than Australian students did ($F(225) = -3.2$, $p = 0.00$). It was concluded that relative to the frequency of stressful events, non-Australian students had greater perceived stress than Australian students did. In other words they had a greater experience of stress in their weekly lives.

The results showed that the mean impact score for students who spoke English at home was 56.75 (SD = 34.61) and for those who spoke another language at home it was 74.46 (SD = 32.27). With alpha set at 0.5, a one-way ANOVA showed that with English as the home language, students had a significantly lower mean DSI impact than ESL home language students ($F(225) = 13.71$, $p = 0.00$). It was concluded that students who

did not speak English at home had a greater individual personal experience of stress than those who spoke English at home.

Also, the results showed that the mean Impact/Event Ratio score for students who spoke English at home was 2.75 (SD = .94) and for those who spoke another language at home was 3.07 (SD = .80). A one way ANOVA showed that students from non-English speaking homes had a significantly higher I/E Ratio than English speaking students (F (225) = 4.44, p = 0.03). It was concluded that relative to the frequency of stressful events, students from non-English speaking homes had greater perceived stress than students whose family's first language was English did. In other words they had a greater experience of stress in their weekly lives.

Table 3 Demographic characteristics and effects of nationality and language on stress (N = 226)

Characteristics	Percent-age	DSI						HPLP II	
		Event		Impact		Ratio		F	Sig.
		F	Sig.	F	Sig.	F	Sig.		
Nationality									
Australian	66.80	6.71	0.01	13.71	0.00	-3.20	0.00	0.03	0.87
Other	33.2								
Home language									
English	79.20	2.94	0.08	5.78	0.01	0.03	0.03	0.01	0.91
Other	20.80								

6.3 What are the most salient subscales of the DSI and HPLP II in regard to male university students?

6.3.1 What are the most salient subscales of the DSI in regard to male university students?

Factor analysis was performed to investigate potential differences in five content areas by principle component extraction with Varimax rotation, selecting for factors with eigenvalues greater than 1. One factor was attracted, which between them accounted for 48.12 per cent of variance. The extent to which each subscale in the DSI loaded onto each of this one factor is shown in Table 4. The subscales of varied stressors and environmental stressors most heavily loaded onto this factor. It is conclude that there is a non-specific general stress factor evident in relation to young men's daily life.

Table 4 Factor analysis of content using principle component extraction with varimax rotation.

Content	Factor
Varied stressors	.775
Environmental stressors	.735
Interpersonal events	.656
Personal competency	.646
Cognitive stressors	.645

6.3.2 What are the most salient subscales of the HPLP II in regard to male university students?

Factor analysis was performed to investigate potential differences in six content areas by principle component extraction with Varimax rotation, selecting for factors with eigenvalues greater than 1. Two factors were attracted, which between them accounted for 40.07 per cent of variance. The extent to which each subscale in the HPLP II subscale loaded onto each of these two factors are shown in Table 5. The subscales of interpersonal relations and spiritual growth most heavily loaded onto the first factor. The subscales of physical activity, health responsibility, stress management, and nutrition most heavily loaded onto the factor two. It is concluded that the first factor of HPLP II related to promoting cognitive/emotional health and well-being (spiritual growth, interpersonal relations), while the second factor related to the promotion of physical health and well-being (physical activity, health responsibility, and nutrition). The subscale of stress management contributed to both factors.

Table 5 Factor analysis of content using principle component extraction with varimax rotation.

Content	Factor	
	Cognitive/emotional	Physical
Interpersonal relations	.735	
Spiritual growth	.664	
Physical activity		.598
Health responsibility		.527
Nutrition		.512
Stress management	.360	.457

6.4 Are stress (DSI) and health promotion behavior (HPLP II) related?

As can be seen in Table 6, with alpha set at .05 a Pearson's bivariate correlation showed that the health promotion behavior of interpersonal relations was significantly and inversely related to the frequency of stressful events ($r = -.15$, $p = .02$) suggesting that as interpersonal relationships are worked upon and improved the frequency of stressful events declines.

The total HPLP II score was significantly and negatively related to the impact of stressful events ($r = .15$, $p = .02$) suggesting that as health promotion behaviors increase the impact of stressful events is reduced. Moreover, 3 of the 6 subscales of the health promotion scale were significantly and negatively related to the impact of stressful events: interpersonal relations ($r = -. 24$, $p = .005$), spiritual growth ($r = -.15$, $p = .02$), and stress management ($r = -.14$, $p = .03$).

As displayed in Table 6, the relationship between the total HPLP II and the DSI (I/E Ratio) was nearing significance ($r = -0.12$, $p = 0.07$), while 3 of the 6 subscales of the HPLP II were significantly and negatively related to the I/E Ratio; interpersonal relations ($r = -.21$, $p = .005$), spiritual growth ($r = -.15$, $p = .02$) and stress management ($r = -.18$, $p = .005$). These results suggested that as the frequency of health promotion behaviors increases the experience of stress is reduced.

In relation to health promotion behavior these results suggested that while health promotion behaviors may not be associated with a reduction in potential stressors in one's environment, they are associated with a reduced likelihood that an individual will perceive these events as stressful, and was also associated with an overall reduction in the experience of stress. Of the health promotion subscales interpersonal relations, spiritual growth, and stress management were most closely related to the impact and experience of stress.

Table 6 Correlations between the DSI and HPLP II (including subscales) (N = 226)

HPLP II	Event		Impact		I/E Ratio	
	r	p	r	p	r	p
Total HPLP II	-0.08	0.25	-0.15*	0.02	-0.12	0.07
Health responsibility	-0.02	0.73	0.02	0.81	0.12	0.08
Physical activity	0.18	0.79	-0.03	0.64	-0.03	0.67
Nutrition	-0.27	0.69	-0.04	0.59	-0.03	0.63
Interpersonal relations	-0.15*	0.02	-0.24**	0.00	-0.21**	0.00
Spiritual growth	-0.87	0.19	-0.15*	0.02	-0.15*	0.02
Stress management	-0.02	0.76	-0.14*	0.03	-0.18**	0.00

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

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

With alpha set at .05 a Pearson's bivariate correlation found that health promotion behavior was significantly and inversely related to the Event/Impact ratio score for cognitive stressors ($r = -.15$, $p = .02$) suggesting that as health promotion behavior increases the overall experience of cognitive stressors declines as seen in Table 7. The results of this study also found that overall health promotion behavior was significantly and inversely related to varied stressors ($r = -.14$, $p = .02$) suggesting that as health promotion behavior increases the overall experience of varied stressors declines.

It was concluded that of the DSI subscales cognitive stressors and varied stressors were most strongly related to health promotion behavior.

Table 7 Correlations between the DSI subscales and HPLP II (N = 226)

HPLP II	Interpersonal problem		Personal competency		Cognitive stressors		Environmental hassles		Varied stressors	
	r	p	r	p	r	p	r	p	r	p
Total HPLP	-0.21	0.00	-0.02	0.76	-.15*	0.02	-0.07	0.27	-.14*	0.02

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

Study Two: Qualitative analysis of stress management and health-promoting behaviors in male tertiary students.

Although it has been acknowledged that vulnerability factors play an important role in the relationship between stress and health promotion behaviors in young men in tertiary education, there has been very little qualitative research focusing on these factors. The aim of the present study was to study the vulnerability factors related to stress and health promotion behaviors in young male university students.

Qualitative data was transcribed verbatim. In order to protect students' confidentiality, pseudonyms were used throughout the transcribed data. As outlined by Huberman and Miles (in Denzin & Lincoln, 1994), a content analysis was carried out using three linked sub processes. These were data reduction, data display, and conclusion drawing/verification. In terms of data reduction, the researcher selected a conceptual framework, research aims, and instruments, and an anticipatory approach was applied. After collecting field notes, interviews, and tapes, the data was summarized, coded, and themes were derived. Data was displayed in terms of these themes. Also, clustering, and further instances of data selection and condensation were conducted. Data was checked for accuracy and conclusions were drawn relating to the research aims. The saturation of themes will indicate the adequacy of the participants.

7.1 The meaning of stress

The meanings of stress were reported as follows according to the order of the students' interviews. The students identified a wide range of meanings of stress that included both physical and emotional meanings. Students however, identified emotional

aspects as having the biggest impact in relation to stress. The young male students used a variety of emotional phrases to indicate the meaning of stress.

(1) Worry. "…*mental stress is more a worry about certain things around you and the strain that puts on you", "…we can talk about stress in terms of a feeling…", "…when you do something in the future that you really worry about you have to do…and you don't really want to…",* and *"it is an inability to deal with your life situation*".

(2) A difficult or unpleasant task "*something you want to do but it is hard".*

(3) Pressure "*when you are under a lot of pressure and you have a deadline to meet, you can get really frustrated." or "pressure from daily events and things you have to do…sometimes things build up and you feel under pressure to get things done." "…when there is pressure on you to do things.",* and "*That pressure and worry builds and you start getting stressed."*

(4) Inability to cope "…*it would understand it as an inability to deal with your life situation."*

(5) General strain "…*stress is more a worry about certain things around you and the strain that put on you".*

(6) Striving to attain a goal"…*when you striving for something. You are stressed to be successful later…*" or "*when you striving for success*" or "*when you striving for success, the steps you take are stressful…"*

(7) Feeling uncomfortable "…*stress means I'm feel uncomfortable*…".

(8) Feeling that things are not going right "*you don't think/feel that things are going right."*

(9) Frustration "*I can get very angry frustrated*…"

(10) Sadness "*I was sad. I was so sad."*

(11) Panic *"… panic, uncomfortable, you don't think/feel that things are going right, or I'm panicky about something*."

(12) Challenge "*…generally something that is challenge to you", and "…a challenge that you might face".* Many of the students viewed the meaning of stress in a positive way or as a challenge.

Physical meanings of stress were also indicated by participants, such as "*you can be stressed physically stress in a way you get very tired in that, do many things at once*" and "*If I am too stress then I can feel physically ill. I can just be totally out of the world not really wanting to do anything."*

In conclusion, stress has both physical and emotional connotations. In this interview participants did not mention the social aspect.

7.2 The sources of stress

The findings of the study indicated that the participants' concerns about the sources of stress fell under three categories, namely university life stress, financial stress and interpersonal relationship stress.

7.2.1. University life stress

Examples of university life stress were as follows: academic stress, imposed pressure to succeed, future career, and satisfaction with university status.

Academic stress

Young males' distress was associated with approaching assignments, and particularly exams. Almost all of the participants considered assignment and exam issues

as the most stressful factors during university life. The level of stress depended on individual attitudes, knowledge, and coping strategies.

"I found probably you know that academic stress it can be very large, can be very painful emotionally, physically."

"It's really towards when exams are starting that I start to lose sleep over it. It is more towards the end of the course as I go through the semester it gets more stressful as the semester goes on. So the stress sort of builds up, more and more."

Some participants were disappointed with their lecturers' because of a perceived lack of instruction for assignments and exams.

"*That is the main stress that they are giving you an assignment the day before and they won't provide assistance. You ask them to help with the assignments."*

"*When I study I do get upset because it is like it is going nowhere. You do all this study for nothing. What they give you to study for the exam is studying a whole book for something that is going to be three questions in the exam and you don't know what to study for. That's what was provided for me."*

As a result of assignments and exams, the respondents also felt uncertain that they would graduate.

"I am worried I won't finish. I think I will fail again, especially with the IT subjects. It is the way that they teach. How do you study for something like this that you really can't study for? It is IT, it is computer based. It is what you apply in an organization not what you apply on a piece of paper. That's what's stressful – that you are learning something that you will never apply. It is disturbing. That they give you an exam where when ever would you see this in an IT situation?"

Some participants did not feel confident any time that they had an exam.

"*I just find the exam time stressful or mid test time stressful because I'm not very good at them. I tend to make panic a bit in exams or make a lot of mistakes."*

"I just I like it was one of these things where I know the whole course and could do all the problems it was just when I got into the exam I just brain shut down. I just didn't… stress.. so… I don't know… I just I…. I just… panic… had a bit of a panic during my exams last semester."

Many participants indicated that the first year of university was more stressful than any of the following years.

"*…a first semester of first year, it was very stressful*." and "*Usually the first year is when you have all the problems. It's just until you get settled, as you don't know what to expect. …You don't have anyone chasing you. At high school everyone pushes you but when you go to University you have to do everything by yourself*."

Moreover, in many respondents, they reported failing in one or more exam in their first year of university study.

"*I have failed. I failed on my first year. I failed a lot. It's just I didn't have a system and a bit more immature… And my first year I drowned, I struggled a lot, you know, and the affects of that were on my results…. first year I struggled a lot*."

And from yet another participant "*I failed in my first couple of years in here I failed a bit and really in the last I sort of felt that the way I was going about my study was not very good for university. Um and that was … that was stressful I guess."*

Another participant felt shock when he failed his exam. "*I failed two exams in first year. It was a shock as you want to pass and you don't want to go back the next*

semester. You want to move on but you do learn from your mistakes. I was stressed at the time."

Imposed pressure to succeed

Some reports have indicated that imposed pressure to succeed is a characteristic of a type A personality. The findings of this study indicated that imposed pressure to succeed was a factor in participants' stress, for example:

"*I have to obtain a certain mark because of my scholarship which is a big source of stress because I know that I need to get only to obtain a certain mark but I also have personal standards where I hope, you know, some people may be happy with the pass mark where as I need to achieve, you know, a mark well above 80 per cent or 90 per cent and that's what I aim for. That's my personal sort of my personal goal really and I need to have that too and I need too I think I do that you know because you know the little bit of stress, the nerve. That to me provides something, provides a ground that I can sort of that I study hard and do better in the exam."*

Some participants pointed out that they had to succeed in everything. This idea can place extra strain on student academic performance.

"People would say 50 per cent is good enough. One mark over, you work too hard. I sort of say, well, you know, if you just pass that's a bad, bad mark, you know. You fail. It's really bad. I aim for a high mark in everything I do. That's just who I am. I don't regret that. I think that's a good thing to do."

In reality individuals cannot succeed in everything they do and need to be able to accept less favorable results. This study found that unreasonably high expectations were associated with stress.

Future career

It is widely accepted that increases in youth unemployment represent a powerful source of stress for young people. Particularly uncertainty regarding future work situations may act as a stressor for university students. In this study, participants worried about the future for many reasons, such as institute status, uncertainty in their future employment markets, and doubts over their own performance capabilities.

"*The job that I will have will be to be a doctor. Um, sometime I worry that if I don't study hard enough now that one year from now or two years from now because I'm not doing enough work now, something might happen to someone or I might make the wrong diagnosis or something and they get sick or worse, may be even died because I don't know what the right thing to do*."

"I'm a little bit worry about is whether I will find the job around home. I would like, ideally, to work somewhere around home."

Moreover, some participants were also worried about the affect their grades and work experiences will have on their future careers.

"*I'm worried because I feel a bit intimidated the fact that I've got no experience…. Yeah, um I just feel intimidated because I've been through career phase, and you know, met kind of, met people in that industry and they're very serious, very old, very corporate and I just feel, you know, am I like that? Would they like me? Would I fit in? You know, and my first year result was pretty…., And I'm worry when I go for a job interview, you know, they're going to look at my result and may be not give me a chance because of that, you know. No matter how much I show them I improve later on, you*

know, there might be student from year one to end has been perfected, you know, I am just scare of that competition."

And "*In term of finding a job that's what I'm worry because I even sometimes glance through the newspaper and see things like experience. I don't have any experience. And I'm not going to lie in the interview, yeah I work for this, I've done this, you know So what I'm gonna do. I feel like a new born baby, you know, so I don't know what to, yeah that's kind of worry me."*

Satisfaction with university status

Feeling unhappy at university can cause significant stress for young people and has consequences for their prospects for personal and career development. Some participants in this study worried about whether the institute they attended was respected and had the necessary facilities.

The results indicated that some respondents felt unhappy with many facilities and the atmosphere of their institute. "*I find this university the worst university and that makes me unhappy. There is no atmosphere, the library is crap and there is not enough study areas. During examination periods, where are you to study when there is only 16 study rooms? You can't study here. The lecturers are boring and how is this relevant to anything. They are not teaching, they are reading off slides. When it comes to that period when you have to study – what do you look at? You sat there in every lecturer thinking how I am going to study for this when what they are saying is not relevant to what is going to be in the exam. It gets me upset."*

Moreover, the findings indicated that some participants felt unhappy with their university status as they felt other students were not focused on their study, for example.

"*Where as (university1) is not that sort of university and I find, as a result, because it hasn't got the prestige there aren't many people that enjoy the finer things in life. There a lot more people that, people of the mentality that just want to pass thing, you know, you understand?"*

"*At (university2), there's more people like myself that want get better marks, you know, they have to strike the personal goal where as at (university1), there are more people, because it's easier to get to (university1) than it is to get to (university2).*"

Furthermore, some participants felt their institution's status would not be recognized by the employment market when they completed their degrees. "*I'm also worry, would my university will be as recognized as say another university, you know, like you look at (university 2) uni, that's very recognized. Is (university 1) University recognized as much as people that are employing, you know, that worry me."*

7.2.2 Financial stress

There are a number of studies that indicated that financial situations might negatively affect individuals' feeling of distress (Ager & MacLachlan, 1998; Schafer, 1996; Simons, 2003; Roberts, Towell & Weinreb, 1999). The examples of financial stress in the current study were paying back student loans and part-time jobs.

Loans

In this study, most of the students used HECS (Higher Education Scheme), a low interest government loan to pay their fees. Many students worried about paying this debt back after graduating and finding a job.

There were examples of participants who were worried about debt. "…*that's also what I think about, because it's like a hidden clause. You don't see it that at the time*

because it's all put on to the HECS but when you do start work and you have to pay back."

Financial problems were abundant for participants.

"*At one stage a big stress was my economics stage like I didn't have money. I find it hard to even to put petrol in my car. You know I always have to turn to my parents, you know, can I have some money. They are not millionaires themselves. They help me to the extent they can. That was a big stress because it's hard, you know. You don't have money, you're student and I can't get clothes, I can't, you know. Like, sometimes I go to school hungry because if I don't make lunch from home, you know you come to school in the morning and might have a full day. You got no money to buy lunch and your stomach goes rumbling. You can't ask anyone, can I have some money, you know."*

Part-time employment

Almost all of the students had to work part-time to cover university and personal expenses; many students felt unhappy with their job and felt they were losing their social life because of it. Many participants also felt they were sacrificing academic development because their part-time jobs were not related to their study area.

"*…so basically I'm just working to cover my expenses and stuff like that. And by doing that it cuts out a lot of my social life. So I can't, I don't go out. I used to play soccer. I don't have a time for that anymore because of study and work*."

Many students showed that they were not happy with their part-time job, for example.

"*And then I get change my ugly uniform*."

"*I don't enjoy the job because they are so many of those people that believe they're better than the rest these people, you know, that perhaps have a lot more money than us. And because of that they can go to these very fancy functions. They can spend all their money and make themselves feel better than the rest. I guess that what's really disappointed me about MCG (Melbourne Cricket Ground), well not only MCG, any cooperate functions in general where these people, sort of, look down on you. I don't serving these people because you have to, sort of treat as if they're superior than you."*

The part-time job can also have an effect on their study.

"*…you can't just come home and get straight into your study because obviously you're a bit tired from work, you need time to rest a lit bit and eat, so by the time I get to study it's probably about 8 o'clock or something, and you try to focus so that's all make it's hard."*

"*It's just my body tired because you have to build up of the week plus work on top of that. And it's just; it gets a bit stressful. Sometime I work during the week as well."*

"So by Monday, I'm just dead tired hard to focus on the lecture."

The stresses are also greater when combined with academic work.

"*So I kind of do that but the hard thing I find is that you got homework plus assignments plus mid semester test. So you got to try to balance that out. Sometime a test could be on the Monday and I'm working from Friday to Sunday. And it just made me nervous because I'd like to study up to the last minute."*

"I work part time and some weeks I work a 40 hour week and that take up time when I am at Uni 5 days a week. It can make it hard. Usually I work 2 –3 days a week during the week, nightshift. That takes up a lot of time and there are pressures at work

and then they double up on your academic pressures. I participate in sport (football) outside of Uni and work and I have to train two nights a week and then play on the weekend. That takes up a significant amount of time. There is a lot on my plate."

Interpersonal relations stress

Examples of interpersonal relation stress were as follows: interpersonal relationships, intimate relationships, ethnic background, family rules, parental marital separation, and family member problems.

Interpersonal relationships

Interpersonal relationships can be a source of pleasure as well as cause deep emotional pain. In this study interpersonal relationships were a common source of stress. The findings indicated that relationships were the source of minor everyday stressors as well as the occasional major stress event.

"*Sometime I suppose meeting new people can be stressful…When you meet someone new, you want to make a good impression or you worry what people think about you*."

In another example, one participant got into a minor argument.

"*We were arguing over some clothes. He wanted to borrow something of mine but he is bigger than me, taller. And, If he borrow my clothing he would have stretched it, and I borrow some of his clothes, but I'm smaller I don't stretch his cloth. So, he would be arguing that it's not fair that I can borrow his cloth but he can't borrow my cloth. And we argue for along time, and then it got out of hand and we had a fight*."

Many participants were vulnerable to conflicts in interpersonal relationships, although these conflicts often arose out of trivial incidents.

Intimate relationships

Love relationships were a common experience among the respondents. The pervasive influence of intimate relationships on young people's psychological and physical development has received much empirical investigation (Knox, Schacht & Zusman, 1999). The findings showed that some of the participants felt distress due to intimate relationships. Distress often lasted long after the end of an intimate liaison. Moreover, one participant felt like giving up as a result of a failed relationship.

Some participants indicated they experienced problems due to the behavior of their partner. For example, "*She can be very demanding on time. She wants to spend time with me and that, that proves a bit of getting use to. Last year was a bit stress point for her and she stress and transfer on to me and not so much of problem that we have. But she's stressful person about and all that kind of stuff she doesn't cope very well and she starts stressing and that kind of put strain on me."*

Some students felt upset and felt their study was affected by a break up. For example, "*I was upset a bit but more just emotional. You try and sit down at your desk and try and work and you just can't really concentrate for a while."*

"*This took all my concentration and I couldn't do any study really for my exams and in the end I was able to sort it out in time to do enough study for the exams but it was very close and it did affect my marks a little bit I think. So I mean so that was stressful*."

After relationship break-ups some participants found it hard to resolve the thoughts and feelings they had regarding their ex-partner, for example. *"I was quite upset about it but it (break from girlfriend) wasn't up to me to be deciding for the two of us."*

"*We were together for three years and we broke up at the start of this year. During the relationship there was stress, but we always made up because we were very open with each other, um that was pretty stressful very upset because um, I still love her and she still loves me but because of her family issues. I found that very stressful, stupid*."

"*I always worry about her. I never stop worrying about her. I don't know I just worry about her. Its feelings aren't always logical so we'll sort it out. You know we.. it is, it kinda sort of is. We're still broken up but you know I just don't feel, you know I'm not. I just worry about it. I just worry about it."*

More disturbingly, one student felt suicidal after experiencing problems with his relationship.

"I was putting myself under a lot of pressure at school to do well. Ah, a lot of pressure from my parent and pressure I put it myself, I don't know I was in love with the girl and she didn't love me back, very sad and I remember thinking I was so sad, may be it would be a good idea or easier to end it."

Ethnic background

Minority group membership has been identified as having an impact on the developing of young males through ongoing strain or chronic stress.

Ethnic background is one factor that some participants indicated as disadvantageous in their studies. For example, "*I only start speaking English when I was in grade prep. Before that I was speaking my own language at home because my parents didn't have English. So I see that as advantage for people who got parents that were born here, you know, know English well and stuff like that so, yeah, just one I see that as quite a bit disadvantage for someone*."

"Whereas for me I don't have that because my parents can't read English or they have difficulty or my English would be better than their. So you kind of on your own and you have to seek alternative ways of actually getting that assignment checked from someone."

Furthermore, ethnic background can also have an effect on intimate relationships.

"*I did have a girlfriend. We had a three-year relationship. But problems arose, personality conflict, you know, we're just a bit different. Uh, her family didn't want to accept me because of my nationality, my background. I consider myself Australian, but you know, obviously because my parent came from overseas. Ah, religion, we have different religion. Her parents just refuse to accept. So we go our own way. That broke up*."

Family rules

The role of family in young people's experience of stress has received much attention as the family plays a major role in young people's academic performance and development. In this study the participants were concerned about family rule. University students strive for a sense of identity and independence within society. The restrictions or rules set by their family can have both a limiting and supporting effect on young people. The findings here supported the idea that family rule is a source of stress for male university students.

Many participants experienced restrictions during the first year of university. It is the transitional time from adolescence to adulthood that caused much stress for participants. "*I do have curfews, like for example, my first year when I was studying."*

Some students felt uncomfortable and stressful with their parental restrictions and rules. For example, "*Even things like, when I returned from Belgium. I lived in Belgium for a year. When I returned, you know, I was quite independent person and to come back to a family, that has rules and, you know, your family are lovely people. They still treat you like you are a child. That compounds stress. Your parents, especially when you turned eighteen, you believe in your own adult."*

Another participant was worried about his parent's high expectations of his study performance.

"*Parents have high expectations… They want me to study. They want me to do a Masters and Ph.D. and become a Doctor. They are both from xxxxxx University and have studied internationally at xxxxxx and xxxxxx. My father was a lecturer at xxxxxx University. He did his Ph.D. in xxxxxx and two Masters*."

Parental marital separation

The experience of parental marital separation is considered an unexpected stressful event for young people. One of the participants interviewed was burdened with this extra source of stress. As a result of divorce, the participant felt distressed and could not function adequately. Furthermore, he also became weary of intimate relationships.

This participant at the first stage of interviews viewed divorce as a common thing in society that has minimal effect on children.

"*My parents were separated about three months ago. That every one always assumes that's very stressful for children. I disagree. I think children these days are especially considering how common divorce or separation is for parents. I think children these days cope with it a lot better. There are lots more children in this situation. They*

can sort of lean back on each other. And, can find support if they need. But generally children don't need support because they're growing up knowing that divorce is a common thing."

When we continued talking about the result of separation, he finally accepted that it had had an effect on his university life.

"I was sad. I was sad. I thought it was hard."

"*I didn't put all my energy into my study, you know. If my family's situation is stable then I can, sort of, concentrate on my study. But, if my family's situation is unstable I'd rather focus on that and make sure everyone's happy, make sure my mom's happy. That's, I means, 'cause that to me, it's most important. I finalize, I've got to make sure everyone sort of, you know. I've to make sure everyone's emotion is stable. I can worry about myself and, you know, my own sort of personal game*."

"*So, I do remember when they did go through the separation. And I think for a few weeks my study just has got to put on hold. And I had to, when it was all calm down I had to go back and sot of fix up*."

"*And if there are things I want to solve or sort out but I can't you know. Problems that' unlike math something like that can't be solves in few steps. And these are problems that are more like emotional level I find that sort of stress to be quite hurtful and that's sort of for me can be very depressing*."

This marital separation also affected his attitude towards relationships.

"I guess it does scare me sometimes. It can be quite scary."

Family member problems

Close family members play a significant role in the life of university students. The results of this study showed that many participants were affected by the problems of other family members, such as their parents' being sick, parents' losing a job, or bereavement.

Some participants experienced great stress as a result of such problems.

"*My mom is very, she gets depressed very easily. She's been in the hospital a few times from depression. So, you know, I, She's got depression, I think, she got. I think she's prone to depression. That's just who she is…when I see her depress, you know, that make me unhappy."*

"*My father at the moment doesn't have a job. He was fired from his job about a year ago. And I worry sometimes about him because I don't think he is very happy at the moment. And that he's afraid to get out to get another job. That stresses me out*."

"*My nineteen years old brother is finishing year twelve. He failed year ten, and then repeated year ten, and then dropped out of school and then came back. So he is, I don't think he is very happy at school. And I worry about him. And my seventeen years old brother also doing year twelve, and ah, he is having a lot of trouble coping, I think, with year twelve. Ah, I think both of them drink alcohol quite a bit, and they also use drug on weekends occasionally. And, I know mom worry about that. That stresses me out, I suppose*."

One participant experienced stress when his dad was sick. He had to look after his brother and didn't have time much for his study. When his father's health improved he still found himself stressed as he struggled to get used to the reduced responsibility.

"*Family issues have become a very big stressful thing in my life. Because my dad got very sick and was bed ridden for 6 months, so I had to spend a lot of time looking after my brothers, because my mum had to work um as well as look after my brothers*."

"*During that time it was stressful. It was more that all of a sudden I had to do a lot more stuff that I hadn't done in that quantity before. And for me that was stressful, it was also the fact that my dad was very sick, so that was also stressful. So it probably wasn't the work it was the fact that he was unwell. It (dad was sick) was towards my exams that I tried mainly for it not too affects me. It didn't affect me that greatly at the time. It just in terms of my study, because at that point in time I just wanted to get through my subjects and just did what I needed to do to pass all my subjects and got through that and went back to looking after my family."*

"*My recent thing that I was a bit stressed about well was more of the fact that I didn't have uni. I was the thing I was most stressed about was sitting around going. I have nothing to do. I'm at, you know, I currently unemployed and just got this quick thing at uni which was only going to be for one or two or maybe one week only… um… during the whole break I was unemployed and I was like I'm not doing anything this break. I'm sitting around doing nothing. I want to be doing something and that was actually very stressful cos I was like I feel like I'm wasting two weeks of my two / three weeks of my life here, complete waste doing nothing."*

One student failed an exam when an uncle passed away.

"*Last semester I failed two subjects due to my uncle passing away in the examination period two days before. So I applied for special consideration and that*

wasn't taken into account so they still failed me. So prior to all this studying it's stress, stress, stress."

In conclusion, the results of the current study indicated that sources of stress fall into three categories. Firstly, university life stress was composed of academic stress, imposed pressure to succeed, future career, and satisfaction with university status. Secondly, financial stress came from student loans and working part-time jobs. Finally, interpersonal relationship stress consisted of interpersonal relationships, intimate relationships, ethnic background, family rules, parental marital separation, and family member problems.

7.3 How to cope with stress

The length and severity of stress depends on the students' ability to effectively cope with stressful events and situations. Coping strategies consist of behavioral and cognitive attempts to manage those demands that are appraised as taxing or exceeding the recourses of the individual. In this study, young men's strategies for coping with stress were listed as relating the three major sources of stress, namely university life, financial, and interpersonal relations.

7.3.1 University life

Time management

Time management was a technique that students in this current study used to cope with their stress, for example. *"Time management is when you have to try and fit everything in and it gets difficult at point."*

" When I get stress, the strategy that I use, organization, kind of thing, have a big deal of stress, get my diary, and I pretty much write down what I need to do, what I've

got to do what work is due for every subject, and to see all this listed out on different day."

"…tend to be fairly short term (plan), like few weeks, but short term plan kind of thing. I got kind of mental long term plan, like I know that I want to do, what I've got to get done."

7.3.2 Financial

Part-time employment

Part-time jobs were a valuable source of income for the participants and helped relieve financial burden. Time management and the psychological separation work and university roles were used to manage the stress of part time employment. "*I work on the weekend, Friday, Saturday, Sunday night, as delivery driver for fish and chip shop back home…I find it quite easy…I get money and that pretty low stress job, not hard at all, and get money for my financial problem."*

"Work isn't stressful. Work is actually time out for me because I'm not focusing on my study or anything just focusing on my work. So it (stress) gonna getting away from me…at the moment I don't make that much money basically enough money to cover my expenses. And sometime I can save that probably for my cloths. So basically, I just working to run myself cover my expenses and stuff like that."

7.3.3 Interpersonal relations

Talk with people who are close

As mentioned earlier interpersonal relationships can be a source of comfort and a source of stress. The majority of participants talked with their close friends when they

were stressed or had a problem, for example. "*I've got a couple (of friends), you know, that are really good to talk to*."

"*I have a couple of close mates since I have known since I was 3 and we ended up going to University together. It was just a coincidence. I have a pretty good network of friends."*

Some participants not only talked with close friends, sometimes they found that talking with anyone about something different can help them reduce stress, for example.

"*I have to talk it out with people*."

"*Usually I like to be around people when I'm upset, just talking with them… Maybe a close friend that I can talk to a bit more personally or maybe just anyone that I can talk to about something different, talk about the football or something. I guess that I just don't want to be lonely when I'm upset like that, yeah I just need company, that it something that I have just always felt."*

Many participants engaged their family members as a way to cope with stress.

"*Going home helps me a lot, I think all the time. I find its good just de-stress, when I'm at home, just talk to mum and dad my brother just chat about things. It's quite good."*

"I am close to my sister we talk about most things."

"Sometimes I talk to my older brother if I am stressed about something that is University related."

One participant talked with his priest to reduce stress and for advice on problem solving.

"*So I can talk to him (priest). And that was really helpful, for me I found. Because, I could lean back on him and sort of, he could give me his opinion, and sort of, just almost sometime even just to reinforce my believe and what I sort of way I felt, just to have somebody there to say yes. You know, you're going on the right path. You're doing the right thing, good on you. That's a little bit of support. It's helpful*."

Talking with a partner

Talking with a girlfriend was another popular stress management technique in this cohort, for example.

"*When I get stress, it's very good having M. that she will actually, she'll recognize that I am stressed, and I'm actually getting better at sharing my feeling."*

"I have a partner. We assist each other in every way. We support each other through university so if I am down, she will push me up in regards to uni."

7.3.4. Personal enjoyment

Exercise

Participating in regular exercise provides a means for physical, moral, social, and personality development. In addition to valuable exercise, sport provides experience in competition, team effort, mature conflict resolution, and helps reduce stress.

In this sample group, exercise was the most popular way to cope with stress. For example, "*Sometimes I go and do some activity such as gym or running or soccer and try and let it out there."*

"I play basketball professionally twice a week at Albert Park. That relieves stress and it gets you high too in your own way. The challenge is there from another opponent, so you just play. I find basketball as a mental relief."

One participant used a boxing bag to reduce stress. "*I have a boxing bag and weights. That calms me down straight away. I go and have a shower and I feel better*."

"*Tennis is a good one as well. Sport is always a good stress release because you get on the court and you just start cracking tennis balls. You take a lot of your frustration and stress and also the exercise and endorphins in the brain*."

"*Tennis is a good one because you can take out your anger. You are clearing all the frustrations."*

"*Physical activity, I might go for a run or go to the gym. It is a good way of forgetting about things, a few hobbies such as bike riding, just to do something that I enjoy and to forget about other things*."

Leisure activities (listening to the music/watching movies)

Listening to music or going to see movies was a popular method for participants to cope with stress.

"I do like to listen to music a lot and I find that very de-stressing."

"*I'll go to a movie*."

"*I watch a lot of TV and movies, more movies not so much TV, a lot of DV and I read a lot, like everyday."*

7.3.5 Less Functional Coping Techniques

Flight

The results of this research indicated that in some cases an avoidant coping strategy was used.

"*What I would probably do, or what I would usually do when I am stressed out is try and push the stress away until a later time when I can deal with it, then at that time I usually let out all my stress is very late at night, like just before I'm going to bed.*"

"*I let out my stress all by myself, alone, late at night and I rarely ever let other people see me stressed. Or generally sometimes when I'm stressed I like, might snap at someone for something and will say look can you please leave me alone.*"

"I generally need time alone. I need time to myself. I need a certain amount of time in a day, and obviously more when I 'm stress, just sort of to think things through. I generally to get over stress. I actually don't tell anybody everything."

"I just keep it to myself."

Using an avoidance coping strategy to reduce relationship worries resulted in even greater stress for this participant.

"*I really tried for it not to get to me. Me and her are still friends, we still go out together and stuff but just as friends. It really frustrates me. It frustrates her as well, it's like I wish I knew what the other person was thinking. But, I found that I always in the last couple of years, what I have really done when I was stressed am said that I can't push away, as I said before. I can't deal with this now, there is nothing I can do it is out of my control, completely out of my control. I will deal with it when I can and that isn't right now and by me worrying about it know, is not going to solve anything. That's how I have done things in the last couple of years. And at night as I said I can get very angry frustrated and upset.*"

Some participants felt that talking with people didn't help or solve their problem.

"*I don't really have anyone that I'm that comfortable talking about it or the people that I do talk to it about it their opinion on it on what I should do or how I should feel differs from how I feel. And talking with them doesn't really make me feel better. I guess it's just a little obsession thing where I'm just a bit."*

Drugs

Another maladaptive coping behavior is the excessive use of drugs of any kind. Illicit drug use in university students is one of the strongest predictors of lifetime dependence. Many studies have indicated that drug use in university students is associated with academic failure and depressive disorders.

This study indicated that smoking is one of the most popular modes of stress reduction. Alcohol is another method that some participants used as their way of reducing stress. A small number of participants also used sleeping pills, and a small proportion also used Marijuana.

(1) Smoking

Smoking is one of the leading causes of death in Australian society, and was prevalent in the current sample.

"*I used to do sport, but now I'm taking up smoking… it increases (amount of cigarettes) when it gets close to the exam time, it increases."*

"I do smoke but not a lot. It is a bit of a stress release too… When I first started it was more because of friends, now it's a bit of a stress release."

(2) Alcohol

Alcohol is part of the social fabric of Australian society and is a major problem among Australian University students. Many studies have indicated that it is common for

university students to use alcohol. The findings of this study have indicated that participants used alcohol for social functioning. At the same time, many students used alcohol as a stress release, for example.

"*Going to the pub is a good stress release. I'll go to the pub for a few beers and just let off some steam that way – just having a few drinks with some friends*."

(3) Sleeping pills

In this study a small number of participants used medical drugs as a stress release and for sleeping problems.

"*I sometimes have problem sleeping. I say up and do things to pass the time. Sometimes it's from school that I don't sleep. I try to figure out something that has happened or failure of the exam. At some point I did take drugs to sleep."*

"I'm actually a bit of an insomniac, um, I don't fall asleep very easily at all. Most of the time at night I probably only get about 3 or 4 hours at full sleep, the rest of it is just lying there awake. I may have my eyes closed but I'm awake. If I go to bed it takes me at least 2 to 3 hours to go to sleep at night and even them I'm a light sleeper… Sleeping pills don't work on me. All medication that I have taken that has had warning stating that you may make you feel drowsy. I never have had that affect. I have found sleeping pills to be ineffective. My mum gave me some sleeping pills to try but they just didn't work."

(4) Marijuana

One participant pointed out that when he experienced stress from university life, an illicit drug (marijuana) was used as a release.

"If I'm stressed I will smoke for relief. On the weekends sometimes, whenever I feel like it. Many people view smoking as a sign of depression, or release – it is a

release. I am better at the time while I am smoking. I know the effects of drugs. I know the disadvantages and the advantages, if there are any advantages. It's not a matter of feeling better. Everyone has a different effect on the drugs. It makes you relaxed."

(5) Suicide Ideation

Suicidal ideation, the reflection on one's own death, or considering the possibility that one could actually end one's own life, is one risk factor resulting from stressful events in university students.

One participant said that sometimes he considered committing suicide in extremely stressful situations. However, he still felt that it was not the best way.

"*There are times when I've thought about it (giving up) but I've quickly… whenever I've thought that I've said no it, you know I'm, I don't like…*"

Moreover, another participant conceded that he had suicidal thoughts while extremely stressed.

"*I hope not. I can't be sure. Obviously I can't be sure that I'll never contemplate it, but because I mean obviously my mom is prone to depression. I'm obviously prone to depression. I think depression is a disease. It's an illness. Unless I become ill, and physically can not, mentally can not sort of think clearly, in that situation, I might, you know contemplate suicide. But that's only because I could not think clear*."

One participant attempted suicide when he studied year eleven and continues to have suicidal ideations.

"*I can just get a knife and do it. This was two years ago* (now he is 20 years old). *I was studying at the time at TAFE. I just wanted to do it and to see what would happen.*

I was fascinated about death and pain and I actually liked the pain of doing this with a knife. Then you go further and further until you bleed. I was fascinated."

In conclusion, the participants from this study use both positive and negative coping strategies. The positive methods of coping with stress are included exercise, communicating with friends, family, and partners, and leisure activities such as watching a movie. In contrast, many participants used negative coping strategies, such as avoidance, drug use, and even suicidal ideation.

7.4 Health promotion behaviors

Health promotion behaviors are an expression of the individual directed toward optimal well-being, and are important in all aspects of university life. While coping strategies are used to combat stress as it arises, health promotion is a holistic concept that promotes overall well-being and is thus preventative as well reactive. The findings of this study indicated that participants used the following health promotion behaviors: exercise, relaxation, and alcohol (perceived as a positive activity by participants).

7.4.1 Exercise

The majority of the subjects reported implementing exercise as health promotion behavior, for example. "*Probably twice a week, I play valley ball every Monday and I fill in, like occasionally, for a basketball team and the netball team, not every week, just sometime, and I also like to go to gym, may be three times a week."*

"So I've more time to allocate to gym, probably three times a week, or something like that, maximum three times a week, slow down an hour or so, you know. Yeah may be swimming or may be just go do some weight you know something like that."

"I'm doing soccer once or twice a week. I do like gym stuff almost every day or every second day."

Some participants reported that they reduced exercise during winter.

"*I used to run 2 or 3 times a week. I will probably start that up again soon but when it's cold in winter it is harder to do it… But in general I think that I am fit and I consider that I will exercise soon and I'm not really worried about that*."

7.4.2 A time for relaxing

Many of the participants used relaxation time for health promotion, for example "*I watch a lot of TV and movies, more movies not so much TV, a lot of DV and that, ah, I read a lot, like everyday*."

And "*Walking, and that's walking is the best way to do it…I find it's easily, well not easily, but best result through walking or just clearing my mind not thinking about anything and just taking sometime off."*

" I suppose doing something different, like may be reading a book or going somewhere I've never been before or calling up someone I've never spoken for a long time, just getting out side of my routine. Ah, eating food probably."

"Yeah, pretty much watch TV, read, yep, on weekend."

"Yeah, just play card for fun, I mean we have stack enough, we don't do plastic chip, all kind of those stuff, you know, you don't need anything, yeah, good fun and relax."

7.4.3 Alcohol

Many of the participants used alcohol for promoting an enjoyable social life. Alcohol was viewed as a way of relaxing. Alcohol when used in moderation and to make

and consolidate friendships can be functional. When used as a coping strategy to avoid or forget a stressful experience it becomes dysfunctional.

"*Every Tuesday night I go out to the local pub cause that the uni night and I find that quite good cheap drinks, I get pretty drunk most Tuesday night, I find it, it's good more for the social thing… you get alcohol, by the end of the night you quite drunk, it's good I like that, I look forward to it every week."*

"When I go home, yeah… Pretty much the same thing with my friends and that, ah we go out on Saturday night or something with a few friend, ah, you know, sit around at home watch the footy on the weekend, you know, curl up in front of wine which is always good at home, yeah, with family and Michel Ah… Yeah beers with dad, mum has a glass of wine, don't mind me drinking much."

"*It tends to be a bit more after exams. Well if I go back to when I first went to university, um I stayed on campus at residential college and a lot of partying went on, lot of drinking and party atmosphere. I was there for three years, but it was particularly in first year lot of drinking."*

In summary, the greatest number of participants used exercise as a positive health promotion behavior.

7.5 The correlation between perceived stress levels and health promotion behavior

The findings from this project indicated that there was a relationship between stress levels and health promotion behaviors. Many of the participants experiencing high stress levels from university and family life also indicated that they had negative ways of coping with stress and inadequate health promotion behaviors. Furthermore, a small number of participants indicated a tendency toward suicidal ideation in the case of

extreme stress. In contrast, the participants with low levels of stress in university and family life had more positive ways of coping with stress and had functional health promotion behaviors. They also stated very clearly that it would be impossible for them to consider committing suicide as the way to resolve their problems.

The analysis in this section constitutes two groups of participants: a high stress group and a low stress group. This categorization was based on self-reported stress levels in the interview situation. The highly stressed group viewed university life and family life as stressful and used negative means of coping. The low stress group perceived the stress of university life as a normal part of life and as much a challenge as a discomfort. Generally these men came from a warm family background, and health promotion behaviors appeared to help prevent the experience of stress.

7.5.1 High stress and negative health promotion behaviors

Many students experienced high stress from university life and family situations. This study indicated that these students had negative ways of coping with stress and poor health promotion behaviors.

Some students had the characteristics of an imposed pressure to succeed. They always strived for outstanding personal achievement. For this reason, they were very serious about their study.

"*. I aim for a high mark in everything I do. That's just who I am. I don't regret that. I think that's a good thing to do*."

While high expectations can produce a functional and motivating level of stress, unrealistic expectations can produce high levels of debilitating stress. As many studies have suggested, type A personalities are vulnerable to the loss or absence of control.

This can manifest in a sense of panic every time an exam or assignment is due, or when considering their academic future. "*I um failed in my first couple of years in here I failed a bit and really in the last I sort of felt that the way I was going about my study was not very good for university. I just I like it was one of these things where I know the whole course and could do all the problems it was just when I got into the exam I just brain shut down. I just didn't… stress so… I don't know… I just I…. I just… panic… had a bit of a panic during my exams last semester."*

"*I am worried I won't finish. I think I will fail again."*

Aside from academic stress, this high achieving personality characteristic often results in disdain for less ambitious students. Rather than seeking comfort from fellow students due to a shared experience, many participants isolated themselves due to feelings of anger and narcissistic superiority. All highly stressed participants blamed people around them and their university, creating a perceived negative and hostile environment for their study and their future career (McNamara, 2000). "*There a lot more people that, people of the mentality that just want to pass."*

Intimate relationships were often a source of distress for this group of participants.

"*That was actually, probably the worst stress that I have been through, my relationship with her involved a lot of arguments at the time. We broke up at the start of this year (now 7 months passed). During the relationship there was stress, but we always made up because we were very open with each other, um that was pretty stressful. A lot of the time because um, the attraction's still there and every time um we're together I feel I do, I do, I feel happy we're together but I also at the same time feel upset because we're*

not, together. I always worry about her. I never stop worrying about her. I don't know I just worry about her."

From a combination of factors such as imposed pressure to succeed, dissatisfaction with their university status, problems with intimate relationships, the results indicated that all these students viewed academic work as highly stressful. These stresses become more serious when combined with family stress factors. All these problems seemed to manifest from or indicate type A personality characteristics or an overall problem in psychological functioning. These participants do not undertake the required health promotion for an overall sense of wellness and thus have a tendency towards stressful interactions with their environment.

Here are examples of family stress interacting with university pressures and individual characteristics.

"*My parents were separated about three months ago. I was sad. I was sad. ...I do remember when they did go through the separation. I think for a few weeks my study just has got to put on hold. I didn't put all my energy into my study, you know. If my family's situation is stable then I can, sort of, concentrate on my study*."

"*If I am too stress then I can feel physically ill or I can be, you know, I can just be totally, you know, out of the world not really wanting to do anything which is probably the biggest stress. You know I get so stress that I just want curl up not do anything*."

High expectations often stemmed from parental influence. "*Parents have high expectations. They want me to study. They want me to do a Masters and Ph.D. and become a Doctor."*

Stress then stemmed from a combination of characteristics and events such as parents' divorce, parents' high expectations of their study, family member's problems, academic stress, and type A characteristics. Confounding this was inappropriate ways of coping with stress such as failing to communicate their feelings with friends, family, and partners.

"*I generally need time alone. I need time to myself. I actually don't tell anybody everything. You don't get that sort of support from your friends because generally your friends, you know don't go that deep emotionally, you know. And your friends are good fun but I haven't got many friends that I can really, sort of, talk about."*

One participant used drugs as the way to reduce stress. "*If I'm stressed I will smoke for relief. I do take drugs but not to get over something. On the weekends sometimes, whenever I feel like it. Many people view smoking as a sign of depression, or release – it is a release. I am better at the time while I am smoking."*

As mentioned earlier the most disturbing finding was that of suicidal ideation in some participants.

In summary, the findings indicated those students in the high stress group suffered in both university and family life. The findings also indicated that there were some correlations between the participants with high levels of stress and health promotion behaviors. When all participants with high level of stress experienced stressful events (combined both from university and family stress sources), they coped with their stress in negative ways, such as not expressing their feelings, using illegal drugs, and portioning blame on to others. When the two sources of stress combine with poor coping skills and a lack of health promotion behavior the results can be potentially dire for the student,

including suicidal thoughts in extreme cases. Even where coping strategies are adequate, these highly stressed students could not prevent frequent stressful interactions with their environment. It appears that holistic health promotion strategies would be beneficial in these instances particularly if aimed at increasing relaxation and decreasing type A personality characteristics.

7.5.2 Low stress and positive health promotion behaviors

For the group with low levels of stress, the analysis of data showed that they had a very warm family background and had supportive interpersonal relationships. Although university life was stressful at times, for example assignments and exams, they still found a way to resolve their problems and used positive methods to reduce stress. For these participants stress from academic areas is a normal part of university life and a normal part of personal development. Furthermore, the findings indicated that these groups utilized functional health promotion behaviors that prevented and reduced stressful interactions. Similarly to the high stress group these students frequently used alcohol, however, they viewed it as a means of enjoying a social life and not a way of avoiding feelings of stress.

Many of these students came from functional families and appeared to derive their stress management techniques from their parents. *"If dad got a problem or something with what I'm doing, he'll tell me. He'll just say, look, I don't think you should be doing this because of this reason and he'll tell me why, and you know that's fair enough, I think, a lot of it, you know, reason why."*

Closeness to family members was commonly displayed within this group of students. "*Going home help me a lot (in reduce stress). When I go home, yeah, ah, I we*

have a courtyard in each block everyone just come and down there after come home from Univ. Just before they cook tea, they kind of congregate around there, talk to each other those come to smoke, they smoke, we just come and have a chat, good free time, go one to get rid of free time, actually."

"*I like to spend time with my family. I went home a couple of times that I'm on holidays and I go home and stay there. I also speak on the phone to them probably every second night. I'm always sending e-mails to mum and dad at work so we are very in touch."*

The participants found university work and exams factors that made them stressed. For example: "*University work mainly, mainly university works that stress me*." Or "*Exam can make me stress. In an exam you're put under pressure to find out what's in your head straight away and that cause a bit of stress."*

In this group, assignment and exam stress was relieved with health promotion behaviors. "*I study and I keep studying. But I do take time out and I do try to remain calm which I think is important, I go for a jog or I go kick a football for half an hour. I was doing that quite a lot during the exam period. During my exam periods I go for a jog or kick the football or something, may be get out for half an hour*."

Participants used many positive strategies to cope with stress. For example, many participants used a time management strategy, listened to the music, watched TV and movies, read books, spent time with family members, and talked with their friends/girlfriend.

"*When I get stress, the strategy that I use, organization, kind of thing, have a big dealing with stress, get my diary, and I pretty much write down what I need to do , what*

I've got to do. Short term plan kind of thing, I got kind of mental long term plan, like I know what I want to do, what I've got to get done, yeah I find writing down, even for a week, like, you know what you got to do you know you can see a couple weeks, kind of things in advance you know what coming up, and it's not gonna jump out at you and stress you, I find that's the main thing that stress me. I know I got to do something, and it's only not very far away and more not have enough time to do it can be even stress… I do like to listen to music a lot and I find that very de-stressing. Going home helps me a lot on reducing stress."

In the case of intimate relationships, the data indicated that relationship break ups are not as debilitating for participants who were generally low in stress and high in coping and health promotion. These people were more likely to have a civilized break-up and remain friends.

In summary, when comparing the two groups, the findings indicated that there was a relationship between stress levels and health promotion behaviors. It was very clear that there were many factors that combined to produce different levels of stress. These included family background and characteristics, individual personality characteristics, interpersonal skills, and stress management and health promotion behaviors. Health promotion techniques such as exercise, time management, enjoyable activities, and the ability to maintain intimate, supportive relationships appeared to address the overall well-being of participants, had a preventative function. However, whereas these behaviors could be easily triggered in the face of a potential stressor, not all students seemed to have these options readily available. Moreover, even when students did indicate these

behaviors were optional, often in times of high pressure, such as exam or assessment periods, they often become overwhelmed and resort to flight or avoidance techniques.

Discussion

The primary purpose of this research project was to explore the factors that influence the onset and management of stress in male tertiary education students. Furthermore, this study aimed to explore the specificity of health promotion behaviors associated with perceived stress utilized by male tertiary education students. Outcomes of this study indicated that the primary identified factors identified by male tertiary students within this study were varied stressors associated to their academic and financial security and environmental hassles such as being from a non-English speaking home or nationality other than Australian. Furthermore, the participants in this study indicated that stress arising from interpersonal difficulties; in particular familial discord and intimate relationship breakdown were a major source of stress in their lives.

The findings of the current study indicated that young tertiary males experienced a variety of physical, psychological and social effects as a result of these stressful events. Overall the sample of young men who participated in the current study reported a significantly higher number of daily stressful events and a greater level of impact related to these events than previously identified normative levels, thus indicating that current perceived levels of stress and impact have increased over time. These findings support current literature, which proposes that stress is an increasing concern for young males (Hunter, 1999; McNamara, 2000; Moon, Meyer, & Grau, 1999). Interestingly, whilst academic issues were identified as a source of stress, the emotional impact of more generalized issues, such as familial discord, parental divorce and disharmony, concerns about one's future and financial hassles were as important. Therefore, it would seem that much of the stress and impact experienced by young tertiary males is not necessarily

specific to academic life, but a component of the maturation process and social environment.

The participants reported utilizing a variety of positive and negative health promoting behaviors in order to cope with their perceived stress. Health promotion behaviors reportedly utilized by the participants were found to lie within two domains: cognitive emotional (utilization of interpersonal support and spiritual values) and physical release (taking responsibility for maintaining health, good nutrition and exercise). It is interesting to note that factors such as a sense of meaning and personal life philosophy (Mobeg et al., 1990; Mulkana & Hailey, 2001), whilst not overtly promoted in out current educational programs, were identified as important factors in facilitating health and well-being amongst these students. Similarly, whereas the literature suggests that young males are more likely to adopt problem focused methods of coping (Day & Livingstone, 2003; Renk & Creasy, 2003), it was those young males who had adopted emotional focus coping methods who reported a level of lower impact from daily stressful events. Further elucidation of this behavior within qualitative analysis indicated that participants often resorted to utilization of perceived normative behaviors to cope with their stress. These included alcohol and drug use, smoking, aggression and avoidance. These findings suggest that dysfunctional health behaviors for young tertiary males are not necessarily specific to their current life status as students but more generalized to the broader social structure of our society.

The findings from qualitative results also indicated that there were some correlations between the participants who used problem-focused methods have greater on health promotion behaviors. In contrast, all participants with emotional-focused methods

were likely to cope with their stress in negative ways. In examining these two kinds of coping strategies, it appears that the problem-focused coping approach is generally more effective than emotion-focused coping. More importantly however, the effectiveness or functionality of the coping strategy used is most important in determining stress and health outcomes.

Overall the outcomes of this study indicated that positive health promotion behaviors were associated with reduced impact of stress amongst young tertiary males. These findings indicate that although the number of identified stressors was equivalent across the sample, for those young men who adopted health behaviors, the impact was greatly reduced. Stress management training (such as education about the causes and consequences of stress, training in methods to reduce psychological and physical arousal, instruction in relaxation, biofeedback and cognitive reappraisal exercises, and information on nutrition, exercise and social skills) and meditation are among the health promotion programs should be made within the university environment.

The results from the study were concluded that non-Australian students had greater frequency stressful events than Australian students. It was also concluded that students who did not speak English at home had a greater individual personal experience of stress than those who spoke English at home. Spiritual care activities should be made (such as meditation, yoga) in the university environment for these student groups.

Is the current sample a normative male university student cohort?

The findings of this study indicated that male tertiary education students reported higher stressful events (an average of 20 daily events that caused them stress) than those reported for a normative sample group (an average of 17 daily events) (Brantley & Jones,

1989). The participants reported experiencing many of the common stressful events that individuals experience in various areas of their personal environment. They further indicated that daily schedules, poor organization of time and activities or an aggravating environment led them to feel overloaded. It is significant to note that this data was collected at the end of semester two. This may have raised the number of responses for stress related to academic life, as it is a time of focus on the taking of exams and pressures to complete assignments.

In defining the impact of stress, the participants described both positive and negative experiences. For example, physical response was expressed by using words, such as “physically ill”, “nausea” and “headache”. Emotional response was expressed by participants using words, such as “worry”, “pressure”, “strain”, “striving”, “frustrate”, “sad”, “panic” and “challenge”. Similarly, social/behavioral response generated by the stressor resulted in individuals adopting a variety of behaviors in order to cope, such as “drinking alcohol” and “smoking cigarette”.

As noted by others (e.g. Degges-White et al., 2003; Reynold et al., 2001; Waldie, 2001) headaches, common cold, and nausea were common physical symptoms reported by participants in this study. Similarly, many psychological stress-related and behavior/social stress-related outcomes are in line with those reported in previous studies (e.g. Cox, 1987; Lazarus & Folkman, 1984; Lazarus, 1999; Selye, 1978, Slavin et al, 1991). These findings support the proposal that perceived stress is primarily interpreted as negative by male students, and results in a reduced sense of well-being.

An impact score is made up of composite scores that are influenced by the number of daily events as well as an individual’s personal appraisal of daily events.

Impact scores represent the best indicators of an individual's personal experience of stress. It was concluded that the male university students appraised greater stress in their personal experience than a normative male university student did. As earlier stated some students may have arising perceived academic stress. These findings were in line with many studies indicated that academic stress and examination are among the main sources of evaluation stress in male university students (Baldwin et al., 2003; Greenberg, 1996; Nwadiani & Ofoegbu, 2001; Owen, 2003; Schafer, 1996). However, the participants also indicated that varied life stressors and environmental hassles were also an important source of stress, which impacted strongly on their sense of well-being. As noted by others (e.g. Beasley et al., 2002; Edwards et al., 2001), high stress was associated with poorer physical and psychological health. This high level of non specific academic stress may be a confounding factor in elevating the reported high prevalence of stress amongst male university students. Therefore it is important that university health services do not become too reductionist in their focus when working with young males who present with difficulties in their studies.

Do demographic variables affect stress and health promotion behaviors?

The finding of current study indicated that only two independent variables, nationality and home language had a significant effect on reported daily stress scores. The findings of the current study indicated that non-Australian nationality students had greater frequency stressful event than those with Australian citizen/permanent status. In other words, they reported a greater level of academic and common stressful events arising from various areas of involvement with their environment. They also showed that non-Australian nationality had greater individual's personal experience of stress than

Australian nationality students. Minority group membership has been identified as having a strong impact on the individual, through ongoing strain or chronic stress. Some of participants in the current study indicated their ethnic background was associated to the experience of negative effect in relation to their study and also their intimate relationships. Slavin et al. (1991) indicated that being a member of a minority group can increase the frequency of certain stressors. Similarly, Lay and Safdar (2003) reported that immigrant/minority status university students reported more overt group hassles compared to the non-minority university students. Furthermore, Wong (1991) found that one third of Hong Kong Chinese immigrants in Australia could be classified as psychological 'at risk'. The outcomes of the current study provide further evidence that daily hassles and perceived stress were positively and significantly related to mental distress in non-English speaking migrant students.

In terms of home language, the finding indicated that there was no significant difference in the number of daily stressful event scores between those students who spoke English at home and those who spoke another language. This suggests that students who spoke English at home had nearly the same frequency of stressful events as those who spoke another language at home. In other words they had nearly the same experienced many of the common stressful events in various areas of involvement in the environment. However, whilst the number of events was equivalent, the reported impact of these events was found to be greater for the non-English speaking students than the English speaking, indicating that non-English speaking homes had greater individual's personal experience of stress than those who spoke English at home. These findings support previous research (e.g., Alati, Najman, Shuttlewood, Williams, & Bor (2003) that has indicated that issues

such as financial hardships and difficulties in language acquisition are major sources of stress for non-English speaking. Furthermore, Alati et al. indicated the many cultural and normative changes required to adapt to a new country are major sources of stress for the immigrant student. The greater the difference between the two cultures and societies are, the greater the likely distress is.

With the increasing prevalence of international on-shore teaching being offered by Australian and other Western universities, it is important to note that these students have a high need for appropriate and consistent social and personal support, as well as remedial language and writing skills. To date, this is not an area of service that is prioritized within the tertiary sector.

What are the most salient aspects of stress in regard to male university students?

Interestingly, the outcomes of the current study indicated that it was not university life that was the most pertinent source of stress in their lives. Rather, varied stressors and environmental hassles were identified as amongst the highest sources of daily stress for the students. For example, issues such as 'was misunderstood', 'hurried to meet a deadline', 'store lacked a desired item', 'competed with someone', and 'ran out of food/personal article' etc. were cited as sources of varied stress in their daily lives. Similarly, environmental hassles are such as 'experienced money problems', 'had car trouble', experienced unexpected expenses, and 'your property was damaged' etc. also provoked a high level of stress in their daily life. These findings suggest that everyday living is in itself a major source of stress for young men, and could possibly be comparable to non-tertiary males as well.

Academic stress

The findings in the current study indicated that the most common sources of academic stress for university students were assignments and exams. The pressure to perform and meet timelines was highly salient and reflected previous research findings (Baldwin et al., 2003; Misra & McKean, 2000; Nwadiani & Ofoegbu, 2001; Owen, 2003; Yi, Lin, & Kishimoto, 2000) that undergraduate students require input into developing independent study and time management skills. Given that current social pressures highlight the importance of academic achievement at a post secondary level for entering into the workplace it is not surprising that imposed pressures to succeed are highly salient amongst young men. One important factor that impacted on the academic stress was the addition of parental worries and high expectations of students' study. It would seem that the stress emanating from this area of concern with respect to parental influences, not only compounds the internalization of self-doubt and worry, but also reduces the opportunity for these young men to use their parents as a potential positive resource in coping with their concerns.

The first year of study was reported as causing the highest level of stress among university students. Many participants failed the exams during the first year. This result is supported by several studies that reported more academic stress in the first year than the later years of study (e.g. Adlaf, et al., 2001; Baldwin et al., 2003; Misra & McKean, 2000; Nwadiani & Ofoegbu, 2001). Furthermore, previous studies confirmed that nearly 40 per cent of students in England leave higher education without getting a degree (Roberts et al, 1999). Many participants indicated this stress rose from life style change during the transition time from secondary level to tertiary education level. As noted by

Nwadiani and Ofoegbu (2001), most of the first year university students are very young and from secondary schools where they are spoon-fed, and therefore flounder when they are exposed to the tertiary learning system. In university education, participants are faced with a new environment, such as new friends, ethnic, and social-class groups. They are confronted with greater academic competition than at the secondary education level. Furthermore, many participants from the current study reported experiencing more stress in relation to developing their own level of self-reliance in the first year transition. This takes the same line as a large number of studies, which indicated (that during the first year of university life) students will be confronted with several tasks, such as competence development, interpersonal relationships, identity development, and autonomous development (Greenberg, 1996; Renk & Creasey, 2003).

The outcomes clearly indicate that the transition from secondary to post secondary education, and the concomitant developmental issues associated with maturation, socialization, intimacy and independence are a vulnerable period for young men. It would appear that it is at this period where one requires the greatest level of support and encouragement. However, without input from those students who do not survive this transitional year and drop out or leave for alternative employment or life options, it is hard to determine what exactly was needed, or indeed if it was specific transitional issues that predicated their departure.

Personal characteristics

Expectations of ‘outstanding personal achievement’ were one of the characteristics that were found amongst a few of the participants in this study. These students reported a strongly internalized and self imposed pressure to succeed and

acknowledged having a highly competitive personality. These personal traits were identified as important stress related factors for the students, and compare with the profile of what has been previously identified as a type A personality (Rice, 1999). The literature indicated (e.g. Fichera & Andreassi, 2000; Heilbrun, & Friedberg, 1987; Kirkcaldy et al., 2002) that this typology in character is strongly associated with increases in dysfunction and risky health behaviors and strongly prone to illness, such as increase risk of heart disease (Guyll & Contrada, 1998; Merz et al., 2002). From the current study it is difficult to extrapolate on how much influence this personality profile has on the overall stress identified amongst tertiary students, however it is clear that for some young males, their preferred manner of engaging with life is less than functional and cause increased levels of pressure. However, this does not detract from the overall finding that it is not individual factors per se that are the primary concern in identifying vulnerable students, nor applying intervention strategies. Rather, there are much broader social and communal issues that require address.

Future career

The findings of the interviews in this study indicated that uncertainty regarding work situations is one factor related to stress in many participants. The participants worried about the future career for many reasons, such as uncertainty in their future employment markets, and doubts over their own performance capabilities. As it is widely accepted that career in the future represents a powerful source of stress in university students, many researchers agree with this finding (e.g. McNamara, 2000; Renk & Creasey, 2003). Unemployment is high, and the cost of living continues to increase. Research indicates that many young adults are now choosing to not leave home until their

mid to late 20's due to the increasing costs of living independently. Housing and rent are high, pay rates as a non graduate are paltry, and even starting graduate incomes are low. Thus future career prospects have become an important source of concern, not only for tertiary students, but seem to manifest early in the secondary process. This is an important are of social concern that requires a broader level of address, and can only be confronted pro-actively by changes to policy and economic rationale.

Satisfaction with university status

The findings of the interviews indicated that perceived university status can cause significant stress for male university students. Many respondents felt that university status has an effect on their prospects for personal and career development. Several respondents worried about whether the institute where they are studying would not be highly regarded and effect their finding employment in the future. Furthermore, many students felt unhappy with the atmosphere in their institute, and struggled to remain engaged when they felt that lecturers and other staff were less than enthused themselves. Interestingly, major changes to the philosophical underpinnings and structural foundations of tertiary education have been reported to have had a seriously negative impact on the morale and engagement of many academic staff over the past 10 years. It would appear from the current study that this lowering of morale has had a filtering down affect on students and is culminating in an increased level of disaffection and stress for the students. As noted by Bandurra (1977) and others, role modeling is an important aspect of socialization and behavior adoption in young people. Therefore, if their role models are not promoting positive attitudes and behavior, such as enthusiasm,

engagement, productivity and discourse, one should not be surprised if the students themselves are less than engaged and enthused with tertiary life.

Financial stress

Situations such as "experienced of money problems" and "experienced unexpected expenses" were reported by students as causing a high level of stress. Many studies have indicated that financial pressure is one of life's major stressors (e.g. Ager & MacLachlan, 1998; Lange & Byrd, 1998; Roberts, et al., 1999) and university students are vulnerable to financial crisis (e.g. Henry et al., 2001). The findings of this research indicated that nearly all participants used HECS as the way of paying university fees. When they use HECS, it means participants have to pay a debt back in the future. The current study indicated a higher amount of students with debt than the previous study by Roberts et al., (1999), with under half of the sample currently in debt. Furthermore, the findings from the current study pointed out that most of the participants worked at a part-time job to cover their expenses. As a consequence large numbers of students are falling into debt and working increasingly longer hours in an attempt to maintain a viable living standard. As a result, many students felt unhappy and were losing time for their studies or a balanced social life.

Unfortunately, this financial pressure is likely to grow, placing increasing numbers of young males under increasing stress. As noted by Simons et al. (2002) if students are faced with financial pressure, they report a lowering of life satisfaction. Similarly, previous research (e.g. Fagan, 1994) has shown that university students with financial problems experienced a sense of low social well-being. Therefore, an important aspect of stress that is faced by tertiary students is one that can not be easily rectified

within the academic arena. Rather this concern is strongly associated with broader economic and social policy decisions that are currently in place within our society. Therefore, a portion of the noted increase in stress amongst tertiary students is seemingly beyond one's control. However, this is not necessarily a no win situation. There is still the potential for assisting students to adopt a revised perception of wants versus needs in relation to material life. However, without major shifts within the broader society, students are likely to remain caught in a poverty trap for an extended period of their lives, post graduation. Therefore, the impact of this stress may become apparent within the early years of post secondary study, and be compounded by developmental issues such as independence etc., however the long term effects may be the major source of concern. As such it is important that administrators and public officers begin to develop more informed evidence of this source of stress for young men, and possibly young women, and investigate means of ameliorating the pressure. Meanwhile it remains a catch 22, where the student is damned if they don't study at the tertiary level, but also damned if they do.

Interpersonal relationships

Interpersonal relationships were one of the common sources of participants' stress in this study. These findings were in agreement with several studies (e.g. Bolger, 1997) which indicated that the one frequently reported stressful event within young people was arguments/fights with friends (interpersonal difficulties), particular young men reported more physical fights and threats than their women counterparts were. Many examples from the interviews in this study clearly showed that some participants were fighting with their friends and having minor arguments. Blair (1989) noted that when an individual's

interpersonal relationships are in difficulty this can lead to feelings of loneliness and despair. The findings of the current study are further supported by a study from Le Roux and Conners (2001) that confirmed the Australian students were significantly lonelier than their South African student counterparts were. The researchers explained this result as young people in Western culture are exposed to varying levels of autonomy, and are taught to become independent and self supportive. This aspect of socialization processes should be noted, as loneliness can affect psychological well-being and physical health (Rice, 1998; Wiseman & Guttfreund, 1995). A great number of studies also confirmed that negative social interaction is related to poor physical and psychological health (e.g. Edwards et al., 2001; Flett et al., 1997). However, for some young men, the externalizing or suppression of emotion is considered to be the "masculine" way to manage life (McCreary, 2003). Unfortunately, this attitude results in a stoic defense against intimacy and an aggressive approach to dealing with stressful events. It is this normative masculine attitude which seems to permeate much of the conversation of young men who report high levels of stress in the personal relationships.

Satisfying personal relationships with others are considered to be an important source of pleasure and positive resource for individuals when they feel stressed Knox, Zusman, Kaluzny, and Cooper (2000). However, intimate relationship difficulties were a common experience reported by the participants in this study. Many reported difficulties in sustaining long term intimate relationships with a special other. The result of failure in these relationships led them to feeling upset and disheartened, with some participants being so strongly affected that they had to put their study on hold. Ding & Wang (2002) and others (i.e., Liu & Jin, 2001) noted that failure in love affairs significantly predicted

depression. Furthermore, previous studies (e.g. Knox, et al., 2000) have reported that most of the respondents who reported difficulty with recovery from intimate relationship breakdowns, needed to take time out from their studies.

Unfortunately, the tryst of 'love' is not an easy path for anyone to travel. It is at this vulnerable developmental stage of life that young people are first experimenting with the notion of intimacy with a significant other, in departure from their parent. Major conflictual pressures arise as they try to dissociate from the child-parent to the adult-parent relationship, and at the same time attempt to negotiate a separate intimate contact. Although not specific to males within tertiary studies, it is an important area of development that must be considered in discussion that arises over their well-being. Whether one can offer any form of preventative measures in relation to this issue is beyond the scope of this writer, however it appears that student services need to take this into account and offer some constructive manner for broaching the topic with young men.

As noted previously, the developmental issues of maturation and dissociation from significant others is a primary source of stress for young adult males and females (Benjamin, 2002). The findings of the present study confirm that this is a source of stress for young men. Participants felt unhappy with perceived outdated current family rules. They believed that they were now more mature and needed to be treated more independently than their parents allowed. Several studies (e.g. Taylor, Hinton, & Wilson, 1995; Walker & Satterwhite, 2002), have indicated that whilst parental rules and expectation, that is the provision of strong boundaries is important for adolescents as they progress through secondary school, for university students the relationship between parental rules and expectations and academic success was minimal.

However, the indication of this source of stress amongst young men does suggest that remediation of the individual is not necessarily a satisfactory resource. Rather, issues such as cultural background, family values and parental perceptions require address. Whilst one can offer sympathy, support and understanding to the individual student caught in such a dilemma, it is often difficult to assist in them extricating themselves from the stress without a more strategic systemic intervention.

Importantly, it is the systemic issues of family which are highlighted as major sources of stress for young males in this study. Many participants indicated feeling unhappy and conflicted over family member problems, which often affected on their study. This finding is very similar to the findings by other studies (e.g. Beasley et al., 2002; Hong & Chongde, 2003), which indicated that negative life events exerted from family member problems were associated with lowered psychological well-being for university students. Issues such as sibling violence, mental and physical illness of parents or siblings, economic concerns, unemployment etc. within the family circle were all reported to be a source of stress for participants in the current study.

Parent's marital separation and/or divorce is often an unexpected and highly stressful event for all children, however the impact of this on the young adult as they themselves are struggling with their own intimacy issues can be devastating. As noted by McNamara (2000) parents' divorce is strong linked with negative mental health outcomes in young people. As noted by the participants in the current study, this form of stress event led them to feeling depressed, anxious, disengaged and negatively disposed towards affiliation with others.

How young tertiary students cope with stress

The findings of the current study indicated that strong positive interpersonal relations were significantly and inversely related to the frequency and impact of stressful events. These findings support previous research (e.g., Pender, 1996) that has found good interpersonal relations and a supportive social network to be an important buffer against the effects of stress. The findings of this also indicated that spiritual growth was significantly and inversely related to the frequency of stressful event and the impact of stressful event. As the growth is identified as a positive sense of meaning and purpose of life, a high level of reported spiritual well-being is a reflection that the individual has the resources to successfully manage stress within certain limits. Pender (1987) suggested that belief about spirituality is an important dimension of high-level well-being. The current study indicated that as with previous research (Mulkana & Hailey, 2001; Hamilton et al., 2003), a higher score on spirituality was significantly related to a higher score on perceived wellness.

The results of this research pointed out that participants used different ways to respond to stressful events in their lives. However, when questioned, more than half of the strategies offered by participants appeared to focus on how to escape from feeling stress rather than how to deal with it effectively. In line with several studies (e.g. Davies et al., 2000), the strategies for coping with stress indicated that often male university students rely on themselves, to withdraw socially, and try to talk themselves out of feeling depressed. The participants chose both positive and negative coping methods listed as follows: exercise, talking with close friends or people, talking with people they have intimate relationships with, spending time with their family or friends, listening to

music/movies, flight, alcohol use, smoking, drugs use, and suicidal ideation. Such processes support the rising concern that is expressed in relation to the need to develop a more pro-active and informed understanding of the sources of stress and its management in young males.

Functional strategies utilized to manage stress.

As noted previously, the participants in the current studied did identify many positive health promotion strategies to cope with their experiences of stress in daily life. Positive social interaction is very important for individuals in terms of the way to cope with stress (e.g. McNamara, 2001). In this present study, many participants reported the use of talking with close friends or people they have intimate relationships with as a way to cope with their stress. Social support has been established as a factor with potential for influencing health promotion behaviors (Pender, 1996). Within this network, family members have been suggested as a primary source of social support. The findings of the current study confirmed that for some participants (those low in perceived stress impact) spending time with their family was one of the ways they used to cope with stress. However, this form of support was not available to all, and was also reported as a difficulty for those students who were confronted with familial disruption and/or divorce. Thus leaving students in a vulnerable position of not having necessary supports available in times of need.

Exercise was also perceived by the participants as a positive way to cope with stress. As noted by Pender (1996) exercise is beneficial as it increase the flow of adrenaline in the body, helps to balance hormonal influences and decreases anxiety and depression. Furthermore, she argued that physical activities can also improve mental

alertness and enhance general mood and psychological well-being. Exercise has been associated with reductions in total cholesterol and low-density lipoprotein cholesterol (LDL) among individuals with high cholesterol (Parker, Patterson, & Hearne, 2003; Pender, 1996), decreased anxiety and depression and improved self-esteem (Edelman & Mandle, 1998). The current study has indicated that participants who utilize exercise as a coping strategy also report a lowered sense of impact from stressful events, thus supporting the proposal that it is a positive and healthy activity.

Similarly, participants in the current study indicated that listening to music or going to see movies was one strategy to reduce stress. As noted by others (i.e., Misra & McKean, 2000; Iwasaki, 2003), leisure activities are an effective method for reducing academic stress in male university students, and are recognized as therapeutic for relieving tension and anxiety.

The outcomes of the current study have confirmed that for students who report less impact from daily stressful events in their lives. The utilization of positive health promotion behaviors, as identified by Pender (1996) is an important aspect of their coping mechanisms. However, for many of the participants, these positive coping mechanisms were not the only methods they utilized. Indeed, some participants (those high on reported impact) often did not associate to any of these factors.

Less functional coping techniques

The outcomes of the current study are similar with previous research, that indicates that stress is linked with increasing negative health behaviors such as smoking, alcohol use, and drug use (Coogan et al., 2000; Kim, 2002; Fromme & Rivet, 1994; Skara & Dent, 2001; Vollrath, 1998). Of concern, the participants in the current study did not

indicate any concern over the use of these negative behaviors. Rather, many perceived them as normative and appropriate coping behaviors. Research regarding males preferred coping strategies (Maus, 2002, Smiler, 2004) have highlighted the public and social issues associated with perceptions of masculinity and male identity in our modern Western society. Importantly, this research has noted that there is a 'current crisis' (Connell, 1995) in our society surrounding current concepts of masculinity, which has lead to many males experiencing heightened levels of stress and ill health. The findings of the current study indicate that this concern is alive and well within our male tertiary students as well.

Research specific to stress and coping studies have indicated that men use more problem-solving coping strategies when they encountered stressful events than women (e.g., Ager & MacLachlan, 1998; Day & Livingstone, 2003; Renk & Creasey, 2003). However, n the current study, many participants reported the used of emotion-focus coping, particularly avoidance and denial.

In general, problem-focused coping is expected to be more beneficial for well-being than emotion-focused coping (e.g. Thoits, 1995). As Kraaijj et al. (2003) noted, cognitive coping plays an important role in determining whether young people develop emotional problems after the experience of stressful events. In vulnerable young people, the reaction to stressful events seems to be related to more negative cognitive coping strategies. It is very interesting to find that many male university students in this study preferred to use emotion-focus coping strategies to resolve their problems. Similarly, escape and avoidance through the use of drugs and alcohol were considered not surprising given the evidence of an overall increase in the use of certain drugs in recent

years (McNamara, 2000, Stock et al., 2001). The findings of this study showed many participants used drugs (prescribed and non-prescribed) as the way to cope with their stress. This type of behavior was not considered to be harmful by the participants, however research has indicated that the short and long term effects of drug use are extremely negative in relation to one's level of biopsychosocial health and well-being. Many participants in this study used alcohol as their way of relaxing, as well as a way of coping with stress. Almost all of the participants viewed their alcohol use as a common thing in their university life. This is consistent with previous studies that have indicated that it is common for university students to use alcohol (Keeling, 2002). However, alcohol is part of the common social fabric of Australian society and is a major problem among Australian university students (AIHW, 1999). Inappropriate and excessive use of alcohol can produce harmful consequences, such as motor vehicle accidents, which are the leading cause of death among 15-24 year olds (ABS, 2000). Many studies also pointed out that there is a relationship between drinking and substance use among male university students as the more students drink alcohol, the more likely they are to have used cigarettes, marijuana, cocaine, and other drugs (Jon et al., 2000; Kim, 2002). This should arouse more concern about alcohol use as common behavior not only among male university students, but also the broader population.

Although much effort has been placed on emphasizing the health risks associated with smoking through public health promotion, one of the common behaviors that many participants in this study used to cope with stress is smoking. Under stress, many students clearly stated that they were smoking to reduce negative emotions, such as when they are anxious or over aroused. Several studies supported this finding that university students

used smoking as the way to cope with their stress (e.g. Haddad & Malak, 2002). As a consequence, rather than coping proactively, these participants further engage in avoidance behaviors, which lead to a piling up of unresolved problems and a continuation of stress (Vollrath, 1998).

Of serious concern, the findings of the current study did indicate that around 30 per cent of participants in the qualitative component of the project reported that when they experienced extremely high stress, they had engaged in suicidal ideation as an alternative way to cope with their life. This result is similar with other studies that indicate almost one-fifth of Australian youth report having had a suicidal though in the past two weeks (McKelvey et al., 1999). Previous studies have also noted that suicidal ideation is related to many factors including poor family relationships, lack of satisfactory peer relationships, reduction in emotional well-being, drug use, and poor grade point averages (Field, Diego, & Sanders, 2001; Groleger, Tomori, &Kocmur, 2003).

Suicidal behavior, the reflection on one's own death, on the possibility that one actually might end one's own life, is one important cause of death among males in the 15-24 years age group in Australia (ABS, 2000). The factors related to suicidal ideation from the current study were related to family relationships, family history of depression, intimate relationships, and emotional well-being. For example, for two participants this was related to problems with their intimate relationships. One other participant experienced stress from family relationship combined with emotional well-being (happiness, anger, and depression). Researchers have indicated that there is a strong

association between reported suicide ideation and injury-related behaviors (Barrios, Everett, & Simon, 2000).

The relationship between stress levels, methods of coping and health promotion behaviors

The outcomes of this study indicated that there is a correlation between reported stress levels and health promotion behavior amongst male tertiary students. In many instances, whilst academic issues were identified as a source of stress, a variety of daily hassles and environmental factors were also reported. The impact of stressful events on the individual appeared to be moderated by their engagement in positive health promotion behaviors. However, often the participants indicated the use of a mixture of positive and negative behaviors in their coping. Unfortunately, for a proportion of the participants many of the potential positive health promotion behaviors recommended for prevention of stress impact by others were found to be also the source of stress in their lives. Similarly some of the less functional ways of coping were also behaviors they had adopted due to social and normative behaviors.

Conclusion

The outcomes of the current finding do confirm pervious reports of there being an elevated of level of reported daily events which lead to perceived stress in tertiary male students' lives. Furthermore, the current study indicated that the perceived impact of the events was also reported to be high for a large proportion of the students. Of importance however, the majority of this stress was not specific to academic life. Rather, ongoing developmental factors, social influences and environmental issues were also cited as sources of much stress provoking events in the young men's lives.

More than half of the strategies utilized by participants in the current study appeared to focus on how to escape from feeling stressed rather than how to deal with it effectively. The negative strategies for coping with stress in the participants include: to rely on themselves, to withdraw socially, and to try to talk themselves out of feeling depressed. Furthermore, most of the proposed indicators of health-promoting behaviors, whilst offering some sense of resilience (i.e., those who reported high health promotion behaviors also reported lower impact of stress); many of the resources recommended for engaging in these behaviors were also identified a source of high stress for some participants. More concerning, students with reported higher stress impact and lower health-promoting behaviors also reported having engaged in suicidal ideation in cases of extreme stress. In sum, it is evident from these data that the stress and health-promoting behaviors of the male university population is a dominant public health issue

The model of stress and health-promoting behaviors identified from this study is depicted as seen in Figure 2. As shown, the main sources of stress are divided into three factors, namely university life stress, financial life stress, and interpersonal relations

stress factors. Nationality and home language demographic and men' socialization factors also had an effect on stress of university students. The intervention of utilizing health-promoting behaviors in male university students can reduce stress and prevent stress occurring. In return, stress has a direct relationship with health-promoting behavior, such that higher stress is related to lower level of engagement in behaviors.

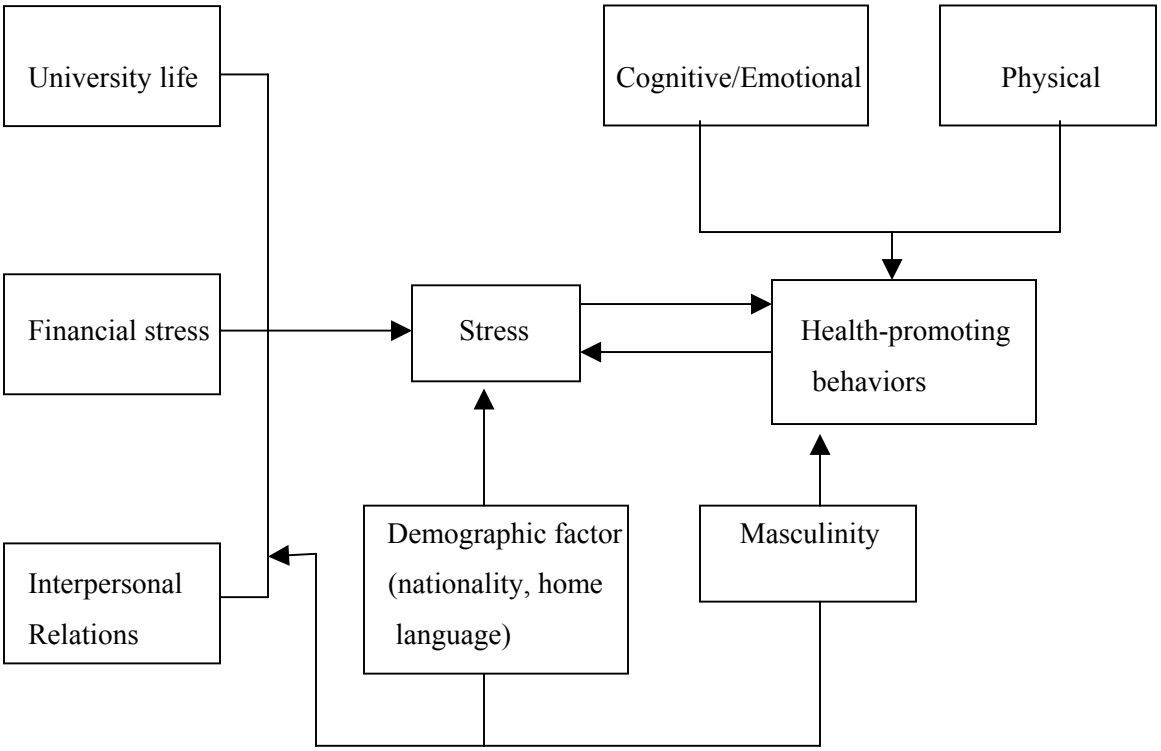

Figure 2 Stress and health-promoting behaviors framework in young male in tertiary education settings.

In the current study, two primary factors were identified within the domain of health-promoting behaviors, namely cognitive/emotional and physical factors. Male university students reported using cognitive/emotional resources (interpersonal relations, spiritual growth, and stress management) and physical activity (physical activity, health

responsibility, nutrition, and stress management) to determine their health-promoting behaviors. Furthermore, when qualitative analysis was introduced, normative values and issues associated with the drive for masculinity (McCreary, 2003) were also identified as being associated with both higher levels of stress and lowered engagement in positive health promotion behaviors.

Limitations of the currents study

There are several cautionary points that need to be kept in mind when considering the results of this investigation. First of all, the questionnaires were undertaken at the end of semester two, the time in which participants were expecting to undertake examination. This may have raised the number of responses affected by examination stress. At the same time, the examination/assessment period of semester was identified by students as a period when they actively decreased the amount of health-promoting behaviors in order to manage their work loads. Secondly, this study was conducted at four universities in Melbourne with 226 students participating in the quantitative part of the study. This may provide a strong generalisable overview of the current perception of events which lead to stress, and the impact of stress in Australian students, however it is also apparent that cultural and normative issues are involved. Therefore caution needs to be taken in extrapolating these findings to a more universal account.

The measurement of stress utilized in the current quantitative component of the study was limited to one daily account. As such it does not offer the opportunity for moderation of the reported level of events in consideration of potential confounding factors that may have been particular to that specific day. Whilst the overall data base was derived from a two week testing period, thus offering some control over these issues

it does not take into account potential major social issues or concerns that may have been evident at the time. This limitation may also account for the elevated less of reported stressful events and impact experienced by the participants.

Current Knowledge

Notwithstanding these limitations, it is clear from the outcomes of the current study that the level of stressful events in young male's lives is not inconsequential. Many students indicated that the impact of life events affected them adversely: psychologically, physically and behaviorally. As noted previously, whilst academic issues were identified as a source of stress for these young men, these issues cannot in many cases be separated out from other pressing issues in their lives. For example to focus purely on time management and study skills for a young person who is also experiencing high levels of stress within his personal environment, one would argue is a rather futile practice. Unless the subsidiary issues are addressed, it is highly unlikely that the student will be able to make themselves emotionally or cognitively available for practical tasks. Similarly, the young male who is experiencing issues of social isolation, cultural shock and insecurity, the need for more proactive community and public education is required in conjunction with individual remedial assistance or counseling.

Many of the identified sources of stress offered by the participants in the study were not specific to just this cohort of young men. Rather they touched on broader social and political issues of our current society. As identified by others (Pascoe, 2003, Smiler, 2003) issues of masculinity, financial resources and employment prospects are a strong reality of current life. To deal with them as population specific rather than public and communal issues is to disregard the importance of the influences across the whole

population. Moreover, to address them in isolation is not considered to be a potentially positive intervention strategy. As noted by Elias (1978), one of the major peculiarities of our traditional conception of man is to think of terms of the individual as discrete from the society. However, this propensity to split the individual off from his environment is at best a folly. The individual cannot exist without consideration of his self in relation to the other. Similarly, the other cannot exist without relation to the self. Therefore, to consider the issue of prevention and intervention on a purely individualistic basis would be to split the person off from a major component of his identity.

Recommendations

As the first year of the academic life was reported to be a particular stressful experience for students, it is recommended that serious consideration of academic support services and adequate inputs for teaching and learning in universities should be put in place. Orientation for the first year university students needs to be extended from a short 'fun' burst of activity in the initial weeks of university life, to a broader integrated program that considers a variety of transitional and academic issues. Provision of leisure activities within the campus might be one of the suitable methods offered for reducing stress, however unless a program of encouragement and value is placed on this activity, many students do not consider it an important aspect of their daily life. Campus recreation practitioners may plan leisure activities and social-recreation pursuits to help students handle their academic stress. They should encourage leisure activities that give students a broader experience in a variety of sports and exercise; encourage the development of practical skills, improve overall health, and encourage a level of curiosity and enthusiasm.

As the nationality and home language had an effect on stress in participant in the current study, it is recommended that all academic support services and leisure activity should focus more on non-Australian nationality and students who spoke another language in particular.

Male tertiary students are aware that there are important and specific health promotion strategies and support services available to assist them in coping with their stress. The greatest barrier to seeking help was men's socialization to be independent and to conceal vulnerability. As such it is recommended that student health services consider the implementation of specific men's health classes, men's resource centers and proactive public educational programs around these issues. It is important to educate campus officers and health care providers to be aware of men's issues, particularly men's socialization to be independent and tendency to conceal their vulnerability from others.

Future Directions

Further research is needed to assess the generalizability of our results. It would be valuable to compare male with female university students to identify the specificity of academic stress related factors to males in comparison to females. In particular, research should focus more on identifying and working with students who are vulnerable to suicidal ideation. Although the current findings offer insight into the sources of university stress and how male students cope, further research is needed to extend our understanding of stress to all young males, as much of that identified was not university specific. Furthermore, the PHPM is theoretically consistent with the frameworks of this study. As the results of the study, the health promotion intervention for young male students should be designed incorporating with these variables from the study. The extent to which the

PHPM is useful in guiding interventions that alter health-promotion behaviors will determined through intervention studies.

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Appendices

Appendix 1: Letter of introduction and questionnaires

INFORMATION TO PARTICIPANTS

I, Nikom Moonmuang, would like to invite you to be a part of a study in to stress and health promotion in young men in tertiary education settings. This project is the part of Ph.D. course, Psychology Department, Faculty of Art, Victoria University of Technology. The aims of the study is to explore the factors that influence the onset and management of stress, and the factors that influences stress health promotion behaviors in male tertiary education settings. This study will increase their knowledge about, and understanding of stress. A further outcome of this study will lead to the development of a stress health promotion model that will benefit male tertiary education students. The results can also provide valuable information about stress health promotion to young males in general.

A questionnaire will be used to collect data on stress and stress management. The questionnaire will be taking 10 minutes to complete. Your participation in this study is in no way connected to the requirement of the course. Your participation is voluntary, and you may stop answering the questionnaire at any time if you change your mind. The completion of the questionnaire implies my consent.

If you have interested in the second phrase of this research, please complete the attached Expression of Interest form and return it to the researcher in an envelope provided by the researcher. In the second phase of the project, in-depth interview will be carried out in a private setting. I will use open-ended questions for a period of about 30-45 minutes. The purpose of the interviews is to identify issues about the causation of stress factors, which increase and decrease stress, health-promoting behaviors that help you reduce a level of stress. Data gathered from individual students will remain confidential.

Any queries about your participation in this project may be directed to the researcher Dr. Marion Kostanski, at the Psychology Department at Victoria University on 03-9688 5222. If you have any queries or complaints about the way you have been treated, you may contact the Secretary, University Human Research Ethics Committee, Victoria University of Technology, PO Box 14428 MC, Melbourne, 8001 or telephone no: 03-9688 4710.

Expression of Interest

I am interested in participating in the follow-up study, an interview about stress factors and health promotion behaviors that deal with stress.

Name: …….

Phone: Home ……

Mobile ……

Email: …….

An information will be confidential.

Part 1: Direction: Thank you for your agreeing to participate in this study. Your participation is appreciated sincerely. Please indicate your answer to each question by ticking √ or filling the answer.

1. Sex a…….male b…….female

2. Your present age? ……year ……month

3. Your status

a……...single b……married c……de facto

d……divorced e……separated

4. Your religion

a……Christian b……Buddhism c……Muslim

d……Hindu e……other, please, state……..

5. Are you an permanent resident or Australian Citizen? a……yes b……no

6. Your nationality, please state……

7. Language spoken at home, please state……

8. What is your current level of your study?

a…….. the first year student b…….. the second year student

c…….. the third year student d……post grad student

9. The degree of your study, please state…….

institution…….

10. Living arrangement

a…….. living with parents b…….. living with partner

c…….. living with other persons (such as flatmates)

d…….. living alone e……..other, please state……

11. Sources of income for educational expenses.

a……. self b……. parents c……. loans

d……. scholarships/grants e…….other, please state……

12. Working

a……. employed full-time b……. employed part-time

c……..employed causal d……. unemployed, looking for full-time work

e……. unemployed, looking for part-time work

f……...unemployed, looking for causal work

13. If you are currently working, what is your labour force status?

a……. retail trade b……. whole sale trade

c……. manual factoring d……. construction

e……. property and business services f…….. health and community services

g……..other, please state…….

14. What are the main reasons for working?

a……..money or financial reasons

b……..career reasons: to build or develop a career

c……..new experience d……..other, please state……

PART 2: Direction: This questionnaire contains statements about your present way of life or personal habits. How often in the past week have you done any of the following? Please respond to each item by circling the appreciate number, and try not to skip any item. Indicate the frequency with which you engage in each behavior by circling:

1 = Never 2 = Sometimes 3 = Often 4 = Routinely

ITEMS	Never ⟷ Routinely			
1. Discuss my problems and concerns with people close to me……..	1	2	3	4
2. Choose a diet low in fat, saturated fat, and cholesterol……	1	2	3	4
3. Report any unusual signs or symptoms to a physician or other health professional……	1	2	3	4
4. Follow a planned exercise program…….	1	2	3	4
5. Get enough sleep…….	1	2	3	4
6. Feel I am growing and changing in positive ways…….. …..	1	2	3	4
7. Praise other people easily for their achievements…….....	1	2	3	4
8. Limit use of sugars and food containing sugar (sweets)……	1	2	3	4
9. Read or watch TV programs about improving health…….	1	2	3	4
10. Exercise vigorously for 20 or more minutes at least three times a week (such as brisk walking, bicycling, aerobic dancing, using a stair climber)……..	1	2	3	4
11. Take some time for relaxation each day…….	1	2	3	4
12. Believe that my life has purpose…….	1	2	3	4
13. Maintain meaningful and fulfilling relationships with others……	1	2	3	4
14. Eat 6-11 servings of bread, cereal, rice and pasta each day……	1	2	3	4
15. Question health professionals in order to understand their instructions….	1	2	3	4
16. Take part in light to moderate physical activity (such as sustained walking 30-40 minutes or more times a week)……..	1	2	3	4
17. Accept those things in my life, which I cannot change…….	1	2	3	4
18. Look forward to the future…….....	1	2	3	4
19. Spend time with close friends……	1	2	3	4
20. Eat 2-4 servings of fruit each day……..	1	2	3	4
21. Get a second opinion when I question my health care provider's advice..	1	2	3	4
22. Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling)……...	1	2	3	4
23. Concentrate on pleasant thoughts at bedtime……..	1	2	3	4
24. Feel content and at peace with myself…….	1	2	3	4

ITEMS	Never ⟷ Routinely			
25. Find it easy to show concern, love and warmth to others……	1	2	3	4
26. Eat 3-5 servings of vegetables each day…….	1	2	3	4
27. Discuss my health concerns with health professionals……..	1	2	3	4
28. Do stretching methods to control my stress……	1	2	3	4
29. Use specific methods to control my stress…….....	1	2	3	4
30. Work toward long-term goals in my life…….	1	2	3	4
31. Touch and am touched by people I care about…….....	1	2	3	4
32. Eat 2-3 servings of milk, yoghurt or cheese each day……..	1	2	3	4
33. Inspect my body at least monthly for physical changes/danger signs……	1	2	3	4
34. Get exercise during usual daily activities (such as walking during lunch using stairs instead of elevators, parking car away from destination and walking)……	1	2	3	4
35. Balance time between work and play…….	1	2	3	4
36. Find each day interesting and challenging…….....	1	2	3	4
37. Find ways to meet my need for intimacy……	1	2	3	4
38. Eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day……	1	2	3	4
39. Ask for information from health professionals about how to take good care of myself…….....	1	2	3	4
40. Check my pulse rate when exercising…….	1	2	3	4
41. Practice relaxation or meditation for 15-20 minutes daily…….	1	2	3	4
42. Am aware of what is important to me in life……..	1	2	3	4
43. Get support from a network of caring people…….	1	2	3	4
44. Read labels to identify nutrients, fats, and sodium content in packaged food…….	1	2	3	4
45. Attend educational programs on personal health care……	1	2	3	4
46. Reach my target heart rate when exercising……..	1	2	3	4
47. Pace myself to prevent tiredness……	1	2	3	4
48. Feel connected with some forces greater than myself……	1	2	3	4
49. Settle conflicts with others through discussion and compromise……..	1	2	3	4
50. Eat breakfast……	1	2	3	4
51. Seek guidance or counselling when necessary……..	1	2	3	4
52. Expose myself to new experiences and challenges…….....	1	2	3	4

PART 3: Directions: This questionnaire contains items that describe daily events that can be upsetting or stressful. Think about the events of the past weeks and then read each item carefully. If that event occurred, rate how stressful it was for you. If the event did not occur during the past 24 hours, do not make a rating. Should you make an error when rating an item, erase the incorrect rating completely and enter the correct rating?

0= not occurred 1= occurred but was not stressful

2 = caused very little stress 3 = caused a little stress 4 = caused some stress

5 = caused much stress 6 = caused very much stress 7 = caused me to panic

ITEMS	Never ⟷ moderate ⟷ panic							
1. Was interrupted while talking…….....	0	1	2	3	4	5	6	7
2. Performed poorly due to others……	0	1	2	3	4	5	6	7
3. Experienced problem with kid(s)…….	0	1	2	3	4	5	6	7
4. Was ignored by others…….	0	1	2	3	4	5	6	7
5. Was forced to socialize……	0	1	2	3	4	5	6	7
6. Someone broke a promise/appointment…….....	0	1	2	3	4	5	6	7
7. Did not hear from someone you expected to hear from..	0	1	2	3	4	5	6	7
8. Someone borrowed something without your permission.	0	1	2	3	4	5	6	7
9. Argued with spouse, boyfriend, girlfriend, etc……..	0	1	2	3	4	5	6	7
10. Argued with another person…….....	0	1	2	3	4	5	6	7
11. Experienced confrontation with an authority figure…..	0	1	2	3	4	5	6	7
12. Was embarrassed……	0	1	2	3	4	5	6	7
13. Performed poorly at task……	0	1	2	3	4	5	6	7
14. Spoke or performed in public…….	0	1	2	3	4	5	6	7
15. Did something you are unskilled at…….....	0	1	2	3	4	5	6	7
16. Was unable to complete a task……..	0	1	2	3	4	5	6	7
17. Was late for work/appointment……..	0	1	2	3	4	5	6	7
18. Performed poorly at sport/game…….	0	1	2	3	4	5	6	7
19. Was unable to complete all plans for today……	0	1	2	3	4	5	6	7
20 Was unorganised……	0	1	2	3	4	5	6	7
21. Failed to understand something…….	0	1	2	3	4	5	6	7
22. Stopped unwanted personal habit (overeating, smoking, nailbiting)……	0	1	2	3	4	5	6	7
23. "Pet peeve" was violated (someone fails to knock, etc).	0	1	2	3	4	5	6	7
24. Thought about the future……	0	1	2	3	4	5	6	7
25. Heard some bad news…….	0	1	2	3	4	5	6	7
26. Worried about another's problems…….	0	1	2	3	4	5	6	7

ITEMS	Never			moderate				panic
27. Thought about unfinished work……..	0	1	2	3	4	5	6	7
28. Was interrupted during task/activity……..	0	1	2	3	4	5	6	7
29. Experienced unwanted physical contact (crowed, pushed)…….	0	1	2	3	4	5	6	7
30. Was interrupted while thinking/relaxing……	0	1	2	3	4	5	6	7
31. Was exposed to upsetting TV show, movie, book…….	0	1	2	3	4	5	6	7
32. Your property was damaged……..	0	1	2	3	4	5	6	7
33. Had a minor accident (broke something, tore clothing).	0	1	2	3	4	5	6	7
34. Experienced money problems…….....	0	1	2	3	4	5	6	7
35. Had car trouble……	0	1	2	3	4	5	6	7
36. Experienced bad weather……	0	1	2	3	4	5	6	7
37. Had difficulty in traffic……..	0	1	2	3	4	5	6	7
38. Experienced unexpected expenses (fines, traffic ticket, etc.)…….	0	1	2	3	4	5	6	7
39. Waited longer than you wanted…….	0	1	2	3	4	5	6	7
40. Had your sleep disturbed……	0	1	2	3	4	5	6	7
41. Was exposed to a feared situation or object….....	0	1	2	3	4	5	6	7
42. Someone spoiled your completed task……	0	1	2	3	4	5	6	7
43. Was criticized or verbally attacked…….	0	1	2	3	4	5	6	7
44. Dealt with rude waiter, waitress, salesperson, etc……..	0	1	2	3	4	5	6	7
45. Was misunderstood……	0	1	2	3	4	5	6	7
46. Someone “cut” ahead of you in line……...	0	1	2	3	4	5	6	7
47. Feared illness/pregnancy……	0	1	2	3	4	5	6	7
48. Misplaced something…….	0	1	2	3	4	5	6	7
49. Hurried to meet a deadline…….	0	1	2	3	4	5	6	7
50. Forgot something……	0	1	2	3	4	5	6	7
51. Store lacked a desired item…….	0	1	2	3	4	5	6	7
52. Competed with someone…….	0	1	2	3	4	5	6	7
53. Experienced illness or physical discomfort……	0	1	2	3	4	5	6	7
54. Was stared at……...	0	1	2	3	4	5	6	7
55. Ran out of food/personal article…….	0	1	2	3	4	5	6	7
56. Did something that you did not want to do…….	0	1	2	3	4	5	6	7
57. Was concerned over personal appearance……..	0	1	2	3	4	5	6	7
58. Experienced narrow escape from danger……	0	1	2	3	4	5	6	7

Consent Form for Participants Involved in Research

CERTIFICATION BY SUBJECT

I certify that I am at least 18 years old and that I am voluntarily giving my consent to participate in the research project entitled:

Stress and health promotion in young men in tertiary education settings.

Being conducted by Victoria University of Technology by:

Dr. Marion Kostanski

I certify that the objectives of study, together with any risks and safeguards procedures listed hereunder to be carried out in the study have been fully explained to me by:

Mr. Nikom Moonmuang

And that I freely consent to participation involving the use on me of these procedures. I certify that the aims of the interview, together with any risks associated with the disclosure of information from the interview, have been fully explained to me.

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this research project at any time and that this withdrawal will not jeopardise me in any way

I have been informed that the information I provide will be kept confidential.

Signed…… Date:……

Witness other than the experimenter……

Any queries about your participation in this project may be directed to the researcher Dr. Marion Kostanski, at the Psychology Department at Victoria University on 03-9688 5222. If you have any queries or complaints about the way you have been treated, you may contact the Secretary, University Human Research Ethics Committee, Victoria University of Technology, PO Box 14428 MC, Melbourne, 8001 or telephone no: 03-9688 4710.

Appendix 2: Sample of a participant's interview transcript

Case 01: B.R.

Age 22 year olds with double degree in engineering and business

Swinburne University

Interviewee: What does the word stress mean to you in your opinion?

Case 01: If you're stress, you've got like,(What did I say yesterday? I try to think..) Stress is like that when you do something, you know, something in the future that you really worry about you've to do. You've got some actions you need to perform. And you don't really want to.. you know.. you're worry about it. You're really stress on, I guess, you know.. if you. you've got something that… It's basically when the pressure's on ahh.. it can happen if you do something that you want to do either something you want to do but it is hard and it's the challenge. Generally something that is challenge to you. You know that can be a cause of stress.

Interviewee: How often do you have stress during the week?

Case 01: How often with me during the week? Ah it all depends on where I am, what I'm doing. A typical week at University I think I'll be stressed a few times a week, generally, a few times a week yeah ah. Obviously there is different kind level of stress. But I probably get stress out ahm….I'm generally get stress with assessment of assignment or anything, yeah.. assignment, exam or any sort of test .ahm.. Especially if I 'm not confident on the work I have to do. That's my uni life. I also get stress at home if there is tension in between anybody in the family, or there is ahmm.. yeah.

Interviewee: What do you mean by assignment make you stress?

Case 01: What in assignment that make me stress? Oh just like if ah...like in math we get an assignment like ah...a problem sheet to do ah….and I'm struggling with the work. If the work is a bit difficult or I find it difficult to ahmm.. ask anybody about, about you know…to help me or I don't really have time to figure it out myself. Then, that and I know that.. you know.. the result of this assignment goes toward my final mark. That can sort be big sort of stress. I guess.

Interviewee: Do you have a lot of assignments during study in university?

Case 01: Ahm.. yeah…well ahmm.. My first semester I found I got a lot of assignments. For math for instant, we've got assignments every week. So every week I get a little bit of stress about these assignments. In between that we have exam, little tiny well mini.. mini exam test.. if you will. And I found them quite stressful simply because of they also go towards our the end of year mark. And you know when you've got the test …you know you have to study. If you not study you feel guilty and guilt sort of built stress. You've got nerve.. you know.. and that's all sort of compound. Yeah..

Interviewee: Do you have a high expectation on your exam?

Case 01: Yes, I do. Yes. Not only do I have to obtain a certain mark because of my scholarship which is a big source of stress because I know that I need to get only to obtain a certain mark but I also have personal standards where I hope.. you know.. some people may be happy with the pass mark where as I need to achieve.. you know… a mark well above 80 % or 90% and that's what I aim for. That's my personal sort of my personal goal really and I need to have that to ..and I need to…I think I do that you know… because you know…the little bit of stress, the nerve. That to me provides

something ..provides a ground that I can sort of that I study hard and do better in the exam..

Interviewee: Do you mean that stress still very for you?

Case 01: Stress ..ahm.. in correct amount.. yeah.. not too much. If I've a little bit of stress I'm happy. That's good. That's good for me cause it make me ..you know.. it gets me really pump up to do the work and I can ..you know.. I do it well. But if I am too stress then I can feel physically ill or I can be ..ahh.. you know.. I can just be totally.. ahh ..you know.. out of the world not really wanting to do anything which is probably the biggest stress. You know I get so stress that I just want curl up not do anything. But that has only occurred on rare occasions and generally that sort of stress is ahmm.. is not academic related. I found probably you know that academic stress it can be very larger, can be very painful emotionally, physically but I think that sort of really difficult stress ..sort of comes from more personal sort of family problem or other sort of issues.

Interviewee: come from personal or family problem? What do you mean by personal problem?

Case 01: Ah …Well if for instance, ah.. you know…if I have problem with friends or relationship within my family or outside of my family that can be very stressful to me. Because I am more of an emotional person and I don't like to hurt other people. Ah…and if there is things I want to solve or sort out but I can't you know. Problems that' unlike math something like that can't be solves in few steps. And these are problems that are more like emotional level I find that sort of stress to be quite hurtful and that's sort of for me can be very depressing. But…you know…ah yeh... I know that in the academic world …you know….not getting the best mark in the world is not the end of the world.

That's not .. to me that's ..a big problem outside.. to get a good mark. Priority I got to get personal issues, family issues sort out first. I got to make to sure they are all working and functioning correctly.

Interviewee: What do mean by having a problem with friend? Do you mean that you get a problem with your friend sometime?

Case 01: I think everybody does. Yeah.. I think every body sometimes. Can I give you an example? Like…For instance! If amm… I don't know, may be…

Interviewee: may be one thing that happened with you.

Case 01: One thing that happened! OK. Ah I had a friend that I met. And he was a….you know Ah.. Oh.. . Actually I have another friend. She came out from Canberra. She was very nice person. And.. We got to know each other very well. But then.. she sort of said I have to go to Carine and I am going to study away for another semester. And you know… The only because some little tiny things that she didn't like in Swinbourne. And I had to try to convince her not to go away. She was a good friend. And those sort of things,.. you know… you can't solve them very easily. You know, it requires lot of thought, a lot of time and effort to make these…to change the mind of people and ah.. and to sort out these problems. You know… I was…That can be stressful, you got somebody that.. you know…

Interviewee: Is that a big argument?

Case 01: Oh.. I don't generally have big argument with friends. That's! Yeah.. It's more sorting out problems and sort of try….I don't know.

Interviewee: Do you have any fight during your argument?

Case 01: No… These days everything can be sort it out verbally. We can always, ..we generally,… if somebody doesn't,…. disagree with something continually I generally left there. I don't worry about it. And if I'm continually fighting someone,… I don't really consider them to be my friend. To be honest I would rather spent my time with people,.. you know.. that believe in the same things as me, have the same value, same priority. So then there is a lot less arguments. You know I had debate with people. I sort of say you know this is incorrect or this is I don't agree with you. That happens. And that happens a lot ..Ah even just.. on Queensland,.. you know.. I was with some international people,.. international friends, and you know.. sometimes they would say.. you know.. For instance one of them said it's good you've got to be immature some other times, you got to let yourself go and be immature. And I said I disagree, I think you got to be mature. And you know it a little argument but it's not, ..it's not,.. you know,.. threatening to our sort of friendship just we try to enforce our believes. And ah.. yeah.. getting that,.. question,.. I think I have those the main issues are when other people try,.. you know.. if I try to help other people through problems or they try to help me that's what really stresses me out. That's what.. I think,..really,.. like… I said like this girl that she try to.. want to go away go away Ahm but I know you know in my heart it's not the right thing for her to do. You know,..' cause she's got a good course at Swinbourne. You know, ah she's got a really good house, all these sot of things. And she basically take a very big risk. And sort of like…even though it's her problems. And sort of,.. you know,.. I care for her so it a bit of stressful sort of situation.

Interviewee: You also told me about family problem.

Case 01: Ah, my parents were separated about three months ago. That every one always assumes that's very stressful for children. I disagree. I think children these days are especially considering how common divorce or separation is for parents. I think children these days cope with it a lot better. There are a lot more children in this situation. They can sort of lean back on each other. And, can find support if they need. But generally children don't need support because they're growing up knowing that divorce is a common thing ah, and you know.

Interviewee: Do you mean that the divorce from your parent not make you up set?

Case 01: I was sad. I was sad, because, but at the same time, because generally these things take a long time to come to virtual. Like, It's been about four or five years so I've known, four or five years that I've know my parent weren't, you now, best friends. And, of course when you first find out, and especially when you're young. I thought it was hard. Because, you know, you always assume your parents are really happy people, but, you know, you also thought said, of course it was true, Easter Bunny's existence. So, you know, things change when you get older. You've to accept these things. And, I think me and my sister are quite accepting change and of our parents situation, so, you know, it was not a big surprise when my mom said, you know, to my dad that she's got to move out and all that sort of things. It's not a big surprise for us. Ah.. so.. the stress wasn't there really. I think, ahh, It almost in a way lifted a bit of stress from us, this separation. Because those lot of tension between them at home, you know, a lot of fighting, a lot of disagreements ahh, and, you know, that can stress out kids,…just because of that. I think it was for the best really that they're separated. I think that's common to a lot of family, a lot of household, you know. The stress is actually in the whole putting up with each

other. That's where stress comes from. Once the separation has occurred then the stress was lifted.

Interviewee: At that time did your parent divorce affect on your study?

Case 01: Ah, yeah, I suppose it did. They, yeah, they separated, well, I mean my study this year hasn't been difficult, hasn't been very challenging. Ah, but, of course I focus all my energy on my family before study. It's priority. I was always focused on my parent, my family situation before my study. So, I do remember when they did go through the separation. It was hard for my mom. She found it very difficult as I looked after her. And I think for a few weeks my study just has got to put on hold. And I had to, when it was all calm down I had to go back and sot of fix up, you know, and.

Interviewee: So at that time you put your study on hold?

Case 01: When I said put it on hold, I said, I did the minimum. I still went to university. I still did. I didn't like, forget about it. I still did the work I needed to do. But I didn't put all my energy into my study, you know. If my family's situation is stable then I can, sort of, concentrate on my study. But, if my family's situation is unstable I'd rather focus on that and make sure everyone's happy, make sure my mom's happy. That's, I means, 'cause that to me, it's most important. I finalise, I've got to make sure everyone sort of, you know. I've to make sure everyone's emotion is stable. I can worry about myself and, you know, my own sort of personal game.

Interviewee: Did the divorce affect on your mom?

Case 01: The effect on my mom? Well, my mom is very, she gets depress very easily. She's been in the hospital few times from depression. So, you know, I, She's got depression, I think, she got. I think she's prone to depression. That's just who she is. But

she also gets depress obviously from what, you know, from my father and what he did and stuffs that depressed her a lot, amm, and so she. That sent her to hospital multiple times in the past few years, and, you know. When that's happened, you know, it's very difficult on every body. Ah, and definitely study gets put on hold then because, you know, I've got to make sure mom's happy and she is OK. You know, she generally get looked after in the hospital. It can actually take mom sometimes for her before she come out of hospital. She's pretty difficult on every body. But, ah, the effect, I means, 'cause she is prone to depression, you know, she gets…

Interviewee: When your mom get stress, it will affect on you as well.

Case 01: Yeah, yeah, exactly, exactly. When I see her depress, you know, that makes me unhappy. Because I want her to be happy. And, you know, it's really. It's quite amazing thing how, you know, how it chains a long sort of people. When my sister see me unhappy, she is unhappy. Because she is four years younger than me, so, you know, she looked up to me. And I looked to mom. It's all sot of go, it's just knocked down the domino. Yeah, but no, because she is prone to depression she finds it quite difficult to cope with a lot of these. She actually gets a lot more stress more than myself, and primarily because this separation involves her directly.

Interviewee: At that time you feel really upset with this issue, so how do you cope with this stress?

Case 01: How do cope with this stress? Ah, I generally need time alone. I need time to myself. I like to spend time with people, of course, but I need a certain amount of time in a day, and obviously more when I 'm stress, just sort of to think things through. I, generally to get over stress, I can think things through. That way of doing that I found,

just go for a walk. Yeah, take a dog for a walk. I walk to university. That's a good half and hour on one way. That takes a lot of stress of me 'cause I can, sort of clear my mind and to think about think about what's important in life. Also going to church and talking with my priest. That helps me. Talking with people is, it is good but sometimes, generally, I first talk to myself. I sort of go for my walk. I think things through.

Interviewee: by walking.

Case 01: Yeah, and that's, walking is the best way to do it. You know, that's all it is for me. I use to play sports but that was generally to get rid of anger more than any thing. Stress, I find it's easily, well not easily, but best result through walking or just clearing my mind not thinking about anything and just taking sometime off. I remember when I was studying last year, you know, for my exam, I had to, had to, had to go for a walk. I had to, just to keep saying, really, just to prevent myself from losing sight of what's im

Interviewee: You mean that you reduce stress by walking.

Case 01: Yeah..

Interviewee: and also go to the church and tell the priest what you have stress.

Case 01: Yeah, I do. I actually don't tell anybody everything. But I do. You know especially with what's go through with my parent because he talked to my parent as well. So I can talk to him. And that was really helpful, for me I found. Because, I could lean back on him and sort of, he could give me his opinion, and sort of, just almost sometime even just to reinforce my believe and what I sort of way I felt, just to have somebody there to say yes. You know, you're going on the right path. You're doing the right thing, good on you. That's a little bit of support. It's helpful. And sometime you don't get that sort of support from your friends because generally your friends, you know don't go that

deep emotionally, you know. And your friends are good fun but I haven't got many friends that I can really, sort of, talk about. I've got a couple, you know, that are really good to talk to but a priest is a different sort of, you know. They are, you know, they deal with these sort of things all day long, you know, everyday, you know,. They've got a lot of experiences they can help me. They help me quite well.

Interviewee: How do you feel after talking with him, better?

Case 01: Yeah, I definitely felt better, but I generally had a lot more things to think about then, you know. He's given me a lot of things, a lot of food of thought so I have to spend more time thinking about what he said, and you know what.

Interviewee: You have to get back and thinking about that.

Case 01: Yes, so it's almost what I felt better I just have to do more thinking and so need more time to myself then, sort of think about what he said what he recommended. That can be sort of depressing in itself having to spend all this time doing this, you know, yeah, it's fine.

I guess what happen to my parent and stuffs that has made me a bit stress. But ah..

Interviewee: Look like the main stress come from your family?

Case 01: Generally, my family situation on a whole. I think the situation with my parents has probably been, you know, obviously the main concern lately. Even things like, when I returned from Belgium. I lived in Belgium for a year. When I returned, you know, I was quite independent person and to come back to a family, that has rules and, you know, your family are lovely people. They still treat you like you are a child. That compounds stress. Your parents, especially when you turned eighteen, you believe in your own adult. or if your sister, my sister is a sort of constant stress sometimes. When she get, she is

doing year ten now. She is struggling with work. She needs help and stuff like that. There are a lot of other sources of stress. I find on whole, but generally, my family that sort of family life. That's quite stressful but that's normal. You know, that stuff, that's common to most people. You'll be in a hard place to find anybody that wasn't stress from family. While I still get stress from my academic work and at times my academic work is much more stressful than my family. That's generally during the exam period. And it's generally, because people post expectation on me or I have expectation of myself, sometimes it's just…

Case 01: Only sometime, you know only sometimes, only briefly. Like most of the time my family is the most important to me. And what is most important to me will give me the most stress. If there is an issue stress because it's important. It's strictly proportional to be amount of stress. Sometimes, I remember my exam last year because I really wanted to get a good mark, to get the scholarships to Swinbourne. That would save me 50000 dollars, so, obviously. For two weeks there my academic life was more important to me than, pretty much, anything. I won't say it was more important than my family because I don't think anything ever has been more important than my family, but you know. I did sort of say to my family, look, I can't effort not to worry about other issues at the moment, just leave me alone for a minute. You have to be cruel to be kind. Leave me alone for a minute and I, just for a couple weeks. I'd get through this then I can get my energy back to into being active member in the family. I did the exam; you know I got the mark I wanted. I was really happy about that you know…

Interviewee: Have you ever failed your exam?

Case 01: No..No.. I've never failed the exam. I don't. To fail something to me it's really bad. I would hate that. I would be very, very disappointed to myself. I don't think there is anything too hard in.. generally, all places that I have been so far don't have anything that never….how do I say…Academic life, They don't watch you to fade off. They don't. They want you to pass. So they give you stuffs that doable. Nothing is too challenging. Northing is so challenging that everyone will fail because that will be pointless.

If, it's passable and they want you to get a good mark. There's no reason why you can't, you know. While some people probably don't get as stress as me about academic work and those, sort of, people would say 50% is good enough. One mark over, you work too hard. I sort of say, well, you know, if you just pass that's a bad, bad mark, you know. You fail. It's really bad. I aim for a high mark in everything I do. That's just who I am. I don't regret that. I think that's a good thing to do.

Interviewee: Do you have any plan for your family in the future?

Case 01: Yeah, my family, I want look after my family as much as I can. And be as supportive as I can, obviously, I would never, you know. I appreciate what my family done for me. How much they supported me through my last 19 years of life. So I want to help them in the future. I like to think sometime, I am helping them now. Like, somebody that they can both talk to. Both mom and dad know who I am. I like to come back and we have a chat. I enjoy that, because, you know, talking, I think, sort of, resolves a lot of issues, you know, can offer lift a lot of stress from relationship in the family.

Is that what you want from that question?

Interviewee: Yeah yeah.. In your opinion, what do you think that men hardly accepted anything easily?

Case 01: Well, in our situation that's the truth. In our situation, was my father who basically doesn't accept change, doesn't accept responsibility. Natively basically, it's generally natively on his part that led to this marriage break down. And, while I don't like to take side in this case, I know, my mother was sort of open person and trusting person. I related more to her than I do to my father because I think my father does a lot of things that incorrect. I think that, in a male in generally, sort of, aren't as willing to change or to accept responsibility or to accept their own faults, you know. They don't want to accept their faults. That's really my father problem. He likes to blame other people, everything. Northing, he doesn't accept responsibility. And.

Interviewee: You mean that when men get something wrong, it quite hard for them to accept their fault.

Case 01: Yes, that they are wrong. They like too. I think women are much more, can say….Auph! I was wrong, you know, I was wrong, yep, sorry!

Case 01: I think so. That what I think is the most, I think you got to be of a certain mind set to be able to say that. It's hard to say I am wrong, you know, because nobody likes to be wrong. I find male, this is in my experience and I know it's a generalisation, but I find male find it more difficult to say that they can't….

I think it's more difficult for male to say, you know I was wrong, I'm sorry. That's basically the cause of my parent marry break down. I'm pretty confidence in that. They are… I mean, because I've seen this happen, because I experiences this so young. It helps me mature a bit and for my own decision. I look at my dad and I can see the mistake he

made. I can see him blaming other people. For instance, sometime, he sort of, said,.. One thing my mom blames him or my mom doesn't like about his personality is that he doesn't initialize anything. He doesn't. He has to have somebody else telling what to do. He won't just pick up a foot ball and take me and my sister to the park and kick a football. He has to wait for us to say come on dad let's kick the footy, oh yeah, Ok .He doesn't initialize anything. I find. And mom said that his fault and I agreed. I think to be a good, sort of, human being you've got to have independent, you've got to be able to initialize when you got a set of situations. And say, these kids need to kick football. They need to spend time with their father. As a father figure you should recognise that. He hasn't that when my mom said to him you haven't done this. Instead of saying, I am really sorry, yes that is my fault or yes, I have been making those mistakes and I would try to change. That's what he should say. Instead, and not only should he say it, he should actually take, you know, you should try and change. But, instead, he said, well, that's how I was brought up, that's my mom's fault, that's my dad fault, that's my parents fault. That's what he said. That's what really disappointed us that he can't say I am sorry, my fault. He said no that's the way I was brought up, my father never did that to me, so why should I have to do it, it's not my problem I am just, you know, not my fault.. not my fault…and well that will continue until somebody said, hang on,.. This is not right..
So, hopefully I don't want to be like that. I want sort of, not only, obviously I don't to make too many mistakes in life. If I do, and when I do, ‘'cause I will, I can accept them. I also want to be able to, sort of, learn from my father's mistake. Well, because he didn't kick the footy with us. He didn't take us here and spend much more time with us. I mean

I don't know my father as well as I knows my mother. That's for sure. Me and my mother had a much better relationship than I do with my father. It's sad.

Interviewee: Do you think that your dad has a high masculinity?

Case 01: It does. Yes, I'm pretty sure that where it does come from. If you look only fifty years ago males were dominate figure in any relationship, in any family or any other relationship. They were always dominant figure. That is changed obviously. That is changing this day but because males always have that upper, they always consider themselves to be better than women. It will take a long time to change. There is something in our testosterone, our masculinity that said we have to be strong. We can't be wrong. We have to be strong. That's where the fault lines, you know. That' where, people like my mom…

Interviewee: What do you think about masculinity?

Case 01: Yeah. I don't like it. I think we all born equal. Why should the males believe in having the upper hand in anything? All the females, they don't.. nobody deserves to have the upper hand just because you're born that way. That's completely incorrect. It's up to individual and who you are as a person that decides where you sit in the hierarchy. I would much prefer to think that everyone is on it. I don't think,….I know that every one is on a level of playing field. Those people that believe that they are above every else, really in reality, a lower, they are not. They can tell themselves they are. I look at them I can say you're sad person. Why should you put yourself above everyone else, just because you have a lot of money? Just because you have a better job doesn't mean you're better than the rest.

Interviewee: Is that the reason that you don't want to work at MCG any more now?

Case 01: No….The reasons that I don't want to work at MCG anymore because it's not challenging enough.

Interviewee: What do you mean by the rich people do……..

Case 01: Oh! Yeah! That's right. That's what I don't enjoy the job, because there are so many of those people that believe they're better than the rest these people, you know, that perhaps have a lot more money than us. And because of that they can go to these very fancy functions. They can spend all their money and make themselves feel better, make themselves feel, like, they're better than the rest. I guess that what's really disappointed me about MCG, well not only MCG, any cooperate functions in general where these people, sort of, look down on you. I don't like serving these people because you have to, sort of, treat as if they're superior than you.

Interviewee: You are unhappy at work because they are look down on you?

Case 01: Yes, of course. Yes, of course they do. Just because they're paying, just because they've the money to do so it doesn't mean that in really they are, you know. It's all a bit too fake to me. It's all…I'd much prefer…if everybody didn't think to themselves and, sort of, you know. I guess it's not really the correct job for me because I don't really enjoy it. I do this basically just so I can, sort of, earn a bit of money. So I can enjoy myself as well, you know. It seems to be an easy option to get some money. I don't really enjoy the work because of these reasons. Although, you know, life isn't fair, I know that, you'll never get what you want in life. Sometime you just have to put up with things while you disagree, and put up with it. I'll see what I can do, if I can get a better job somewhere else where people respect me a little bit more.

Interviewee: But you got the scholarship.

Case 01: Yeah, well money is not a big issue. It's nice to have something or challenge or something to do, just basically to make myself feel a bit better. To have some work and to get experience, really, to new meet people, to have experience, all very important in life. I am very experiences that way of leaning. That's the best way of maturing, learning. If you don't take any risk in life you never get any knew at. And that's, males don't like to take risk. I find that another distinction between males and females. Females are willing to take more risk, to be open to new things where as males, sort of say, well, this is they way we've done in the past, this the way we'll do it in the future. And because they believe in the dominant figure, they get their way.

Interviewee: Did the grant provide you with a job in the future?

Case 01: Well, I hope obviously, I hope to get a job through my Uni. They don't give me job. No. I do, do a year of work where I can, but all of these n my own. I would rather do it myself, really to get a job myself, I guess. That's one thing I haven't really though about it because that's six years in the future, you know. At the moment I'm just looking towards finishing Uni. Then getting to the end of Uni and then I'll what I want to do. I might want to do a master or a PhD or something like that. I might want to continue or I might go straight into work force. I don't know.

Interviewee: Do you have any plan for your future?

Case 01: Do I have any plan? No. I like home automation, electronic, I mean that sort of stuff, anything that I enjoy, definitely. I won't do a job that I don't enjoy. That'll be stupid. If I to get up in the morning and arrr… I don't want to go to work. Then I'll quit. I

want to get up in the morning and say, yes, you know, off to work again. Doing something that I really enjoy, something that is challenge but still doesn't get boring. I want to work with nice people. I will never work for a male shower as?? pig I always wanna work with a nice…..I'm always gonna….I know it's a bit ideal I want to make sure whatever job I land, whatever job I have in the future, you know, I can be happy. That I think that's the most important. And also I want a flexible job. I don't want my job took over my life. I think the job is only small part of my life. The most important to me would be family and sort of growing up and growing old with children and stuff like that. That would be the most important thing to me.

Interviewee: So for you, the family is very important for you?

Case 01: Yeah, of course.

Interviewee: Yesterday you told me about your ante commit suicide.

Case 01: She didn't commit suicide. She attempted it. She attempted to commit suicide. Yeah, and Yes, suicide I find it's something I'd never contemplate it. I'd never worry about it to my self. I worry about a lot of other people especially like with my ante. She became so depress, so unhappy. And the interesting here, is, her husband is my father's brother. Both my father and my father's brother are very, very similar people. My mother has been in the hospital for depression so has my ante. She, my ante, is the one who wanted to commit suicide because of my uncle. So it goes, It does show, it's sort of wake up. It shows that it's really my father and my father's brother that have the issues that they need to confront because they depressed other people. In that respect, if she try to commit suicide, when I find out about that was really depress, you know that's upset me a lot because it's upset my mom. It's upset, everyone really sort of upset about it.

Fortunately, she is ok and I still see her. When it happened I went and talk to her. I focus my energy into that. I don't, other things just don't matter when this sot of thing occurred. I think suicide is a horrible thing. While I can't understand the mentality it takes to contemplate suicide because I enjoy life too much and I would never …

Case 01: Yeah, I mean, you know, just I couldn't do it myself. I know that's a big problem and a lot of people do because they think it's the only way out. Now, ante is lot better. She now goes to our church. She's never use to focus. Now she goes to church. She spends a lot of time with us. I really love this person so it's really a good thing. You know, sometime when people that commit suicide are just so caught up in the moment, so upset, so depress. They can't see the big picture. They can't stand back and, say, well this is life, looking in the future. They can't see the change and options. They get cloudy vision and, say or believe the only way to get out is suicide. I think that's the main problem.

Interviewee: Do you think this issue should never happen with you?

Case 01: No. Well, I hope not. I can't be sure. Obviously I can't be sure that I'll never contemplate it but.. because.. I mean obviously my mom is prone to depression, I'm obviously prone to depression. I think depression is a disease. It's an illness. Unless I become ill, and physically can not, mentally can not sort of think clearly, in that situation, I might, you know contemplate suicide. But that's only because I could not think clear. If I ever have a clear mind I would never…..

Interviewee: Do you afraid on the relationship?

Case 01: Am I afraid?

Interviewee: Yeah

Case 01: Yeah, I guess it does scare me sometimes. It can be quite scary, but you know, I just try to think of big picture. I just stand back and think, well, you know, this is where we are and what we're doing. I've got to, you know, that's all I was, sort of, like 'cause when I was stress, just sort of, thinking about what's important in life. You know, I like to, if I'm worry about anything or if something scaring me or whatever, you know, I can just think about, I can go and see my dog. My dog is so cool 'cause she is…

Interviewee: but anyway you still have a family in the future

Case 01: Yeah .. of course. It's always gonna be a problem and issue but that's life, you know. And you grow older, you grow more mature through these problems. Yu learn, my experience…

Interviewee: Do you have any girlfriend at the moment?

Case 01: No, not at the moment. Too lazy, too busy, too lazy, now that I'm settling into the Uni. It's been a big change for me too going from school to university because you've got to make a new whole set of friends. You've got to change your lifestyle and everything. It's quite a big change going from school to Uni. I enjoy changing…..

Interviewee: What do you mean by changing your lifestyle?

Case 01: Changing your life style?? Well, it's a huge change because, you know, for thirteen years I went to school, where the teacher told you every thing. How you need to do? What you need to do? Basically, you don't do much thinking. You only need to learn thing. Now at university you have to be much more independent. The whole surrounding changes, atmosphere changes, at school you're told, big fish, small pond, everyone else is big fish and small pond. Now at Uni., small fish and a big pond. At school there're three

hundred people, what, Uni. is fourteen thousand. It makes big different. Lecture instead of teacher, a lot more assignments, and a lot less ah.. and a lot less waiting to handle.. like in school they told you exactly what you need to do, when you need to do it. Everything is, sort of, handed to you on a plate, you know, but in university you have to do it all yourself. It's very different…..

Interviewee: Do you think that more stress in secondary school than university life?

Case 01: I don't know. I can't really comment yet. So far it hasn't been, no, but I think because that was the work load. At school, I find there is a lot more work. They worry about other things for you but I still had to do a lot more work. In university, less work but you have to worry about other things as well, to do university life. Most of it I enjoy. I love change. I really like to change.

Ah, I don't know because I do go to Swinbourne. It's not Melbourne. It's not Monash. So there isn't a really big, sort of, university campus field. It's only, It's very much, I go to University just to study. Where as If I went to may be a different university, 'cause there is a lot more, you know, community atmosphere, you could have sort of, spend a lot of time. It's like a whole city, you know, in the university. Where as Swinbourne is not that sort of university and I find, as a result, because it hasn't got the prestige there aren't many people that enjoy the finer things in life. There a lot more people that, people of the mentality that just want to pass thing, you know, you understand? Like.. Ah..

Interviewee: I see

Case 01: At Melbourne, there's more people like myself that want get better mark, you know, they have to strike the personal goal where as at Swinbourne, there are more people, because it's easier to get to Swinbourne than it is to get to Melbourne,.. Ok..

Most people that want to get to Melbourne. Most people that want to get the best mark also want to go to Melbourne. And most people that just want to pass don't care where they go and they go to Swinbourne. That's probably the only sort of thing a bit disappointing because, you know, there's not many people that I can, sort of, relate to, like so many people that I can relate to as in, you know, as may be as I could if I went to Melbourne. I like the course better in Swinbourne, and I think, obviously that's the most important thing in university's life to catch? And, there are still very nice people at Swinbourne. I meet some really good friends which is very nice. Yeah.. Ah…No…
So far, university life is really good. I just, Yeah.. Just a big change that I need sort of, yes, embrace the change but I enjoy the change, So it's good.
Interviewee: Are you feel like the uni life make you more mature?
Case 01: Make me more mature? Yeah, I think, obviously, it does. I think it makes every body a bit more mature because you have a bit more independent, a bit more people that gonna be surprise, sort of, more people that gonna fail the subjects in university, 'cause it's a lot easier to fail. Yeah, there definitely be a problem. And ..and these are really excuses, you know. I experienced a lot already only in one semester. That helps me mature. I've seen a lot of things, everything, everything. Make sure you're growing up. But my trip to Queensland ah…that made me, sort of that opened my eyes a lot, you know, because I hadn't on holiday, like, with people my own age, like that. I hadn't done that for a while. So you know, you sort of, loose sight of what's important when you're at Uni and school. Like, I did school for so long and so long. And all you see is your family and your friends. Then I've done something different, really different and that sort of happened as a good experience. It helps me think, well, there are different people out here

as well. You've got to keep that in mind. Any sort of, travelling or any sort of change or experience help you mature. Definitely university also does help you grow up.