PERCEIVED STRESS, PERCEIVED SOCIAL SUPPORT AND GENERAL WELL-BEING AMONG UNIVERSITY OF KWAZULU-NATAL FIRST-YEAR STUDENTS

by

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Declaration

I declare that the article hereby submitted by me for the Master of Arts (Clinical Psychology) degree at the University of KwaZulu-Natal is my own, independent work and has not been submitted by me to another university/faculty. Furthermore, I cede copyright of this article in favour of the University of KwaZulu-Natal

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Abstract

The objective of this study is to examine whether the effects of stress on University of KwaZulu Natal first year students' well being depend on the level of perceived social support. First year students are faced with the challenges of leaving the comfort of their homes in search for education and experience that enhance their growth. This life transition can be a stressful experience that requires social support from other people in order for the student to enjoy a healthy wellbeing. Methods; One hundred and fifty survey packages, which comprised of four measures: The Demographic Survey, The Multidimensional Scale of Perceives Social Support, The Perceived Stress Scale and The WHO (five) Wellbeing Index were distributed. Ninety three (62%) survey packages were anonymously completed and returned by the participants. Hypotheses; Four hypotheses were tested in this study: Whether the level of perceived social support will moderate the effects of stress on wellbeing of university students; whether females will perceive themselves to have more social support as compared with male students; whether younger students will perceive themselves to have more social support than their older counterparts. And lastly to find out whether students who live at home with their family perceive themselves to have more social support as compared to those that live away from their families, either in on-campus accommodation or renting accommodation alone or with other students. Results; The results obtained indicate that the level of perceived social support moderates the effect of stress on students' wellbeing. The second hypothesis was also supported on the basis that females perceived themselves to have more social support than their male counterparts. The third hypothesis which sought to find out whether students who live at home with their family perceived themselves to have more social support as compared to those that live away from their families, either on on-campus accommodation or renting out a flat alone or with other students has not been clearly confirmed, therefore is an implication for further research. Lastly, the results do not indicate that younger students perceive themselves to have more social support than their older counterparts. Conclusions; It is evident that social support plays a very important role in the life of a first year student, as it assists them in moderating the effects of stress on

their wellbeing. The availability and the way that individual perceive social support depends on the gender of an individual.

Key words: Perceived Stress; Perceived Social Support; General Wellbeing; Moderating effect; First Year University Students.

Chapter I

Entering university is a time of major transition for most young people who venture away from the safe nest of their parent's love and care in pursuit of education, autonomy and growth-enhancing experiences. By leaving their parents' homes, first-year students are deprived of important others who have approved their sense of self in the past. As a result, it is likely that their sense of self is shaken, which can result in significant distress. Past research has identified that attending university for the first time can be a stressful experience for many students (Dyson & Renk, 2006; Fisher & Hood, 1987; Shaikh & Deschamps, 2006). For example, in a study to examine the psychological response to the transition to university, Fisher and Hood (1987:426) determined that the transition to university involves change for all students; "there is need to break away with old routines and to adjust to demands of the new environment". These changes and stressful experiences need to be overcome so as to lead physically, socially and psychologically healthy lives.

In order for an individual to live a healthy life, they need to find or adopt ways of dealing with the different stressors that they experience. There may be different ways of coping and achieving well-being, despite the strength of stressors an individual experiences. In a study by Yeh and Inose (2003) it was concluded that international students experiencing difficulties with adjusting to a new cultural setting used or employed close connectedness and social networks as critical ways of coping and dealing with stress and mental-health concerns, especially when they are far away from home. Apart from connectedness and social networks, other ways of coping that may be implemented include exercise (Holder, Coleman & Sehn L, 2009), therapy (Mazzucchelli, Rees, & Kane, 2009), as well as social support. Social support in different forms is viewed to improve an individual's well-being, be it through social networks, perceived or even received social support.

Research, however, presents an opaque picture of the role of social support on the individual's health and well-being. although numerous studies have documented that social support buffers or moderates the effects of stress on the well-being of an individual, some argue that there may be other factors that play a role in assisting social support to perform its buffering role effectively. For example, Luszczynska and Cieslak (2005) confirm in their study the buffering role of social support in managers if the role of personality is considered. Therefore the authors take into consideration the notion that social support alone cannot buffer the effect of stress on an individual.

Due to the complexity of the social support concept, several problems have been encountered in the study of social support. Operationalisation of social support has not been adequate (Schwarzer & Leppin, 1988; Thoits, 1982). This may make it difficult to identify the exact aspect of social support that moderates the impact of stressful events; hence the assumption that there may be other factors that play a role in assisting social support. Schwarzer & Leppin (1988) conclude in their study that it is necessary to specify the dimensions of social support that under study in order to get a better understanding and to draw clear and specific conclusions.

Purpose of Study

The study explores the role of social support in the relationship between stress and general well-being. This is in relation to many previous studies that have identified stress and social support as key factors that are strongly linked to well-being in the general population. This study will therefore examine whether a relationship exists between social support, well being and stress. Precisely finding out whether the effects of stress on student's wellbeing depend on the level of perceived social support. Other factors that are examined include how social support is perceived in terms of age, gender and the living arrangements of students.

The variables under study are: stress as the independent variable; well-being as the dependent variable; and social support as the moderating variable.

Hypotheses:

Null Hypothesis: The level of perceived social support does not moderate the effect of stress on the wellbeing of university students.

Alternate hypotheses:

- 1. There should be a greater level of perceived social support for females than their male counterparts, OR females should perceive themselves to have more social support than their male counterparts.
- 2. Younger students should perceive themselves to have more social support than their older counterparts.
- 3. Students who live at home with their families should perceive themselves to have more social support than those that live on campus or those that have rented accommodation on their own or with their friends.

Theoretical Framework

The theory that guides this study is the buffering hypothesis of social support. It hypothesises that support is related to well-being, primarily for people who are experiencing stressful situations. The theory has been found to be appropriate for this study, looking at the fact that first-year students are subjected to a lot of stress, especially during the first few months of tertiary education. The reason for the stress could be attributed to the change that is involved in the process of transiting to university level, as Fisher and Hood (1987) conclude in their study. According to Cohen and Will (1985), the buffering model argues that support protects persons from the potentially pathogenic influence of stressful events, which

maintains the view that social support acts as a buffer to protect us against the negative effects of stress. Therefore there is a possibility that social support may be a protective tool that can be used by students to cope and deal with the stressful experiences of their first year.

Chapter II

Literature Review

This chapter will review research on the relationship between social support, wellbeing and stress. The three variables in this study will be operationalised to give a clear understanding of how they are utilised in the study. The challenges facing university students, the focus sample for this study, will also be reviewed.

Stress

This section focuses on the concept of stress, as it is one of the main variables in the study. The definition of stress will be outlined and later the chapter will explain in detail how stress affects the individual's body, responses to stress and also explain how social support may intervene, in order to maintain better health for the individual.

Definition of Stress

This study draws on the definition of stress as a negative emotional experience accompanied by predictable biochemical, physiological, cognitive and behavioural changes that are directed either towards altering the stressful event or towards accommodating its events (Taylor, 2009). According to Cohen and Wills (1985), psychological definitions of stress closely link appraised stress with feelings of helplessness, possible loss of esteem, perceptions of low self-efficacy and perceived lack of social control; therefore, the availability of social support affects our appraisal of a stressor and our ability to cope with it (Ganster & Victor 1988; Sheridan & Radmaches 1992). Cohen and Wills (1985) suggest that feelings of helplessness arise because of the perceived inability to cope with situations that demand effective response, while loss of esteem occurs to the extent that the failure to cope adequately is attributed to one's own ability or stable personality traits, as opposed to some external cause.

Sheridan and Radmaches (1992) indicate three different types of stressors that individuals experience in life. The first one is the cataclysmic, which is defined as events that happen to several people or the whole community at the same time, usually unpredictable, have a powerful impact and require great coping efforts, e.g. wars. The second one is personal stressors, which affect individuals and may or may not be predictable, have a powerful impact and require great coping efforts. Personal stressors in this study may be the experience of the transition to tertiary contexts of and levels of learning. The changes that are experienced may have a powerful impact on the student. Therefore, for the student to be able to cope better with the presenting situation, they may need to employ effective coping efforts in order to maintain healthy well-being. The third stressor that is mentioned is the background stressor, which is defined as the daily hassles of life. Daily hassles of life are small, but persistent problems that irritate and distress people, such as waking up late for school one morning or even forgetting a cellular phone at home when one was supposed to have taken it along.

Responses to Stress and Social Support Mediation

Responses to stress are many and include physiological changes, for example, changes in body image due to weight changes; cognitive and emotional reactions such as an inability to concentrate, or even an irritable mood; as well as behavioural responses that include isolation. Curtis, Groarke, Coughlan and Gsel (2004); and Ganster and Victor (1988) suggest that stress might affect health through overestimation or through suppression of an immune-system response; therefore, the physiological mechanism through which social support affects health must work to relax the flight or fight response or to strengthen the immune-system response.

Cohen and Wills (1985) have outlined three different ways in which support may intervene in the stressful event or expectation of that event and a stress reaction. In the first instance, they suggest that support may intervene by alternating or preventing a stressappraisal response. Secondly, support may intervene between the experience of stress and the onset of the pathological outcome by reducing or eliminating the stress reaction or by directly influencing physiological processes. Thirdly, support may alleviate the impact of stress appraisal by providing a solution to the problem, by reducing the perceived importance of the problem, by tranquilising the neuroendocrine system so that people are less reactive to perceived stress, or by facilitating healthy forms of behaviour.

University students form a very susceptible group to experience stress because of the transitional period that they go through (Arslan, Dilmaç, & Hamarta, 2009; Burris, Brechting, Salsman & Carlson, 2009; Daniel, 2007). Most new entrants into university are young and are confronted with new experiences, get to meet new people, as well as face different opportunities that may bring about stress in their lives (Bayram & Bilgel, 2008), triggered by the change that they are forced to go through. According to Wilcox, Winn and Fyvie-Gault (2005), the first year of university may be a stressful experience and a tremendous challenge, for as individuals as students usually face the pressure of maintaining a balance between their interpersonal relationships, academic demands and their own expectations. This period has extensive implications that may last for long in an individual, some of which may be difficult to overcome (Arslan *et al.*, 2009; Lui, Nagato, Shono & Kitamura, 2009). Individuals that are faced with such an experience are in dire need of solutions to deal with the increasing demands on their lives. One of the options that could be a solution to the problem is the one that this study will mainly focus on, namely the amount of social support that an individual believes is available to his or her (Inose & Yeh, 2003; Wilcox *et al.*, 2005).

Many studies have shown that social support may be a tool to overcome stressful situations; hence, keeping healthy in all aspects, be it physical or psychological. In a study undertaken with Turkish university students, Bayram and Bilgel (2008) have determined that many university students start university unprepared for the challenges of keeping a proper balance between responsibilities, while maintaining a healthy lifestyle in the face of stressors; however, the authors conclude that social support acts as a buffer against high stress levels.

Social Support

The definitions of social support will firstly be reviewed in detail so as to operationalise the concept as it is used in the study better. Following this, the chapter will focus on the dimensions of social support. The dimensions are also specified and reviewed for a better understanding of the social support concept. At the end of this section, a detailed review of the two models of social support in relation to health will be done.

Definitions of Social Support

Social support is a multidimensional construct (Flannbry & Wieman, 1989). Many researchers have defined the construct simply in operational terms, which include tangible assistance, informational support and emotional support (Taylor 2009; Schaefer in Bloom, 1990). These dimensions may be examined in terms of the structure of people's social relationships and social network (Feist & Brannon, 1988). When social support is conceptualised in terms of social ties, the extent of social networks and relationship is expected between the size and integration of the individual to one's social networks and social role functioning (Bloom 1990). According to the researcher, as the network becomes increasingly constricted, implying a less dense social network, the individual has fewer opportunities to receive support.

Social support can also be explained as the amount of assistance that individuals believe is available to them; that is, perceived social support (Printz, Shermis & Webb, 1999). Bozo, Toksabay and Kurum (2009) explain perceived social support as a construct of social support that refers to how much individuals feel secure and companionable in their surroundings. Sanderson (2004) defines perceived social support as the amount of support that would be available if needed by an individual and suggested that received social support is the actual amount of support that is received by an individual. In a study by Caspi, Bolger and Eckenrode (1997, in Ganster & Victor, 1988) perceived available social support is related to a mitigation of the impact of a prior day's stressful event on the next day's mood state.

Social support has been conceived of and measured in a variety of ways within a number of theoretical and empirical frameworks. According to Sanderson (2004), social support is the existence of social relationships, the quality of the available relationships and the amount of assistance individuals believe is available or the amount that they receive. Another explanation of social support which seems to be common among a number of researchers is information leading individuals to believe that they are cared for, esteemed and valued (Cobb in Bloom, 1990; Ganster & Victor, 1988; Sheridan & Radmaches, 1992; Cohen & Wills 1985; Taylor 2009) and belonging to a network of communication and mutual obligation (Cobb in Bloom, 1990; Taylor, 2009). According to Weiss (1974, in Diamond, 1979), social support is a combination of at least six categories of relational provisions: attachment, social interaction, opportunity for nurturance, reassurance of worth, sense of reliable alliance and the obtaining of guidance.

Dimensions of Social Support

Defining and understanding the concept of social support also require an understanding of the dimensions of social support. The dimensions include structural versus instrumental support; perceived versus actual received support; and emotional versus instrumental support (Schwarzer & Leppin, 1988). According to Sheridan and Radmaches (1992), instrumental support reduces stress by solving the problem. Informational support is giving information, advice or feedback; information can help people recognise and cope with their problems. Emotional support refers to the expression of caring, concern and empathy for a person as well as the provision of comfort, reassurance and love to that person (Sanderson 2004). Tardy (1985) argues that in order for one to understand the social support concept they need to specify its dimensions better. Tardy (1985) might have come up with different names for the dimensions, but they still tie in with those suggested by Schwarzer and Leppin (1988), as they convey the same meaning. Tardy (1985) suggests additional dimensions to conceptualise social support further. He argues it is important to specify direction; support can be given and/or received, disposition (availability versus utilisation of support resources), description of support versus evaluation of satisfaction with support, content (what form does the support take, and lastly, network (what social systems provide the support).

Models of Social Support and Health

Research indicates that social support leads to better health, but it has not been specified whether support is always beneficial or whether it is beneficial particularly during periods of extreme stress. It has been evident that there is a process through which social support has a beneficial effect on well-being. Although a number of studies have provided evidence of a relationship; in theory, this result could occur through two different processes (Cohen & Wills, 1985). According to these two authors, one model proposes that support is related to well-being only or primarily to people under stress, and the other model suggests that social support benefits health, independent of the amount of stress the individual is experiencing (Sanderson, 2004). The first-mentioned model, which is termed *the buffering model*, argues that support buffers or protects persons against the potentially pathogenic

influence of stressful events (Cohen & Wills, 1985). According to Sheridan and Radmaches (1992), the buffering model focuses on aspects of social support that act as a buffer to protect us against the negative effects of stress. The authors continue to suggest that the model refers to interpersonal resources that protect against the negative effects of stress by meeting specific needs created by stressful events. This means that the buffering process is only utilised during times of need, for example, the period when students start their lives as university students. Sheridan and Radmaches (1992) argue that the buffering model focuses on functional, rather than structural support. Functional support involves the qualities of social relationships that are presumed related to stress responses (Ganster & Victor, 1988; Sanderson, 2004). According to Ganster and Victor (1988), functional social support as derived from a psychological and social-psychological paradigm is generally operationalised as the perceptions of the recipient.

Cohen and Wills (1985) have outlined different social resources that act as stress buffers, and these include esteem support, informational support, social companionship and instrumental support. The authors explain esteem support as information that a person is valued and accepted. This type has also been referred to as emotional, expressive, selfesteem, ventilation and close support. Informational support is explained as help in defining, understanding and coping with problematic events. It is also termed advice, appraisal support and cognitive guidance. The third social resource mentioned is social companionship, which is explained as spending time with others, such as peers or family members in leisurely and recreational activities. This may reduce stress by fulfilling a need for affiliation and contact with others by helping to distract persons from worrying about problems, or by facilitating positive affective mood; also called belongingness.

Although the buffering hypothesis suggests that social support benefits health only during times of high stress, other researchers believe that social support benefits health regardless of the amount of stress individuals are experiencing. This hypothesis is called the *main-effects model*. According to this perspective, individuals benefit from having social support during stressful and low-stress times (Sanderson, 2004). This means that social support can help people to experience both low and high levels of stress; hence, having high levels of social support is always advantageous to health.

According to Ganster and Victor (1988), the main-effects model prevails when support is operationalised as the degree of integration in the social network. Sheridan and Radmaches (1992) suggest that the main-effects model involves or focuses on basic social relationships and networks that have a positive effect on well-being unrelated to stress. Sanderson (2004) share the same sentiments with the above-mentioned authors and suggests that membership of social networks enhances well-being, no matter what level of stress is experienced. Bloom (1990) agrees to Sanderson's statement and says that social networks may influence health outcomes. Sanderson (2004) continues to indicate that social relationships and network aspects are sometimes described as the structure of social support, which suggests that relationships and networks are the building blocks of social support. According to Ganster and Victor (1988), the structural aspects of social support identified in the literature range from evidence of the simple presence of others to social-network indices. Structure includes marital status, membership of an organisation, social roles, church attendance and many more. In line with this view, people who have more social connections are less likely to engage in unhealthy modes of behaviour (Sanderson, 2004), such as smoking and alcohol abuse, and are more likely to engage in health-promoting behaviours (Barrerra, Chassin & Rogosch, 1993; Maton & Zimmerman, 1992; Windle, 1992, in Sanderson 2004) such as engaging in physical exercise. According to Bloom (1990), the social network may influence health outcomes directly by providing access to information or by enhancing motivations to engage in adaptive behaviours. It may also influence outcomes indirectly; that is, support from others may encourage the individual to comply with treatment recommendations to maintain health-promoting behaviours (Bloom, 1990) such as proper nutrition. Thus integration within the social network and the ability to draw resources from this network can maintain health. Good integration and a dense social network may therefore indicate that an individual has social support in abundance; this being an important preventive factor in the event of illness, which can also facilitate physical recovery (Bloom & Spiegel, 1984).

In conclusion, it is quite evident that social support is advantageous to the improvement and maintenance of well-being in individuals. Literature suggests that there are two different ways that individuals benefit from social support. Its value is evidenced in situations whereby stress is experienced in high amounts and can also be useful throughout an individual's life, whether they are going through a difficult time or not. The main-effects model could possibly mean that individuals manage to live and maintain good and healthy statuses because of the ever-available support; which they may not be aware of at times, since it has no beginning and end like the buffering model, which advocates the accessibility of social support during certain times, for instance, periods of high stress.

The different modes/kinds of support, such as informational, esteem and social companionship that an individual perceives to have, become a shield that will definitely safeguard them from the negative effects of stressful circumstances that they experience.

The kind of lives that university students lead expose them to high levels of stress; hence, they may find support to be very advantageous during this time of their study. During this time there is a very high need for support; hence, the most beneficial means of support would be the buffering model. In such a case, the level of perceived social support would intervene by shielding the negative effects of the high stress on the well-being of students.

Other factors that may facilitate social support

Although it is evident that social support seems to play an important role in moderating the effects of stress on well-being, the literature suggests that there are other factors that contribute to this buffering effect. In the study by Luszczynsk *et al.* (2005) it is concluded that personal characteristics should be regarded as resources that may protect against the negative impact of stress on well-being. It has been evident in the above-mentioned study that emotional reactivity also plays a moderating role. To support the role of personality in moderating the stress effects on well-being, Flannery *et al.* (1989) suggest that buffering effects arise from the individual's enhanced sense of mastery in coping with life stress and the avoidance of helpless feelings. Sarason (1987, in Ganster & Victor, 1988) concludes that underlying personality factors may be the source of effective coping patterns, which lead to better health, with social support being just another outcome of the personality traits. The three studies therefore suggest that social support on its own is not sufficient to mitigate the impact of life stress on well-being. The authors conclude that there are other factors that assist social support to buffer the effects of stress.

Apart from the role of personality, other research has advocated for gender as a contributing factor to buffering the effects of stress on well-being. According to Ystgaard *et al.* (1999), gender plays a role in an individual's response to stress and social support. It was found in a longitudinal study that boys appear to be protected by social support from family and peers when they are exposed to stress, while there was no evidence in favour of the buffering hypothesis for girls (Ystgaard *et al.*, 1999). Contrary to the above-mentioned study, Heitzmann & Kaplan (1984) have found in their study, which investigated the role of social support in the control of type II diabetes mellitus, that social support may operate differently with regard to males and females. The authors suggest that male patients who are highly satisfied with their supportive relationships tend to have poor control of their diabetes.

Conversely, satisfaction with support is associated with better control of diabetes for women. Hamdan-Mansour and Dawani (2008) also conclude that female students have higher perceptions of stress and social support than their male counterparts. The latter study therefore suggests that social support is more beneficial to women than men.

It is therefore quite important to take into consideration the possibility that social support may not mitigate the effect of perceived stress on its own. Hence, credit need not always exclusively be directed to social support.

Importance of Social Support on University Students

Social support has been confirmed to be a protective factor on the health of individuals. Several authors have also confirmed the health-protective influence of social support on university students (Edwards *et al.*, 2001; Gecková, Dijk, Stewart, Groothoff & Post, 2003; Hamdan-Mansour & Dawani, 2008; Laurence, Williams & Eilad, 2009). In their study, Edwards *et al.* (2001) find that dental university students who showed more depressive symptoms had significantly lower levels of social support, thus confirming that with less social support, individuals' well-being is at risk. According to Sanderson (2004), university students who receive greater support from their families are less likely to report neurotic symptoms. In a study to examine the relationship between perception of social support and perceived stress in university students in Jordan, Hamdan-Mansour and Dawani (2008) have found that perceived stress has a negative correlation with perceived social support. The study therefore suggests that social support is crucial for university students to lead healthy lives leading to improved well-being. The studies have therefore substantiated that social support plays a very crucial role in the lives of university students.

Well-being

Despite life experiences that people go through, it is every individual's aspiration to live a healthy live, be it physically, socially, financially or even psychologically. One needs to be well in order to perform to one's optimal best, including university students who are expected to perform at their best, regardless of the difficulties that they face throughout the learning journey.

The next section of the chapter will focus on the study's third variable, which is wellbeing. The section will help the reader understand the well-being concept more in detail and see its relevance to the study.

Definition of Well-being

A wide range of literature has not been able to come up with one single definition of well-being. According to Pollar & Lee (2003), well-being is a multidimensional construct incorporating mental/psychological, physical and social dimensions. Concepts of well-being have not only changed over time, but also differ between cultural groups and even between different people within the same culture (Campion & Nurse, 2007). The authors reach consensus regarding the definition after consultation and define wellbeing as being at ease with oneself, having meaning and fulfilment, experiencing positive emotions, being resilient and belonging to a respectful community. Some authors define well-being using individuals' characteristics of an inherently positive state as well as absence of depression. Natvig, Albrektsen and Qvarnstrom (2003) define well-being as a state in which individuals realise their own abilities, can cope with the normal stresses of life, can work productively and fruitfully and are able to make a contribution to their community. According to Sanderson (2004), well-being may be psychological or physical.

As mentioned earlier, from the literature, well-being seems to be best understood as a multidimensional construct. Marks and Shah (2005 in Campion and Nurse, 2007) include

satisfaction, personal development and social well-being as the main dimensions of wellbeing, while White (2010) terms the dimensions to be material, relational and subjective. According to White (2010), well-being is viewed as a social process with three dimensions, namely material, relational and subjective. The author continues to say that well-being may be assessed at individual and collective levels but at base it is something that happens in the relation between the individual and the collective; between local and global; between people and state. In White's (2010) view, *material* comprises assets, welfare and standard of living such as the socio-economic status of an individual. *Relational* is divided into two spheres: the social, which includes social relations and access to public goods; and the human, which includes capabilities, attitudes to life and personal relationships. Lastly, the subjective also has two aspects: on the one hand, people's perceptions of their (material, social and human) positions, and on the other hand cultural values, ideologies and beliefs.

With regard to Marks and Shah's (2005) view of the dimensions of the well-being concepts, the satisfaction dimension is measured by an indicator called life satisfaction, which captures satisfaction, pleasure and enjoyment. The personal development dimension is defined as engagement in life, social cohesion, curiosity, autonomy, fulfilling potential and feeling that life has a meaning. This dimension is more strongly linked to overall health, longevity, resilience and the ability to cope with adverse circumstances. The social well-being dimension is understood as the sense of belonging to communities, a positive attitude towards others and a feeling of contributing to society.

According to a well-being model by Marks and Shah (2005), improved well-being occurs as a result of balancing the reduced impact of risk factors with the promotion of protective factors and the creation of a supportive environment.

The literature suggests that there are three main influences affecting the state of wellbeing: genetic factors, life circumstances and being involved in active pursuit of special interests. Campion and Nurse (2007) conclude that genetic factors account for 50 percent of the variation in people's happiness, although there are interactions between genetics, upbringing and the environment. The authors suggest that life circumstances also influence the state of well-being and include such things as income, material possessions, marital status and neighbourhood environment. The way that life circumstances are defined by Campion and Nurse (2007) captures the same concept as White's (2010) material well-being dimension as well as Marks and Shah's (2005) social well-being dimension. According to Campion and Nurse (2007), it is evident that adaptation to life circumstances mentioned above occurs quickly. These factors are therefore estimated to account for only 10% of personal happiness. As one of the main influences, intentional activities and pursuits actively engaged in can account for 40% of variation in happiness (Campion & Nurse, 2007). These include working towards goals, socialising, exercising, appreciating life, art and culture and engaging in meaningful activities and work. The above-mentioned influence is similar to Marks and Shah (2005)'s personal development dimension of well-being, as they both embrace the fact that life has a meaning and should be appreciated in order to accomplish the greatest potential of well-being.

It has been made clear that individuals with greater social support are less likely to suffer from various psychological disorders. Holahan and Brennan (1997. in Sanderson, 2004); House, Landis and Umberson (1988); and Schwarzer and Leppin (1992) observe that depressed people report having fewer friends, fewer close relationships and less supportive family interactions than people who are not depressed. In addition, individuals with more social support experience better physical well-being. It has been evident that pregnant women who have high levels of social support experience a number of benefits, including fewer pregnancy complications, heavier and healthier babies, and lower rates of postpartum depression (Collins, Dunkel-Schetter, Lobel & Scrimshaw, 1993; Norbeck & Tilden, 1983, in Sanderson, 2004).

The Relationship Between Social Support, Stress and Well-being

There is an abundance of theoretical and empirical literature on the relation between social support and physical health outcomes. Some of the empirical studies have dealt with the question of how social interaction and social support relate to the onset of disease (Berkman & Syme, 1979; House Robbins & Metzner, 1982; Siegrist, 1986, in Schwarzer & Leppin, 1988). Others have studied the role of social support in coping with chronic illnesses (Harvey & Reddihough, 2006; Heitzmann & Kaplan, 1984; Skok, Norman, Malla, McLean, Voruganti, Cortese, McIntosh, Cheng & Rickwood, 2000). In a study by Curtis, Groarke, Coughlan, & Gsel (2004) that was conducted to examine the extent to which psychological stress, social support and clinical disease indicators predict physical, social and psychological well-being in patients with rheumatoid arthritis, it was found that higher perceived stress and lower social support were associated with poor emotional adjustment. Findings from these studies suggest that a positive response to stressful life events is facilitated by socially supportive environments and Dimond (1979) suggests that in the absence of such support the maintenance of personal equilibrium is problematic.

Past research has identified stress and social support as two factors strongly linked to well-being in the general population (Hulbert & Morrison, 2006; Luszczynska *et al.*, 2005; Sakihara, Ariizumi, Watanabe & Oyama, 2006; Skok *et al.*, 2006; Takizawa, Kondo, & Ystgaard, Tambs & Dalgard, 1999). Experimental literature suggests that social support may have a causal impact on mental and physical health outcomes (Cohen & Wills 1985). Most studies have hypothesised as one of their aims that social support buffers the negative effects

of stress on well-being. In one study done by Skok *et al.* (2006) it is concluded that perceived social support has a mediating effect on the relationship between stress and well-being of mothers caring for school-aged children with cerebral palsy. Another study undertaken in a different population by Luszczynsk *et al.* (2005) suggests that individuals who perceive high social support appraise the environment as less stressful, safer and more secure; hence, leading to improved or better well-being. The authors conclude that social support can directly improve health by reducing levels of occupational stress among male managers. In a study of Israeli soldiers following the 1982 war in Lebanon, Solomon, Mikulincer and Hobfoll (1986, in Ganster & Victor 1988) found a relation between social support from officers and combat stress reactions.

Social support enhances health by reducing or preventing negative psychological consequences of stress. It has been evident that socially supportive persons may have a stronger immune system or be less reactive; therefore, be more equipped against stress (Ganster & Victor 1988). To add to this evidence, Cohen & Wills (1985) also outline that people with spouses, friends and family members who provide psychological and material resources are in better health than those with fewer supportive social contacts.

Social support may be provided prior, during or after a stressful event. As suggested by Ganster & Victor (1988), social support is provided beforehand by directly preventing exposure or increasing behaviour patterns the risk of exposure. It may also be provided during the stress episode by reducing the severity of the episode, or after the episode by encouraging or facilitating coping and recovery behaviours.

In conclusion, there seems to be very strong evidence that supports a positive relationship between social support, stress and well-being. Quite a number of studies have revealed and supported suggestions that social support plays a very effective role in moderating the effects of stress on the well-being of individuals.

Justification of the Study

For the purpose of this study, the construct that will be examined will be perceived social support. Perceived social support is chosen for this study because literature has shown that the construct is easily measureable in the general population, for example (Laurence *et al.*, 2009; Skok *et al.*, 2006). Another reason for this choice is that evidence for a buffering model is found when the social support measure assesses the perceived availability of interpersonal resources that are responsive to the needs elicited by stressful events (Cohen & Wills, 1985; Ganster & Victor, 1988). According to Ganster and Victor (1988), the buffering model is supported when perceived functional support is assessed, particularly when the type of support received matches the specific demand of the stressor.

Limitations and Conclusion

There have been limitations with research conducted in this area. One of the limitations was the issue of sample size (Luszczynska *et al.*, 2005; Skok *et al.*, 2006; Ystgaard *et al.*, 1999) that was relatively small. Another evident limitation in one of the studies was the use of male managers only (Luszczynska *et al.*, 2005); therefore, their results could not be generalised to female managers. The authors also suggest that more data-analysis methods be used for further investigation. For example, Luszczynska *et al.* (2005) suggest that structural equation modelling with multiple indicators be applied to investigate the complex relations between personality variables, social support, stress and stress outcomes further.

In conclusion, although literature has confirmed that social support indeed moderates the negative effects of stress on an individual's well-being, it has to be taken into consideration that social support may also be supported by other factors such as age, a person's level of education and personality. This study acknowledges the conclusions drawn from other studies that social support does not alone perform the moderating role, but in combination with other factors. In this case the study will focus on the moderating role of social support, together with accounting for factors such as gender, age and the residence of participants.

Aim of the Study

The main aim of this study is to examine whether there is a relationship between perceived social support, perceived stress and general well-being. To find out precisely whether the effects of stress on well-being depend on the level of perceived social support of first-year university students. The following four hypotheses have been formulated.

The null hypothesis:

1. The level of perceived social support does not moderate the effect of stress on wellbeing of university students.

The alternate hypotheses:

1. The level of perceived social support will moderate the effects of stress on well-being of students.

2. There should be a greater level of perceived social support for females than their male counterparts, OR females should perceive themselves to have more social support than their male counterparts.

3. Younger students should perceive themselves to have more social support than their older counterparts.

4. Students who live at home with their families should perceive themselves to have more social support than those that live on campus or those that have rented accommodation on their own or with friends.

The following are research questions that will be answered to assist in confirming or disputing the formulated hypotheses.

- Does the level of perceived social support moderate the effects of stress on well-being of students?
- 2. Will females perceive themselves to have more social support than male students?
- 3. Will younger students perceive themselves to have more social support than their older counterparts?
- 4. Will students who live at home with their family perceive themselves to have more social support than those that live on campus or those that have rented accommodation on their own or with friends?

Chapter III

Methodology

The following chapter will review the methods used in conducting this study. These include the design and sample used in the study, methods of analysing data, procedures (including ethical considerations) followed in collecting data as well as the instruments used to collect the required data.

Research Design

A quantitative design is most suitable to meet the research objectives of this study. The research design used in the study is a cross-sectional non-experimental, survey methodology: a method in which individuals provide responses to a series of items in a questionnaire. A survey type of design was appropriate for this study, examining relationships between variables at a specific time. In terms of this study, the researcher aims to gain an understanding of whether the effects of stress on student's well-being depend on the level of perceived social support. Other factors that are examined include how social support is perceived in terms of age, gender and the living arrangements of students.

Sample

Participants for this study were first-year University of KwaZulu-Natal students in Pietermaritzburg. Both males and females of 18 years and above were recruited to take part in the study. The study was open to all degree programmes and all nationalities in the first-year community. Participants resided in residence on campus, or off-campus at home, or in private accommodation. The participants were recruited using a convenience sampling method (Cozby, 2001) and participation was voluntary. All students were from other disciplines except Psychology students, who were recruited on an individual basis, whereby the researcher had to approach different individuals around campus to take part in the study. Although the researcher had planned to collect data in a lecture theatre setting after obtaining permission from one of the lecturers, the individual approach method was utilised, because it was examination time and also towards the end of the first semester; therefore, no lectures were taking place. At the beginning of the second semester the researcher requested permission from one of the first-year Psychology lecturers to distribute more survey packages to the students at the end of one of the lecture periods. Before distributing survey packages, the researcher introduced herself and orally briefed the participants about the study. Also included in the survey package was the consent form and the information sheet (see Appendix A) which gives a brief explanation of the study and outlines all the necessary ethical protocols considered in the study and the administration of the questionnaire.

In total, 150 survey packages were distributed and 93 were returned (62% response rate). None of the survey packages were considered unusable.

Data Collection Technique

The data were collected using four measures, which were incorporated into one survey package that was not meant to take more than 20 minutes to complete. The Demographic Survey, The Multidimensional Scale of Perceived Social Support, The Perceived Stress Scale and The WHO (five) Well-being Index were used to collect the required data for the study. A survey method was used because survey designs facilitate self-report (Cozby, 2001).

Instruments

The Demographic Survey

The participants' demographic information was collected using a researcher-generated data sheet. (See Addendum B.) The information requested was each participant's current age, gender, nationality, programme of study and faculty. Other questions specific to the study included the participants' residence status, duration of their stay in Pietermaritzburg, whether they attended secondary school in Pietermaritzburg, their permanent home and the number of friends that came along with them to university.

The questions that played the most important role in this study were the age, gender and the participants' residence status questions. The three above-mentioned questions have been linked to the aims of the study, and have therefore been used to answer the other three research questions, excluding the main research question. Also, the three other alternative hypotheses have been derived from the three questions.

The Multidimensional Scale of Perceived Social Support

A measure of participants' level of perceived social support was obtained through The Multidimensional Scale of Perceived Social Support (MSPSS) (Dahlem, Zimet & Walker 1991). (See Addendum C). The MSPSS is a 12-item, self-report questionnaire scored on a seven-point Likert scale ranging from one, which implies *very strongly disagree* to seven, which implies *very strongly agree* (Skok *et al.*, 2006). The final score is derived by summarising the individual items and dividing by the number of items. Possible scores range from 12 to 84, with higher scores indicating higher perceived social support. The MSPSS addresses the subjective assessment of social support adequacy. In a study to describe the development of MSPSS, Zimet, Dahlem, Zimet and Farley (1988) conclude that the measure

was designed to assess perceptions of social support adequacy from three specific sources. The three sources are family, friends and significant others (Laurence, 2009; Zimet *et al.*, 1988). Zimet *et al.* (1988) suggest that although some other scales contain items addressing these sources of support, most do not consider them as potentially separate, distinct groups; instead, they consider the scale as a whole entity without any specific subgroups within.

The MSPSS has been found to be psychometrically sound, with good reliability, factorial validity and adequate construct validity. Cronbach's alpha, a measure of internal reliability, was obtained for the scale as a whole as well as for each subscale (Clara, Cox & Enns, 2003; Kazarian & McCabe, 1991; Zimet *et al.*, 1988). According to the authors, for the significant others, family and friends sub-scales, the values were 0.91, 0.87 and 0.85, respectively and the reliability for the total scale was 0.88. These values indicate good internal consistency for the scale as a whole and for the three sub-scales.

According to (Clara *et al.*, 2003; Kazarian & McCabe, 1991; Zimet *et al.*, 1988), the test-retest reliability for the significant other, family and friends subscales were 0.72, 085 and 075, respectively. They also obtained 0.85 for the whole scale.

The MSPSS was used because it is self-explanatory, simple to use and time conserving. It is these features that make it an ideal research instrument for use when subject time is limited and/or when a number of measures are being administered at the same time (Zimet *et al.*, 1988), as is the case in this study. The authors also advocate the fact that the MSPSS has been tested with a relatively homogeneous, normative sample of college students. Likewise, Kazarian and McCabe (1991) have investigated and found solid psychometric and factor-analytical properties of the scale on undergraduate university students; hence, supporting its suitability to be used on University of KwaZulu-Natal students. No literature has been published to support the MSPSS's suitability for use across a range of cultures. The

instrument has been normed on the American population. This could then mean that the interpretation of this instrument should be treated with caution in cultures where it was not normed, for example, also in the population that was used in this study.

The Perceived Stress Scale

A measure of the participant's stress level was obtained through The Perceived Stress Scale (PSS) (Laurence et al., 2009). (See Addendum D). The PSS is a 10-item instrument developed by Cohen, Kamarck and Mermelstein (1983). The items are scored on a five-point Likert-type scale ranging from zero (never) to four (very often). Scores for the PSS range from zero to 40, with higher scores indicating greater levels of perceived stress (Remor, 2006). It is designed to measure the degree to which situations in one's life are perceived as stressful. According to Remor (2006), the scale measures the degree to which individuals appraise situations in their lives as stressful. Items evaluate the degree to which people find that life is unpredictable, uncontrollable or overloaded (Cohen et al., 1983; Ramirez & Harnandez, 2007; Remor, 2006) and the scale includes questions intended to evaluate the current level of stress experienced by the subject (Remor, 2006). According to Laurence et al. (2009), the PSS assesses global perceptions of stress with the rationale that stressful events can increase the risk of health problems when they are perceived as threatening or otherwise demanding. Although previous studies suggest that the psychometric properties of the scale for evaluating perceived stress are adequate, Remor (2006) suggests that the temporal validity of stress evaluated by the scale is a brief eight weeks, because the level of perceived stress seems to be influenced by daily stressors, vital events and resources encountered by the subject. The eight-week validity period of the scale would probably have no implications on the study, because literature argues that transition to university involves change for all students, which may bring stress to the individuals (Dyson & Renk, 2006; Fisher & Hood, 1987; Shaikh & Deschamps, 2006). In addition, university students are constantly under
pressure and experience immense stress, not only because of the changes and adjustment that accompany university life, but also because of constant studying.

Reliability related to internal consistency (alpha coefficient) for the Perceived Stress Scale has been found to be 0.82 and test-retest reliability found to be 0.77 (Cohen *et al.*, 1983; Ramirez & Harnandez, 2007; Remor, 2006).

Cohen *et al.* (1983); Ramirez & Harnandez, (2007); Remor, (2006) advocate for the fact that the Perceived Stress Scale has been tested with relatively homogeneous and diverse samples, including both healthy and ill adults of varying socio-economic status, as is more typical of the general population.

The WHO (five) Well-Being Index (The Psychiatric Research Unit, 1998)

A measure of the participants' well-being was obtained through the WHO (5) Wellbeing Index. (See Appendix E.) The index is a five-item measure designed to capture the subjective quality of life of individuals. According to Awata, Bech & Yoshida (2007), each item assesses the degree of positive well-being during the past two weeks on a five-item Likert-type scale graded from zero (at no time) to five (all of the time). The total score ranges from zero to 25, with high scores thereby indicating an increased sense of well-being.

Studies suggest that the scale has a sufficient degree of statistical reliability and validity. In a study by Awata *et al.* (2007), Cronbach's alpha was found to be .89, while Saipanish, Lotrakul and Sumrithe (2009) found an alpha of .87.

Kaplan, Bush and Berry (1976) hold the view that the index of well-being has been constructed to fulfil the definition of content validity by including all levels of functioning and symptom/problem complexes.

Procedure

The study was coordinated by the School of Psychology at the University of KwaZulu-Natal.

For all other students except Psychology students, the researcher had to introduce herself to each of the participants, because the recruitment was done on a one-on-one basis. As for the participants who have Psychology as one of their major subjects, the survey packages were distributed in class after the researcher had orally introduced herself and briefed the participants about the study.

The participants were then given the survey package that included (1) a cover letter that briefly explained the purpose of the study, the informed consent form, as well as the participant's instructions; and (2) survey instruments, which included The Demographic Survey, The Multidimensional Scale of Perceived Social Support, The Perceived Stress Scale and The WHO (five) Well-being Index. The participants were allowed to take the survey packages with them, so that they could answer them during their own time, and they were asked to drop off the questionnaires with one of the administrators at the School of Psychology when they had completed them. They were then thanked in advance for their participation in the study.

Some of the participants, however, decided to complete the questionnaires right there and then, and of the balance, not all of them returned the questionnaires through the administrator as was requested by the researcher.

Data Analysis

A hierarchical regression analysis (Luszczynska & Cieslak, 2005) was used to test the four hypotheses in this study; the main hypothesis being: whether the level of perceived social support will moderate the effects of stress on well-being of university students.

Subsequent to the central hypothesis, box-plot and one-way Anova analyses were performed to test whether females, younger students and those who lived at home with their families perceived themselves to have more social support.

Descriptive statistics were also obtained and reported from the data, that is, the frequencies and percentages for the demographic variables, which included age, gender, nationality, programme of study and residence status.

Ethical Considerations

Firstly, the study was approved and ethically cleared by The Social Science Research Ethics Committee of the Faculty of Management and Human Sciences at the University of KwaZulu-Natal.

All necessary research ethical protocols were observed in this study. The participants were issued with an information sheet which gave a brief explanation of the study. There was also a consent form for them to consent to participate in the study. The participants were assured of confidentiality and anonymity of their responses; that is, they were asked not to put their names on the questions, so as to avoid any association of the responses with the participants. With regard to confidentiality, they were informed that the collected data would be stored in a locked filing cabinet in the researcher's supervisor's office and would be shredded after a period of five years.

They were informed about the voluntary nature of the study, including the opportunity to withdraw at any time during the course of the administration.

Information was passed on to the participants that there were minimal foreseeable risks or ill effects from participating in the study. There was a very small possibility that unpleasant emotions would be evoked by answering the questions in the questionnaire. The participants were informed that if anyone of them experienced any distress or discomfort that was brought about by any question, a referral to the University of KwaZulu-Natal Student Counselling Centre would be arranged through the researcher, or the individual could directly contact the centre to make an appointment. The centre's contact number and physical address were provided on the survey information paper.

With regard to the participants' rights of access to the findings, they were informed that there would not be any formal forum to meet and discuss the findings, but a copy of the thesis would be made available for them to access in the library.

Chapter IV

Results

Initial Analysis

This study sought to investigate whether the effects of stress on University of KwaZulu-Natal first-year students' well-being depend on the level of perceived social support. The analyses were performed in two steps. Firstly, frequencies and percentages were calculated for the demographic variables, measured on the nominal scale. This information is provided in Table 1.

The hierarchical multiple regression was performed on the independent variable (perceived stress), dependent variable (well-being) and the moderating variable (perceived social support) to determine whether the effect of stress on student's well-being depends on the level of social support. Lastly, box-plot and one-way Anova analyses were performed to find out whether females, younger students and those who lived at home with their families perceived themselves to have more social support.

The data reported in this chapter were analysed using SPSS 15.0 Windows computer software.

Response Rate

Ninety-three questionnaires were collected from the first-year university students over a two-month period (long winter vacation excluded). Most of the questionnaires were obtained from the Bachelor of Commerce (Accounting) students and those who had Psychology as one of their majors. Of the 93 survey packages collected none was excluded from the sample. The response rate for this study was 62%.

Demographic Characteristics of the Sample

Descriptive statistics were obtained and reported from the data; that is, the frequencies and percentages for the demographic variables, which included age, gender, nationality, programme of study, residence status, the number of years residing in Pietermaritzburg, high school education, number of friends from high school and permanent home of residence.

Table 1

Demographic characteristics	#	%
Age		
18-20 yrs	77	82,8
21-22 yrs	9	9,7
23 ⁺ yrs	7	7,5
Gender		
Female	65	69,9
Male	28	30,1
Nationality		
South African	87	93,5
Zimbabwean	3	3,2
British	2	2,2
Malawian	1	1,1
Programme of study		
B.Com.	43	46,2
Psychology	44	47,3
B.Sc.	6	6,5
Residence		
On-campus university res	25	26,9
Off-campus rented, alone	6	6,5

Frequency distribution of the demographic variables for the research participants (N=93)

Off-campus rented, with others	26	28
Off-campus, living at home	36	38,7
Years in Pietermaritzburg		
Less than 1 year	51	54,8
1-2 years	7	7,5
2-3 years	2	2,2
3^+ years	33	35,5
Pre-tertiary school		
Yes	35	37,6
No	58	62,4
Number of friends		
No friend	33	35,5
1 friend	11	11,8
2 friends	9	9,7
3^+ friends	40	43
Permanent home		
Pietermaritzburg	35	37,6
Other, in Africa	4	4,3
Outside Africa	3	3,2
Outside Pietermaritzburg	51	54,8

The frequency and percentage distributions of the biographical variables, as shown in Table 1, indicate that there are more females than males in the research group. The sample of females constituted 69,9%, while the sample of males constituted 30,1% of the total research group. There were more younger participants in the study than older participants, as indicated by 82,8% of participants falling within the 18-20 years age range; 9,7% in the 21-22 years age range; and 7,5% of the participants being older than 23 years. The table illustrates that

more South African citizens took part in the study than people from other nationalities. 93,5% were South African citizens; 3,2% were Zimbabweans; 2,2% were British; and 1,1% participants were Malawian. The sample of B.Com. (Accounting) students comprised 46,2% of the research group, while 47,3% had Psychology as one of their major subjects. 6,5% were Bachelor of Science students, which indicates that there were more Psychology students than those from the other disciplines.

The total number of students who resided at home with their families outweighed all other living arrangements of the students. 26,% of the students stayed on-campus in university residences; 6,5% stayed on their own in rented accommodation off-campus; 28% stayed with other students in off-campus rented accommodation; and 38,7% of the participants lived at home with their families. In terms of the number of years that the students had been staying in Pietermaritzburg, more students (54,8%) reported to have been living in the place for just less than a year; 7,5% had been living in Pietermaritzburg for more than a year, but less than two years; 2,2% had been staying in Pietermaritzburg for more than two years but less than three years; and 33,5% of the participants had been residing in Pietermaritzburg for three or more years.

More participants attended pre-tertiary school outside Pietermaritzburg, as indicated by 62,4%, compared to 37,6% of those who had attended pre-tertiary school in Pietermaritzburg. Of the 93 participants, 35,5% had no pre-university friends that had come along to university with them; 11,8% had one friend; 9,7% had two friends; while 43% of the participants had three or more friends.

The distribution indicates that, although more South Africans took part in the study, many of them originated from outside Pietermaritzburg. The table shows that 37,6% participants had indicated that their permanent home was Pietermaritzburg; 4,3% came from

other cities within Africa; 3.2% from outside Africa; and 54,8% of the sample originated from within South Africa but outside Pietermaritzburg.

Table 2

Demographic Characteristics	#		Total Percentage
	Female	Male	
Residence			
On- campus university residence	10	15	26,9
Off-campus rented, alone	5	1	6,5
Off-campus rented, with others	17	9	28,0
Off-campus, living at home	33	3	38,7

Characteristics of Participant's residence status in relation to gender (N=93)

The descriptive statistics of the demographic variables indicate that the number of male students outnumbered that of the females for students staying on-campus in university residences, whereas the females outweighed their male counterparts in other living arrangements. According to the sample, 15 males stayed on-campus in university residences, compared to 10 females. Five females stayed off-campus on their own in rented accommodation, compared to one male. On the other hand, 17 females stayed off-campus in rented accommodation with others, and 33 stayed off-campus at home, compared to nine and three males, respectively.

Table 3

Demographic Characteristics		#		Total Percentage
	18-20	21-22	23 ⁺	

Residence

On-campus university residen	ce 22	3	0	26,9
Off-campus rented, alone	5	0	1	6,5
Off-campus rented, others	20	3	3	28,0
Off-campus, living at home	30	3	3	38,7

The descriptive statistics of the demographic variables indicate that younger students (18-20 years) represented the highest number in all living arrangements, compared to the older students, i.e. 21-22 years and those above 23 years of age.

Primary Analysis

Firstly, Pearson's correlation was performed to find out whether there was any correlation among the three main variables of the study. A correlation was done between *perceived stress* and *well-being;* between *perceived stress* and *social support;* and finally between *social support* and *well-being.*

A hierarchical multiple regression analysis was then performed to test the main hypothesis; whether the effects of stress on student's well-being depend on the level of social support. Subsequent to the central hypothesis, box-plot and one-way Anova analyses were performed to test whether females, younger students and those who lived at home with their families perceived themselves to have more social support than their counterparts.

Correlation Between Perceived Stress and Well-being

Person correlation was performed to find the relationship between perceived stress and well-being. The analysis revealed an r value of -0.140; significance value was 0.091 (1 tailed); alpha =0.05.

 R^2 is low at 0.02, indicating that a mere 2% of the variance are accounted for by the two variables.

It can therefore be concluded that the correlation between the two variables is insignificant and very weak at a 0.091 level of significance. However, although it is a weak (insignificant) correlation, the relationship is assumed to be negative. This means that, as the amount of stress decreases, well-being increases. Below is a diagram showing the correlation between the two variables.





Correlation Between Perceived Stress and Social Support

Person's correlation was performed to find the relationship between perceived stress and social support. The analysis revealed an r value of 0.354; significance value was 0.001 (2 tailed); alpha =0.05.

 R^2 is 0.125, meaning that 12,5% of the variance are accounted for by the two variables.

It can therefore be concluded that correlation between the two variables is significant at a 0.001 level of significance. The relationship between the two variables is positive. This means that, as the amount of perceived stress increases, the amount of social support also increases. Below is a diagram showing the correlation of the two variables.



Correlation Between Social Support and Well-being

Person's correlation was performed to find the relationship between social support and well-being. The analysis revealed an r value of 0.295; significance value was 0.04 (2 tailed); alpha =0.05.

 R^2 is 0.089, meaning that 8,9% of the variance is accounted for by the two variables.

It can therefore be concluded that correlation between the two variables is significant at a 0.04 level of significance. The relationship between the two variables is positive. This means that, as the amount of social support increases, well-being also increases. Below is a diagram showing the relationship of the two variables.



Figure 3: Correlation Between Social Support and Well-being

Hierarchical Multiple Regression

The hierarchical multiple regression (using the standard linear regression) was performed to assess the moderating effects of social support on the well-being as a dependent variable and perceived stress as an independent variable. Below is the descriptive statistics for the three variables.

Table 4Descriptive Statistics

		Std.	
	Mean	Deviation	Ν
Scale Well-Being	3.7312	1.14341	93
Scale Stress	3.4699	.51726	93
Scale Social	1 5091	7005	02
Support	4.3084	.12225	95

The model revealed that 15,7% of the total variance was accounted for by the social support and stress variables. R^2 value = 0.157, degrees of freedom1 = 2, degrees of freedom2 = 90. Model was significant at 0.0001; alpha, 0.05. Analysis of variance revealed that the model was significant at 0.0001 level of significance; alpha = 0.05.

The coefficient for stress, that is, how much the stress variable contributes to the model, is -0.280 at 0.008 level of significance. The coefficients for social support are 0.397 at 0.0001 significance level. The model revealed that the social-support coefficients are larger than those of perceived stress, which confirms the moderating effects of social support.

When social support is taken out of the model, the original model loses significance (sig = 0.181, alpha = 0.05). The R^2 is reduced to only 2% of the variance of the model. Thus stress alone is not a good predictor of well-being (F = 1.817. R^2 = 0.020. df1 = 1 and df2 = 91.

Variables	R^2	Р	R ² reduced	F
Step 1				
Stress	0.157	0.05	*	*
Step 2				
Social support	0.020	0.05	2%	1.817

Table 5: Regression for variables predicting general well-being

Box-Plot Analysis

The box-plot analysis indicates that younger students perceive themselves to have more social support, compared to their older counterparts. Figure 4 below indicates that 18-20 year-old students scored between a range of 3 and 5.9 on the MSPSS and the group had the highest mean of 4.6. The score of students who are in the 21-22 age group range is 3.5 and 5.1, while those who are above 23 scored between 3.1 and 5.6. Their means were 4.5 and 4 respectively.

This analysis therefore indicates that younger students with the highest mean score perceive themselves to have more social support, although statistical significance of the sample is due to be tested.



To find out whether females perceive themselves to have more social support than males, another box-plot analysis was performed. Figure 5 below suggests that females perceive themselves to have more social support than males. This is indicated by the high female mean score of 4.6, compared to the male's 4.2 mean score.

Figure 5: Box-plot analysis of social support in relation to gender



Figure 6 below indicates that students who live at home with their family members perceive themselves to have more social support than those who live on-campus, off-campus on their own, or with others. This is shown by the highest mean of 4.7, compared to others, which were 4.2, 4.1 and 4.5, respectively.





One-way Anova

A one-way analysis of variance was performed to test whether females, younger students and those who lived at home with their families perceived themselves to have more social support.

Gender Analysis

A one-way analysis of variance was performed on the sample to find out whether the box-plot analysis yielded results that were statistically significant. On the research question that intended to investigate whether females perceived them to have more social support than males, the following results were obtained. (Refer to Table 6.)

Table 6

One-way Anova showing the significance of social support in relation to gender

Descriptive			
	Ν	Mean	Standard deviation
Scale Social Support			
Females	65	4.6	0.089
Males	28	4.2	0.012
Total	95	4.5	0.075

Analysis of var	iance				
	Sum of	Degrees of	Mean square	F- ratio	Sig
	squares	freedom			
Scale Social					
Support					
Between	2.75	1	2.747	5.525	0.021
groups					
Within	45.25	91	0.497	*	*
groups					
Total	47.99	92	*	*	*

The tables above show a statistically significant difference at 0.021 significance value (alpha - 0.05). The hypothesis that females perceive themselves to have more social support than their male counterparts has therefore been supported.

Age Analysis

Though the box-plot analysis suggests that younger students perceive themselves to have more social support than older students, the sample has been proven not to be statistically significant. (See Table 7.) The significance value for the difference in age is 0.165 at alpha – 0.05. Therefore, the hypothesis that younger students perceive themselves to have more social support than their older counterparts has not been supported.

Table 7

One-way Anova showing the significance of social support in relation to age

Descriptive			
	Ν	Mean	Standard deviation
Scale Social Support			
18-20	77	4.56	0.719
21-22	9	4.43	0.578
23+	7	4.03	0.821
Total	93	4.51	0.722

Analysis of var	iance				
	Sum of	Degrees of	Mean square	F- ratio	Sig
	squares	freedom			
Scale Social					
Support					
Between	1.88	2	0.942	1.838	0.165
groups					
Within	46.11	90	0.512	*	*
groups					
Total	47.99	92	*	*	*

Residence Status Analysis

The box-plot analysis suggests that students who reside at home with their families perceive themselves to have more social support than other students who stay in university residence, off-campus renting accommodation on their or with other students. This variable has not been clearly proven or disproven to be statistically significant, because the significance value that has been obtained (0.06 at alpha 0.05), is said to be approaching significance. (See Table 8.) Therefore, the hypothesis that students residing at home with their family perceive themselves to have more social support than other students have not been safely/clearly supported, but there is a possibility that the statement could be true.

Table 8

Descriptive			
	N	Mean	Standard deviation
Scale Social Support			
On-campus – university residence	25	4.29	0.63
Off-campus – rented, alone	6	4.11	0.51
Off-campus – rented, with others	26	4.52	0.75
Off-campus – living with family	36	4.72	0.74
Total	93	4.51	0.72

One-way Anova showing the significance of social support in relation to age

Analysis of variance					
	Sum of	Degrees of	Mean square	F- ratio	Sig
	squares	freedom			
Scale Social					
Support					
Between	3.813	3	1.271	2.561	0.060
groups					
Within	44.198	89	0.496	*	*
groups					
Total	47.992	92	*	*	*

Chapter V

Discussion

The study explores the role of social support in the relationship between perceived stress and well-being. Four hypotheses were tested in this study: Whether the level of perceived social support will moderate the effects of stress on well-being of university students; Whether females will perceive themselves to have more social support, compared to male students; and Whether younger students will perceive themselves to have more social support than their older counterparts. Lastly, the aim was to find out whether students who live at home with their family perceive themselves to have more social support, compared to those that live away from their families, either in on-campus accommodation, or renting accommodation on their own or with other students.

Out of the four tested hypotheses two were supported, one was not supported and the other hypothesis was not clearly supported, because the significance value of 0.06 can only be said to be approaching significance at an alpha level of 0.05. It is also quite important to note that the primary hypothesis for this research was fully supported by the study.

Below is a discussion of each one of the four hypotheses.

Moderating effect

The first hypothesis, which is the primary hypothesis aimed at finding out whether the level of social support will moderate the effects of stress on well-being of first-year university students. The regression analysis showed that stress alone is not a good predictor of well-being at F=1.817. $R^2 = 0.020$. df1 = 1 and df2 =91. This was made evident by the fact that whenever social support was taken out of the model, the original model lost significance. Therefore the hypothesis was safely supported by this study, which means that the level of

social support has been shown to moderate the effects of stress on well-being in this sample of university students.

A number of studies have also reached similar findings, across a range of contexts for the moderating or buffering effects of social support (Inose & Yeh, 2003; Sherbourne, Meredith, Rogers & Ware, 1992; Uchino, Cacioppo, Kiecolt-Glaser, 1996).

In a study where a similar sample was used, Inose and Yeh (2003) have found that social-support network satisfaction, which is one of the aspects of social support, is a significant predictor of distress among students. The authors have come to this conclusion in a study that hypothesises that higher levels of social support satisfaction will predict lower levels of stress. Although Sherbourne et al. (1992) have used a different sample and explored the buffering effect of social support in a different context, their study also confirms that social support could be viewed as a buffer to stressful situations. In their study, which is aimed at examining the extent to which social support and stressful life events are more or less beneficial to the long-term physical functioning and emotional well-being of chronically ill patients, they conclude that social support could be viewed as a buffer that might enable multiple sclerosis patients to cope more effectively and deal more successfully with an influx of negative emotions, among them depression. Although their study is a longitudinal study, which is different from the cross-sectional design used in this study, the two studies have a very important aspect in common. They both aim at finding out whether social support will moderate the effects of a negative emotion on the well-being of individuals. The studies come to a similar conclusion, although different samples were used; that is, the current study has used a younger population, while Sherboure et al. (1992) have conducted their study using a much older and chronically ill population.

Uchino *et al.* (1996) argue that research in this area generally addresses the issue of whether social support benefits health directly, or instead acts as a buffer to lessen the negative impact of stressful life events on health. The authors agree that there is support for both points of view, as it appears that support can benefit health directly and also mediate the consequences of stressful life events, depending on the type of support and stressful events measured. However, the authors conclude in their study that social support is one factor that might play an important role in maintaining health and limiting the impact of illness. There is evidence that patients with low social support reported significantly worse physical functioning and emotional well-being at the baseline of the study than patients with high social support (Uchino *et al.*, 1996). In this study, instead of exploring the direct benefits for health, the buffering effects were considered; therefore, adding more evidence to already existing substantiation that supports the viewpoint that social support moderates or buffers the consequences of stressful events.

Gender

The second hypothesis in this study aimed at finding out whether females perceived themselves to have more social support than their male counterparts. The box-plot analysis that was performed suggested that females perceive themselves to have more social support than males. The analysis of variance performed on the sample suggested that the sample was statistically significant at 0.021 significance value (alpha- 0.05). Therefore, the study concludes that females perceive themselves to have more social support than their male counterparts.

Personal characteristics such as gender may help to identify who experiences stress and who is likely to seek social support more often than others. Day and Livingstone (2003) have conducted a study to examine gender differences in perceptions of the stressfulness of scenarios relating to family, friends, work relationships and school, as well as the differences in the types and sources of coping methods used as a response to these situations. The authors have found that men and women view the stressfulness of situations differently. This conclusion is supported by other researchers with similar findings, for example, Misra, McKean, West and Russo, (2000); Ross and Mirrowsky (1989); and Roxburgh, (1998).

Although gender appears to influence the likelihood of seeking out certain types and sources of social support from others, it may primarily be a function of the degree of perceived stressfulness of the situation (Day & Livingstone, 2003). Men and women do not differ in the extent to which they sought appraisal, informational and instrumental types of support. However, Day and Livingstone (2003) have found clear evidence that indicates that women report close persons in their primary network and utilise emotional support to a greater extent than their male counterparts.

In a comprehensive review of social support and physical health, Fuhrer and Stanfeld (2002) and Shumaker and Hill (1991) have examined the available evidence for gender differences and discussed the possible factors that may account for these observed gender differences. They contend that the associated factors are related not only to the definitions of support and health that are used, but also to the possible mechanisms linking social relations to health that may differ for men and women. The above-mentioned studies share the same findings as this study, namely that females benefit more from higher levels of social support than males. In this study, the possible mechanisms that may link social relations to health are not known, since the study did not explore that aspect in detail. Therefore the suggested mechanism mentioned in the other studies may imply further studies.

Accommodation

The third hypothesis sought to find out whether students who live at home with their family perceive themselves to have more social support, compared to those that live away from their families, either in on-campus accommodation, or renting a flat on their own or with other students.

The box-plot analysis suggests that students who reside at home with their families perceive themselves to have more social support than other students who stay in university residences or off-campus, or renting accommodation on their own or with other students. Although the box plot supports the hypothesis, the analysis of variance proves otherwise, as the significant value that has been obtained (0.06 at alpha 0.05), is said to be approaching significance. Therefore, the hypothesis that students residing at home with their family perceive themselves to have more social support than other students has not been supported by the study, but given the direction of difference, it might be worth investigating further.

When new students enter university, feeling lonely and homesick is a common experience. At this early stage, before students establish new friendships, emotional support from family and friends at home can act as a buffer against the stress of feeling alone in a strange environment (Lamonthe *et al.*, 1995; Tao, 2000; Wilcox, Winn & Fyvie-Gauld, 2005).

Studies that have investigated social support in relation to the transition to university usually take a psychological perspective and show that social support is vital for successful adjustment to university life (Lamonthe *et al.*, 1995), and that support differs from different sources, such as peers, tutors and parents each playing different roles (Tao, 2000). The lack of significant differences found in accommodation type may be explained by Tao (2000). The author suggests that the social support that university students access may be more diverse

and not simply dichotomous; that is, not necessarily from parents at home or from peers. For some, social support can be sourced more diversely, as long as there is availability.

Data support the claim that making compatible friends is essential to retention and students' living arrangements are central to this process. Such friends provide direct emotional support equivalent to family relationships as well as buffering support in stressful situations (Lamonthe *et al.*, 1995; Tao, 2000; Wilcox, Winn & Fyvie-Gauld, 2005).

The fact that this hypothesis is not supported by this study could be explained by many aspects, such as the time that the data were collected. Since it was in the middle of the year, it could be that the first-year students could already have found compatible friends, making it easier for them to combat stressful situations, because such friends may have provided direct emotional support (Wilcox *et al.*, 2005). The reasons for this findings could also be attributed to the other variables that were not analysed in the study, such as where they went to school, how long they have been in Pietermaritzburg and how many friends from their high school accompanied them to university.

Age

The box-plot analysis indicated that younger students perceive themselves to have more social support, compared to their older counterparts. Although the box-plot analysis suggests the above-mentioned suggestion, the difference was not statistically significant. The significance value for this sample is 0.165 at alpha – 0.05. Therefore, the hypothesis that younger students perceive themselves to have more social support than their older counterparts is not supported. Studies have been found to support this study's finding that younger people do not gain more from social support than older individuals; indeed, there is some suggestion that older individuals benefit more (Krause 2005; Li & Liang 2007; Uchino *et al.*, 1996).

Although there is research available that supports this study's findings, it is quite important to note that there is a huge gap when looking at the ages utilised in the other studies. Looking at this current study, the age group that was investigated is much younger than the ones used in the other studies. The one most important factor in these studies is that they all come to the same conclusion that younger people do not benefit more from social support than older individuals. There may be different reasons that explain why older individuals may benefit more. These include the experience of fewer life events and the extensive contacts with family members for older individuals, which means that younger individuals experience more life events as they embark on the road to exploring/starting their lives; hence, the need for more support from other people. To support this statement, Uchino *et al.* (1996) conclude in their study that most elderly persons have fairly extensive contacts, are not isolated from family and friends, and are satisfied with the support available to them. Similarly, older subjects have consistently been found to experience fewer life events than younger subjects do.

Uchino *et al.* (1996) also suggests that social support may play a particularly important role in maintaining health among the elderly, because the elderly are at high risk for both illness and disruptions in their sources of support. The youngest age group (18-44) reported significantly less availability of social support. They were significantly more likely to experience work, financial and relationship events. The oldest patients were least likely to experience stressful events.

Contrary to the findings of this study, some research has concluded that younger individuals gain more from social support than their older counterparts do (Barreera, Andrews, Barnes & Atenafu, 2007). It is quite important to note that the age range that was utilised in the sample is very narrow; therefore, as further implications for this study, one could compare first-year and fourth-year student in order to get a better age range.

Conclusions

In conclusion, becoming a student is about constructing a new identity and a sense of belonging, as well as acquiring new academic and coping skills. This is a complex process and "finding your place" between new and old creates tension that has to be resolved. Establishing and maintaining social support with peers and (to a lesser extent) academic staff is central to this process (Shaikh & Deschamps, 2006).

The findings of this study suggest that social support plays a very important role in the life of a first-year student, as it assists them in moderating the effects of stress on their well-being, depending on the level of support which each individual perceives him/herself to have. Literature has suggested that the availability of the way that individuals perceive social support has been found to depend on the gender of the individual; therefore this study concludes that females perceive themselves to have more social support than their male counterparts. Although other factors such as age and the student's type of accommodation were investigated, they have not been found to be significant.

Limitations and implications for further research

There are several limitations to this research project that warrant discussion. Firstly, although the study was initially meant to cover all faculties in the university, the sample size was limited to just three faculties (although the third was still not well represented) at the

university. While students from these faculties may share similar experiences with other students from other faculties not included in the sample, these common characteristics were not empirically tested and generalisability of the findings should be cautioned. Future research should explore the experiences of students in other faculties.

One of the instruments that were used to collect data; that is, The Multidimensional Scale of Perceived Social Support, should be treated with caution, because it has not been normed for use across a wide range of cultures. As Kazarian and McCabe (1991) indicate, it has only been normed in the United States of America. There was no other instrument that could be used in this regard.

As an implication for further research, it would be interesting to continue to analyse the extra demographic data that were collected in this study, for example, "where they went to school, with how many friends they came to university, and whether they originated from or outside Pietermaritzburg. A subsequent analysis may additionally take these factors into account to determine the extent to which they influence the amount of perceived social support in these students and how their well-being may be affected.

It would be interesting, as further research in this area, also to explore the role that an individual's culture has to play in the way that people experience, perceive and utilise social support to moderate the effects of stressful situations on their general well-being. Just as the values, norms, beliefs and rituals are noted to vary across cultures, the way of perceiving, providing and receiving social support also differs across cultures. Thus the cultural context influences the perception of what constitutes support; who should provide it; to whom and under which circumstances.

For example, Western cultures are suggested to be oriented toward ideals of personal control and independence. As a result, the provision of support may be constrained in order to

foster individual autonomy. In contrast, Eastern cultures are perceived to focus on values of harmony within the group and interdependence, and for that reason the provision of support may be more liberally provided in order to underscore the collective (Vondras, Poulid, Malcore & Iwahasi, 2008). Contrary to Western cultures, Africans value involvement with other people, close and extended families, as well as participation in the community (Holdstock, 2000). According to the author, one only has to attend an African wedding, funeral or ritual ceremony (Mkhize, s.a.) or spend a day or a weekend at an African home to realise the importance of people to one another.

In many cultures the social support provided and received and a perception of its availability conveys to the person a sense of how they are esteemed, valued and belong as a member of a social network where there is a mutual responsibility to provide assistance.

Maintenance of social bonds is the most crucial motive for humans and threats to social bonds generate intense feelings (Holdstock, 2000); therefore, survival is threatened when they do not exist.

Instead of a quantitative design, a qualitative design could also be considered to explore the relationship of the three constructs. A qualitative study would allow the researcher to find the explanations in more detail, as each respondent would provide a detailed account of how they benefit from social support, instead of providing responses to a series of items in a questionnaire.

Instead of focusing only on one process through which social support has a beneficial effect on well-being, further investigations may also be undertaken to accommodate both processes involved, that is, the buffering and main-effects models.

To gain comprehensive results in relation to age and social support, it would be advisable to investigate the age variable with a wider range of students, for example, comparing first-year and fourth-year students.

Also, to gain a clearer picture about the differences in gender perceptions of stressfulness, one could add a measure that may be able to tease out the differences in male and female students.

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Appendix A

Information for participants and informed consent form



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South Africa

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Survey Information and Informed Consent Form

I am Malebogo Pilane, a Masters student in Clinical Psychology at the University of Kwazulu Natal (Pietermaritzburg) in South Africa. I am conducting a study on <u>the importance of social support in everyday life</u> as part of the research requirement for my degree. I would like to request your participation in this study in which I ask you to complete a series of questionnaires which will take you not more than one hour to complete.

All of your responses will be completely confidential and anonymous. You will not be asked for your name, and the answers to the questions will not in any way be associated with you. PLEASE DO NOT PUT YOUR NAME ANYWHERE. The data collected will be stored in a locked filing cabinet in the researcher's supervisor's office.

The foreseeable risks or ill effects from participating in this study are minimal. There is a very small possibility that answering some of the questions on the questionnaires may evoke some unpleasant feelings. In the event that you experience any distress or discomfort, a referral to the Student Counselling Centre can be arranged through me or directly by contacting them to make an appointment, (The Student Counselling Centre is located in Milner Road between RMS and Finance or you can telephone them at 0332605208.

One benefit you may gain from your participation in the study <u>may be a better</u> <u>understanding of how social support can be of importance to your life.</u> Your participation in this study will be greatly appreciated. Participation in this study is strictly voluntary. You may discontinue at anytime without any prejudice from the investigator or the University. Please feel free to ask questions concerning the study before, after or during the completion of the questionnaires.

You must be at least 18 years old to participate in this study. If you are not at least 18, please do not answer. If you decide to answer the questionnaires, after you have finished, you can put the package in the box provided in the entrance to the Psychology building.

If you have any complaints or queries that the researchers have not been able to answer to your satisfaction, you may contact:

The Social Science Research Ethics Committee, Faculty of Management and Human Sciences, University of KwaZulu-Natal, 031 260 2325 Ms Phumelele Ximba <u>ximbap@ukzn.ac.za</u>

Or the Chairperson of the Social Science Research Ethics Committee Prof. Steve Collings, <u>collings@ukzn.ac.za</u>

If you wish to take part in this study please complete the following form:

I hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT

DATE

Thank you for contributing your time to help with this important study.

Sincerely,

Malebogo Vernice Pilane

School of Psychology

University of Kwazulu Natal (Pietermaritzburg)

Contact; 0724008148

E-mail: quonium84@yahoo.com

Supervisor:

Vernon Solomon <u>solomon@ukzn.ac.za</u> Tel: 033 2605680 School of Psychology University of Kwazulu Natal Pietermaritzburg

Appendix B

Demographic Survey

Instructions: On this questionnaire are a number of questions/statements that you are required to answer. Please read each one carefully and circle the appropriate answer.

- 1. Age:
 - a) 18-20
 - b) 21-22
 - c) 23+
- 2. Gender:
 - a) Female
 - b) Male
- 3. Nationality:
 - a) South African
 - b) Other (please specify)_____
- 4. Programme of study and Faculty
- 5. Residence
 - a) On campus University residence
 - b) Off campus rented accommodation alone
 - c) Off campus rented accommodation with other students
 - d) Off campus living at home with family
- 6. For how many years have you lived in Pietermaritzburg?
 - a) Less than 1 year.
 - b) 1-2 years.
 - c) 2-3years.
 - d) 3years+.

7. Were you at school in the Pietermaritzburg area?

- a) Yes
- b) No
- 8. How many friends from before have come to university with you this year?
 - a) No friend.
 - b) 1 friend.
 - c) 2 friends.
 - d) 3+ friends.
- 9. Where is your permanent (i.e. family) home?
 - a. City_____
 - b. Country_____

Appendix C

Multidimensional Scale of Perceived Social Support

The questions on this scale ask you about your perceptions towards other people around you. In each case you will be asked to indicate by circling the number that best describes your perception.

- 1= Very Strongly Disagree
- 2= Strongly Disagree
- 3= Disagree
- 4= Do not know
- 5= Agree
- 6= Strongly Agree
- 7= Very Strongly Agree.

12345672. There is a special person with whom I can share my joys and sorrows.12345673. My family really tries to help me.12345674. I get the emotional help and support I need from my family.12345675. I have a special person who is a real source of comfort to me.12345676. My friends really try to help me.		1. T	here is a specia	l person who	is around m	e when I'm i	n need.	
2. There is a special person with whom I can share my joys and sorrows. 1 2 3 4 5 6 7 3. My family really tries to help me. 1 2 3 4 5 6 7 4. I get the emotional help and support I need from my family. 1 2 3 4 5 6 7 5. I have a special person who is a real source of comfort to me. 1 2 3 4 5 6 7 6. My friends really try to help me.	1		2	3	4	5	6	7
2. There is a special person with whom I can share my joys and sorrows. 1 2 3 4 5 6 7 3. My family really tries to help me. 1 2 3 4 5 6 7 4. I get the emotional help and support I need from my family. 1 2 3 4 5 6 7 5. I have a special person who is a real source of comfort to me. 1 2 3 4 5 6 7 6. My friends really try to help me. 1 2 3 4 5 6 7								
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1 2 3 4 5 6 7 5. I have a special person who is a real source of comfort to me. 1 2 3 4 5 6 7 6. My friends really try to help me.		4. I	get the emotior	al help and s	upport I need	d from my fa	mily.	
5. I have a special person who is a real source of comfort to me. 1 2 3 4 5 6 7 6. My friends really try to help me.	1		2	3	4	5	6	7
1 2 3 4 5 6 7 6. My friends really try to help me.		5. I have a special person who is a real source of comfort to me.						
6. My friends really try to help me.	1		2	3	4	5	6	7
		6. My friends really try to help me.						
1 2 3 4 5 6 7	1		2	3	4	5	6	7
7. I can count on my friends when things go wrong.		7. I	can count on m	y friends wh	en things go	wrong.		
1 2 3 4 5 6 7	1		2	3	4	5	6	7

8. I can talk about my problems with my family.

1 2 3 4 5 6 7			1	2	3	4	5	6	7
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9. I have friends with whom I can share my joys and sorrows.

1	2	3	4	5	6	7

10. There is a special person in my life who cares about my feelings.

	-	-	•			
1	2	3	4	5	6	7

11. My family is willing to help me make decisions.

	•	0 1				
1	2	3	4	5	6	7

12. I can talk about my problems with my friends.

1	2	3	4	5	6	7

Appendix D

Perceived Stress Scale

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you wail be asked to indicate by circling how often you felt or thought a certain way

0= Never 1 = Almost Never 2 = Sometimes 3 = Fairly Often 4 = Very Often

1. In the last month, how often have you been upset because of something that happened unexpectedly?

			0	1	2	3	4
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2. In the last month, how often have you felt that you were unable to control the important things in your life

0	1	2	3	4

3. In the last month, how often have you felt nervous and "stressed"?

0	1	2	3	4

4. In the last month, how often have you felt confident about your ability to handle your personal problems?

0	1	2	3	4

5. In the last month, how often have you felt that things were going your way?01234

6. In the last month, how often have you found that you could not cope with all the things that you had to do?

0	1	2	3	4

7. In the last month, how often have you been able to control irritations in your life?

	0	1	2	3	4
8	In the last mont	h how often have y	you felt that you we	re on top of things?	

9. In the last month, how often have you been angered because of things that were outside of your control?

0	1	2	3	4

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

	0		1	2	3	4
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Appendix E

WHO (five) Well-Being Index

Please indicate for each of the five statements which is closest to how you have been feeling over the last two weeks.

- 0= At no time.
- 1= Some of the time.
- 2= Less than half of the time.
- 3= More than half of the time.
- 4= Most of the time.
- 5 = All of the time.

1. I have felt cheerful and in good spirits.

	U	1			
0	1	2	3	4	5

2. I have felt calm and relaxed.

|--|

3. I have felt active and vigorous.

0	1	2	3	4	5

4. I woke up feeling fresh and rested.

	0	1	2	3	4	5
--	---	---	---	---	---	---

5. My daily life has been filled with things that interest me.

1 2 3 4 5