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STRESS AND COPING IN GAUTENG TEACHERS

MELANIE FONG CHONG

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DECLARATION

I hereby certify that this dissertation is my own unaided work. It has been submitted exclusively to the University of the Witwatersrand in partial fulfilment of the requirements for the degree of Master of Arts (Industrial Psychology).



Melanie Fong Chong

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ABSTRACT

Despite the increasing concerns regarding the levels of stress experienced by teachers, and the potential resultant effects of this stress, relatively little is known about the potential effects of coping strategies and perceived social support in coping with teacher stressors. This study aimed to investigate whether both general and specific ways of coping (namely, problem-focused, emotion-focused and escape-avoidance coping) have the potential to moderate the relationship between stressors and strain experienced by individuals within the teaching profession. Furthermore, attempts were made to establish which of these types of coping strategies are most effective for coping with the typical stressors faced by teaching professionals. Similarly, this study investigated whether perceived social support has the potential to moderate the stressor-strain relationships experienced by teachers, and examined which types of social support (namely, perceived social support from family, friends, supervisors, or colleagues) have the potential to effectively moderate this relationship. The data were collected using questionnaires, which were distributed amongst seventeen elementary schools within the Gauteng region. The sample for this study consisted of 188 English-speaking, elementary school teachers, employed on a full-time basis. Moderated multiple linear regressions were carried out in order to investigate whether coping strategies and social support have the potential to moderate the stressor-strain relationships, and analyses of variance were used to determine which of the three ways of coping (that is, problem-focused, emotion-focused, or escape-avoidance coping) has the potential to be the most effective for coping with teacher stressors. Generally, the use of coping strategies was found to significantly moderate the investigated stressor-strain relationships of teachers, while the potential of specific ways of coping to moderate particular stressor-strain relationships appears to be specific to the situation. Similar results were found with regards to perceived social support. Problem-focused coping strategies were generally found to be the most effective method for coping with a range of teacher stressors, but its efficacy was also found to be situation-dependent.

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INTRODUCTION

The levels of stress experienced by individuals employed within the teaching profession has, for some time now, been a subject of concern. Teachers could be regarded as the backbone of the educational system, without whom, the framework of the education system would crumble. Accordingly, significant decreases in the levels of competent and effective teaching has the potential to prove destructive to the educational possibilities of the nation's youth. In order to be able to prevent and moderate the effects of these high levels of stressors experienced, more information regarding the potential moderators of these effects is required.

This study has limited its focus to the ways in which the types of both coping strategies and social support could potentially moderate the stressor-strain relationships within the teaching profession. The literature review which follows will attempt to provide an overview of the current research findings regarding teacher stressors and strain, as well as the contemporary theories surrounding ways of coping and social support. A description and explanation of the methodology used for the purposes of this study will be followed by the results of the statistical analyses of the data gathered. The discussion of the implications of the findings will conclude with suggested directions for future research.

LITERATURE REVIEW

There appears to exist an increasing interest and concern in the subject of teacher stress and coping. This concern is possibly particularly pertinent in the case of the South African educational system. Within this chapter, the general aspects of teacher stress will be outlined, which will be followed by a discussion of teacher stressors which have been found to be specific to, and common within, the teaching profession. An examination of the types of stressors which could be considered unique to the South African situation will also be included. The investigation into the potential consequences of teacher stress will be proceeded by a discussion of the current views regarding background variables and psychological and physiological strain. Models of stress will be outlined in order to introduce the model of stress which has been adopted in this study. Finally, the major hypotheses of this study will follow.

TEACHER STRESS

"...Many talented men and women [in the teaching profession] with high expectations of achievement are dispirited and disillusioned. Some leave the profession, others stay but are plagued by a multitude of physical, emotional and behavioural stress-related manifestations."

(Milstein and Golaszewski, 1985, in Cooper, 1995, p.69).

Teaching has been termed "a profession in peril" (French, 1991, p. 209), and many research findings have reinforced this rather bleak view of the teaching profession. Holland and Michael (1993) suggest that teachers frequently become disillusioned with the teaching occupation as a result of the lack of meaning and satisfaction which the tasks now provide them. Studies conducted in a number of Western countries have reported that teaching is regarded as a highly stressful occupation, with teachers appearing to suffer from higher levels of stress and strain than non-teachers (Pithers, 1995; Cox and Brockley, 1984). Researchers have found that approximately one-third of teachers in a number of countries regard teaching as highly stressful (Boyle, Borg, Falzon and Baglioni, 1995), which has contributed to the "increasing flight of competent teachers from the classroom, as well as a general physical and emotional exhaustion and exasperation of a large number who remain" (Cunningham, 1982, p.220). Kyriacou (1987, in Borg and Riding, 1991) points out that the high levels of stress experienced by teachers appears not to be specific to a particular context, but instead is a more cross-cultural phenomenon which seems to be steadily on the increase.

At present, a wide range of theories exist regarding the causes, consequences and effective coping strategies of teacher stress (as will be outlined later in this chapter). A variety of these theories have been studied, in attempts to test these views, but the results have often proved conflicting and inconclusive. Considering the apparent widespread incidence of severe teacher stress (and its potential consequences), it would appear that these aspects of teacher stress require further examination and consideration.

Teacher Stressors

Trendall (1989, in Kelly and Berthelsen, 1995, p. 346) maintains that stress is a "multi-factorial concept composed of factors within the individual, the organisation and nature of the workplace, and the nature of the wider society". A stressor has been defined as "a subset of environmental conditions that are likely to be appraised as demanding and to have implications for a person's well-being" (Moos and Swindle, Jr, 1990, p.30). A brief discussion of potential organisational and workplace stressors follow, which is then proceeded by a number of broader societal issues and pressures. The individual background variables which have been investigated as possibly being related to the teacher stressor-strain relationships will be discussed at a later stage in this chapter.

Boyle, Borg, Falzon, and Baglioni, Jr (1995) found that the majority of teacher stressors fall into five distinct dimensions, namely, needs for professional recognition, poor relations with colleagues, student misbehaviour, time and resource difficulties, and workload (all of which were used as measurements of teacher stressors for the purposes of this study). Pithers and Fogarty (1995, in Pithers, 1995) appear to concur with these findings, citing a number of commonly experienced teacher stressors which include lack of student discipline, work overload, lack of time and resources, poor management of the school, poor relationships with colleagues, role ambiguity and conflict, and a lack of professional recognition and respect from others. This corresponds to other research conducted, which adds to the list of stressors such negative aspects as student apathy, excessive paperwork, lack of administrative support, inadequate salaries, poor parent-teacher relationships, overcrowded classrooms, as well as feelings of self-estrangement and isolation (Cooper, 1995; Montalvo, Blair and Boor, 1995; Pretorius, 1994; Okebukola and Jegede, 1992; Dooley, Rook and Catalano, 1987; Russell, Altmaier and van Velzen, 1987; Wangberg, 1982; Cooper and Marshall, 1976). The effects of this isolation can be exacerbated when the teachers hold the view that their problems are unique and as a result of some type of failure on their own part, thereby resulting in the internalisation of problems and stressors (Newell, 1990, in Wangberg, 1992). Thomson and Wendt (1995) suggest that teachers typically work in isolation, with little significant professional contact with their colleagues.

Furthermore, the influence which teachers are able to exert in their classrooms has been found to seldom extend to other aspects of the management of the school, which has been found to be another potential cause of frustration and alienation from the school (Newman, Rutter and Smith, 1989, in Thomson and Wendt, 1995). Pithers (1995) suggests that the powerful interpersonal demands of teaching, in conjunction with the considerable task demands and expectations, can often result in high levels of potential stress for such individuals. Kelly and Berthelsen (1995) submit that social change has served to increase the expectations of parents and the community in general, with respect to the standard of education and the outcomes of the system, and that the weight of expectations falls primarily on the shoulders of the teaching fraternity. Wangberg (1982) also maintains that the teacher is typically called upon to fulfil a number of roles within a working day, which involves a high frequency of interactions with others, relative to other professional occupations.

The school teaching environment is currently undergoing a number of significant changes, which has created a sense of crisis in a workplace which has been characterised as a "slow-changing, bureaucratic organisation that seldom fosters peer dialogue and growth" (Thomson and Wendt, 1995, p.269). These changes are particularly felt within the current South African educational system. Sylvester (1998, p.7) suggests that "South African teachers have in recent years been made the scapegoats for disrupted classes, poor...results and a lack of discipline among pupils, and they no longer enjoy the respect and reverence once shown to them". The job security of South African teachers is further under threat at present, with increasing rates of retrenchments and departmental cutbacks (ibid.). Moreover, considering that change is regarded as one of the most significant potential stressors for teachers, (especially that which is perceived to be beyond the control of the individual), (Travers and Cooper, 1993; Fisher, 1984), the introduction of Curriculum 2005 in 1998 could forseeably create yet another major stressor for elementary school teachers. (For an outline of the principles of Curriculum 2005, see Appendix 2 on page 90). Furthermore, increasing pressure is being placed on the educational system of South Africa to correct social and economic problems, which are generally regarded to exist as a result of the former apartheid system of schooling (Prevorius, 1994). The education system has also become an often contentious subject for interested parties on social, economic and political levels. This has served to place the spotlight on the education system, and thereby exert added pressure and expectations on the teaching staff of such educational institutions.

Potential Consequences of Teacher Stress

It appears to be widely accepted that occupational stress has the potential to have significant implications for both the physiological and psychological well-being of individuals (Fletcher, 1991, in Kelly and Berthelsen, 1995; Moos, 1988, in Fisher and Reason, 1988). Kelly and Berthelsen (1995) maintain that occupational stress needs to be understood in the specific occupational context in which it has occurred. Therefore the unique and specific aspects of teacher stress should be carefully considered, as well as the generalisations that can be made with other occupational stresses.

Teacher stress has been defined as "a response of negative affect (such as anger or depression) by a teacher, usually accompanied by potentially pathogenic physiological and biochemical changes (such as increased heart rate...) resulting from aspects of the teacher's job and mediated by the perception that the demands made upon the teacher constitute a threat to his [or her] self-esteem or well-being and by coping mechanisms activated to reduce the perceived threat" (Kyriacou and Sutcliffe, 1978, p.2). Failure to reduce the perceived threat will result in strain. Potential stressors can be physical, psychological, or a combination of the two (ibid.). Research findings suggest that teachers who are experiencing high levels of psychological or physiological strain might develop attitudes or behaviours which could consequently have the potential to affect the teaching relationship and learning process of the individuals being taught (Blase, 1986, in French, 1991; Kyriacou and Sutcliffe, 1978).

Goldberg (1979, in Thatcher, 1995) suggested that symptoms of strain are divisible into four distinct factors, namely, somatic symptoms, anxiety and insomnia, symptoms of social dysfunction, and symptoms of severe depression. (These dimensions were used as measurements of strain within this study). In accordance with these theorised dimensions of strain, potential consequences of high levels of psychological and physiological strain are said to include physical, behavioural and psychological symptoms (Cunningham, 1982). Physical symptoms include symptoms ranging from headaches, back aches and peptic ulcers, through to sleep disturbances, hypertension and physical exhaustion (Cooper and Cartwright, 1994; Wright, Bonett and Sweeney, 1993; Russell, Altmaier and van Velzen, 1987). Absenteeism, turnover, lack of commitment and dedication, deterioration in work performance, and an inability to take work 'seriously' are all examples of behavioural symptoms (Byrne, 1993b; Lunenburg and Cadavid, 1992; Cunningham, 1982). Psychological symptoms extend from feelings of anger, depression, loss of self-esteem, irritability, helplessness and hopelessness, through to psychological "burnout" (Byrne, 1991; Russell et al, 1987). Teacher burnout has been defined specifically as "exhaustion, negative self evaluation...and negative attitudes towards students" (Friedman, 1993, p.1036), but also incorporates other aspects of the general burnout phenomenon.

Burnout in an individual is assumed to occur as a result of psychological strain (Spielberger and Sarason, 1991, in Lunenburg and Cadavid, 1992), and is regarded as the "final step in a progression of unsuccessful attempts to cope with negative stress conditions" (Byrne, 1993a). Burnout has been defined as a multidimensional syndrome comprised of three major cognitive or affective components, namely, *emotional exhaustion*, *depersonalisation* of others, and feelings of *reduced personal accomplishment* (Friedman, 1995; Evans and Fischer, 1993; Lee and Ashforth, 1993). Along with these components, cynicism (Greenglass and Burke, 1988), defensiveness and autocratic behaviour (Cunningham, 1982), and physical fatigue and cognitive weariness (Friedman, 1993) have been found to be accompanying symptoms of burnout. Emotional exhaustion is said to be caused by excessive psychological and emotional demands which are made on individuals (Jackson, Schwab and Schuler, 1986), and refers to feelings of overextension and fatigue as a result of the daily pressures of the occupation (Friesen and Sarros, 1989). Maslach (1982, in Friesen and Sarros, 1989, p.179) explains emotional exhaustion as "a pattern of emotional overload...[where] people feel drained and used up...They lack energy to face another day". A sign of emotional exhaustion is the teacher's perceived inability to give of him/herself to the students, which is in contrast to what he/she was able to offer in the earlier career stages (Pretorius 1994; Byrne, 1993b).

Depersonalisation of others refers to the development by teachers of negative, uncaring or indifferent attitudes towards pupils, parents of pupils and/or colleagues (Friedman, 1995; Pretorius, 1994; Byrne, 1993a; Byrne, 1993b). This could result in "a very cynical and dehumanised perception of [others]...in which they are labelled in derogatory ways and treated accordingly" (Maslach and Pines, 1977, in Friesen and Sarros, 1989, p.179). Teachers suffering from burnout could begin to view and treat others as mere objects, and this is said to often be reflected by the use of object labels, rather than person names (Jackson, Schwab and Schuler, 1986). This cynicism and callousness could have harmful effects on their relationships with students' parents, students, colleagues and superiors (Byrne, 1993b).

Feelings of low personal accomplishment is the third component of the burnout phenomenon, and refers to the perception of inadequate personal or professional achievement, which results in the diminishing of a sense of self-esteem (Friedman, 1995; Friesen and Sarros, 1989). Teachers may perceive themselves as ineffectual in attempting to educate students, as well as in fulfilling various other school responsibilities (Byrne, 1993b). According to Lunenburg and Cadavid (1992), feelings of learned helplessness could also result when teachers begin to feel chronically unsuccessful, ineffective and powerless.

Cooper and Marshall (1976, in Byrne, 1991, p.197) propose that educator burnout is "a function of stressors engendered at both the organisational and individual levels". Research has found that teacher burnout is a function of the quality of the individual's working life at the school (Byrne, 1993b; Cunningham, 1982). Negative aspects of teaching have the potential to eventually 'wear out' the individual, resulting in consequences such as tiredness, inability to concentrate, inefficiency or dysfunction in the preparation and tasks of teaching, excessive boredom, and indifference (Lamude and Scudder, 1994; Cunningham, 1982). Farber and Miller (1981, in Byrne, 1993b) found that teachers suffering from burnout tended to be less sympathetic towards students, with a lower level of tolerance for class disruptions or changes to schedules. It has been reported that burnout has been found to be correlated with the increased use of alcohol and drugs (Maslach and Jackson, 1981, in Greenglass and Burke, 1988). Feelings of alienation, less acceptance of their ideas, less encouragement and praise, lowered morale, and reduced flexibility are among the potential implications of teacher burnout for students (ibid.).

Background Variables and Strain

In general, research investigating the possible influence of background variables on the levels of strain and burnout have yielded inconsistent and inconclusive findings. Researchers have generally explored the individual's background variables of gender, age, marital status, level of schooling taught, years of experience, and the type of student taught (Kelly and Berthelsen, 1995; Smith and Bourke, 1992; Byrne, 1991). Russell, Altmaier and van Velzen (1987) cite a long list of research studies which have found positive relationships between demographic variables and psychological and physiological strain (for example, Furnham, 1987; Payne and Furnham, 1987; Anderson and Iwanicki, 1984; Schwab, Jackson and Schuler, 1984; Beck and Gargiulo, 1983; Crane and Iwanicki, 1983; Schwab and Iwanicki, 1982). Similarly, Byrne (1991) details research studies that have found gender differences on variables such as depersonalisation, emotional exhaustion, and personal accomplishment. Borg and Riding (1991) also report on studies which found that females report higher levels of strain than their male counterparts, and that the perceived stressors were significantly different for the two groups. Contrary to these seemingly consistent findings, Kelly and Berthelsen (1995) present a lengthy record of contradictory research studies, some of which have found such relationships, and others which deny the possibility of these relationships.

Similarly, a number of studies have produced results which suggest that young teachers suffer from far higher levels of psychological and physiological strain than do their older counterparts (for example, Laughlin, 1984, in Borg and Riding, 1991; Maslach and Jackson, 1981, in Byrne, 1991). However, these relationships are again disputed by findings of other research (such as Anderson and

Iwanicki, 1984; Schwab and Iwanicki, 1982, in Byrne, 1991). The variable of years of experience of a teacher has produced similarly inconsistent findings. Some research studies have reported findings in which more experienced teachers suffer significantly less strain than their less experienced counterparts (Byrne, 1991), while others steadfastly maintain that no such relationships exist according to their findings (for example, Anderson and Iwanicki, 1984, and Schwab and Iwanicki, 1982, in Byrne, 1991).

Inconsistent findings have rendered it impossible for researchers in the field of stress to reach any consensus as to whether demographic variables are related to levels of stressors or strain. While authors such as Kelly and Berthelsen (1995, p.346) emphatically maintain that "demographic variables *do not* predict stress", others tentatively suggest that the relationship between demographic variables and the stress process is "worthy of further study" (Byrne, 1991, p.198). Brenner and Bertell (1984, in Boyle, Borg, Falzon and Baglioni, Jr, 1995, p.51) assert that teacher stress results from "the combined effects of the teacher and school characteristics, potential stressors in the school environment, actual stressors, overall perceived work-related stressors, stress reactions/symptoms and health status, personality characteristics and coping mechanisms, as well as non-work related stressors". Clearly then, the processes involved in teacher stress are multidimensional and complex, and would seem to warrant still further research into the relevant components and their interactions.

Owing to concerns resulting from the findings on the costs and consequences of strain on teachers and the teaching process, the number of research studies conducted in the area of teacher stress is steadily increasing, with the majority of earlier studies focusing on the sources (stressors) and correlates, as well as the magnitude of teacher stress (Salo, 1995). The area of coping with teacher stress is, however, also an important aspect of the stress process, and there is a growing tendency amongst researchers to study stress and coping together (Salo, 1995). Indeed, it has been suggested that it could prove artificial to attempt to study stress independently of the coping variable (Lazarus, 1990). Despite this, there exists at present a dearth of information about the coping processes of individuals employed within the teaching profession. There do, however, exist a number of models of stress which include the coping process as an integral aspect, and these will be outlined now.

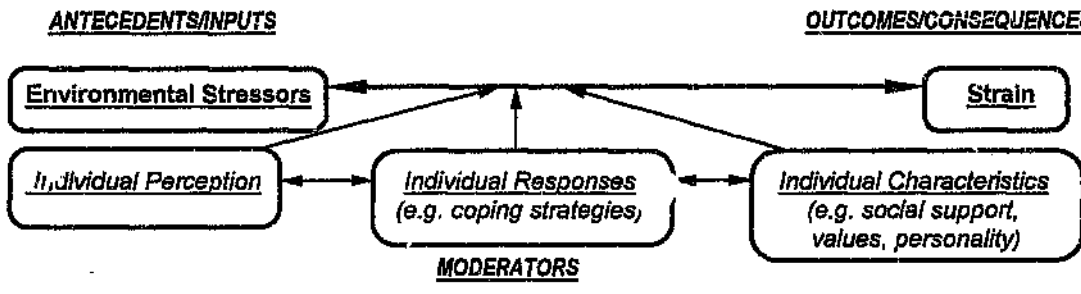
Models of Stress

Dewe (1989) points out that despite the abundance of research material on stress, there appears to exists a determined lack of agreement on the definition of stress and its processes. A number of models of stress have been hypothesised, one of which is termed the *engineering* model of stress. This approach regards stress as resulting solely from pressures in the environment (Hinkle, 1974, in

Boyle et al, 1995). Stress is therefore defined as the "external environmental stimulus characteristics" (Cox, 1978, in Boyle et al, 1995, p.50). The *physiological* perspective, on the other hand, emphasises the physiological responses to stress (DeFrank and Stroup, 1989, in Boyle et al, 1995), and defines stress in terms of the physiological responses induced by stress (Cox, 1978, in Boyle et al, 1995). This model of stress focuses *solely* on the individual's response to a stressor, and the effect of the physical demands made on the body by the stressor (Romano, 1992).

The *transactional* or *interactional* perspective appears to be the model to which most now subscribe (Boyle et al, 1995; Weber and Laux, 1990; Dewe, 1989), and this is the most complex of the three models. This perspective, which is also called the cognitive-transactional approach (Roberts, 1995), is a more person-centred approach to the study of stress (Weber and Laux, 1990), and refers to "a particular kind of relationship between person and environment" (Lazarus, 1966, in Lazarus, 1990, p.3). Lazarus (1990, in Weber and Laux, 1990, p.37) has explained that this perspective views the individual as a "complex, organised being with goal commitments and beliefs about self and world, integrated into a coherent, functional personality system". This is clearly in sharp contrast with both the engineering model and the physiological perspective. Lazarus (1990, p.3) explains that the term *'transaction'* "implies that stress is neither in the environmental input nor in the person, but reflects the conjunction of a person with certain motives and beliefs...with an environment whose characteristics pose harm, threats, or challenges depending on these person characteristics".

DIAGRAM 1: SIMPLIFIED DIAGRAM OF TRANSACTIONAL OR INTERACTIONAL MODEL



This model of stress (simplified in Diagram 1 above) was initially advanced by Folkman and Lazarus, and views stress as a complex transaction or interaction between environmental demands and constraints, and the individual's needs and resources (ibid.). It emphasises the dynamic relationship between "one's cognitive evaluation of a situation and subsequent coping" (Santiago-Rivera, Bernstein and Gard, 1995, p.374), and this perspective regards the cognitive appraisals and coping responses as the most significant variables in understanding the stress process (Roberts, 1995).

Strain (the negative result of a stressful situation) is therefore determined by the perception of a stressor, the perceived intensity of the stressor, the strategies used to cope with or to resolve this stressor, and the degree of success of the strategies used, as well as a number of individual characteristics (such as levels of available social support, values, personality and others) (Osipow, 1991). Thus, the effects of potential stressors are a function of the individual's cognitive appraisals and coping strategies (Roberts, 1995).

The cognitive appraisal process is divisible into the primary and secondary appraisal (Roberts, 1995; Lazarus, 1990; Puffer and Brakefield, 1989). Primary appraisal involves evaluating whether the encounter (or transaction) involves harm or is a threat of harm (Lazarus, 1990; Folkman, Lazarus, Dunkel-Schetter, DeLongis and Gruen, 1986). Once the encounter has been appraised as being a stressor, the individual appraises which coping responses would be necessary to eliminate or reduce the potential resultant strain (that is, the secondary appraisal) (ibid.). In this way, the individual's cognitive appraisal of the encounter determines the effective presence and extent of the stressor (Gadzella, Ginther, Tomcala and Bryant, 1991).

In accordance with the interactional nature of the stress process, some studies have found that coping processes and social support have the potential to act as moderators in the relationship between stressful life events and consequent psychological or physiological strain (Zeidner and Endler, 1996; Higgins and Endler, 1995; Decker and Borgen, 1993). Koeske, Kirk and Koeske (1993, p.321) suggest that "effective copers should be buffered against the negative consequences of stress by the implementation of their strategies...As stress conditions increase, the effective copers, being insulated by the procedures they enact, should show less negative effects". (Decker and Borgen (1993) point out that no consensus has been reached regarding the existence of such relationships, owing to the contradictory and inconclusive research results thus far).

Termed "recursiveness" or "reciprocal determinism" (Lazarus, 1990, p.11), each variable within the stress process has the potential to affect any other variable in the process. Therefore, the coping strategies and availability of the coping resource of social support are capable of changing the levels of strain perceived by the individual through the provision of feedback (Pithers, 1995). Because some individual characteristics, such as personality and values, would be almost impossible to manipulate, the coping resources used by individuals can be the focus in an attempt to influence the stress process. Effective coping strategies are capable of influencing both the perception of stress and the levels of resultant strain, and is therefore a very important factor which is able to be manipulated in the stress process. Similarly, seeking the support of social relationships during a stressful encounter

could also prove an effective resource with which to attempt to moderate the stressor-strain relationship.

COPING

Coping has been defined as "a set of concrete responses to a stressful situation or event that are intended to resolve the problem or reduce the distress" (Costa and McCrae, 1989, in Matson, 1995, p.89). Lazarus and Folkman (1984, in Decker and Borgen, 1993, p.470) have likewise explained the process of coping as the "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person". Classification schemes for coping processes have divided responses into method of coping and focus of coping (Billings and Moos, 1981). The *methods of coping* system has divided active attempts to resolve stress into ..ltive and behavioural mechanisms, namely active-cognitive and active-behavioural coping (Puffer and Brakefield, 1989; Billings and Moos, 1981; Lazarus, 1966). Active-cognitive coping refers to attempts by the individual to manage his/her appraisal of the stressful situation, while active-behavioural coping alludes to overt behaviours in an attempt to resolve the stressful event and/or its effects (Billings and Moos, 1981). Attempts to avoid resolving the stressful events is termed avoidance coping, and refers to activities such as eating or smoking in an attempt to 'forget about' the stressors (ibid.).

The *focus of coping* classification is comprised of problem-focused and emotion-focused coping (Billings and Moos, 1981; Endler and Parker, 1990a; Lazarus, 1991; Folkman and Lazarus, 1985). Attempts to directly change "the troubled person-environment relationship by acting on the environment or oneself" (Lazarus, 1993, p.238), and thereby change the terms of the relationship (Lazarus, 1990), is regarded as problem-focused coping. Problem-focused coping could include the collection of more information about the problem, or assessing ways in which to address the challenge (Endler and Parker, 1990b). Emotion-focused coping emphasises the cognitive or behavioural responses which are designed to alleviate the emotional reactions to the stressful event without actually impacting on the event itself (Biork and Cohen, 1993; Folkman and Lazarus, 1988; Billings and Moos, 1981). Lazarus (1990, p.4) explains that "what is attended to may be changed, or its meaning is changed...when the person denies or distances the threat, which in turn also affects the appraisal". In this manner, the "relational meaning" of the event is changed, which serves to mitigate stress without modifying the actual conditions within the environments (Lazarus, 1993, p. 238). An example of emotion-focused coping would be focusing on any possible positive aspects of the situation.

Although Billings and Moos (1981) describe distinctions between methods of coping and the focus of coping, it would appear that this distinction has become 'muddied' over time, as can be distinguished in the writings of a number of authors in stress research. These authors, (for example, Cockburn, 1996; Santiago-Rivera et al, 1995; Higgins and Endler, 1995; Salo, 1995; Endler and Parker, 1994; Okebukola and Jegede, 1992; Latack, 1986), appear to broadly define categories of coping strategies as comprised of problem-focused and emotion-focused coping strategies. Owing to the seemingly preferred use of this classification, Endler and Parker (1990a) proposed the introduction of a third basic coping strategy, namely an escape-avoidance strategy similar to that submitted as a method of coping in the previous classification. (The problem-focused, emotion-focused and escape-avoidance ways of coping classifications were therefore used for the purposes of this study).

Although it has been suggested that it could prove impossible to identify strategies of coping which are consistently positive or negative (Puffer and Brakefield, 1989; Billings and Moos, 1981), and that one coping strategy could prove effective in one situation and ineffective in another (Cooper, 1995), Folkman and Lazarus (1980, in Billings and Moos, 1981) found that work-related stressors were associated with problem-focused coping strategies, while emotion-focused coping was used more for health-related concerns. Several other studies have also identified more problem-focused strategies as being more effective in teacher stress (for example, Cockburn, 1996; Higgins and Endler, 1995; Lehmicke and Hicks, 1995; Salo, 1995; McCrae and Costa, 1986, in Bjork and Cohen, 1993; Lazarus, 1993; Okebukola and Jegede, 1992; Pearlin and Schooler, 1978). Lazarus (1993) found that the problem-focused coping component termed 'planful problem-solving' was significantly positively related to satisfactory outcomes. In contrast, the emotion-focused aspect of distancing was found to be associated with unsatisfactory outcomes to the coping process (ibid.). Cohen, Evans, Stokols and Krantz (1986, in Koeske, Kirk and Koeske, 1993) suggest that escape-avoidance strategies could afford a valuable protective function in environments which are intractable, with little opportunity for feedback or control. This could suggest, then, that there can exist a number of basic strategies which could prove effective in moderating the stressor-strain relationship for individuals exposed to similar stressors (such as individuals within one profession) (see Diagram 2 on page 14 for model). Cockburn (1996) found that there exists a lack of awareness of coping techniques in the teaching profession, and that strategies are acquired as the need arises. Research findings have also shown that the individual's selection of coping strategies is significantly influenced by personal factors, and the "ongoing characteristics of family and work settings" (Moos and Swindle, Jr, 1990, p.30). However, if one can begin to understand which coping strategies have been found to be most effective, and for which specific stressors, trainers of teachers can begin to "develop teachers to deal more effectively with the pressures imposed on them" (Cooper, 1995, p.70).

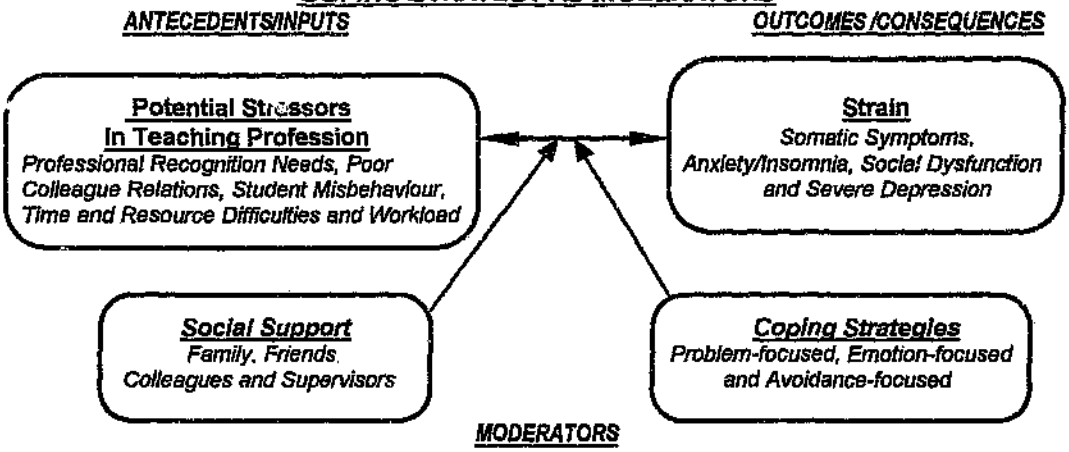
Social Support

Social support is defined as "the existence or availability of people on whom we can rely, people who let us know that they care about, value, and love us" (Sarason, Levine, Basham and Sarason, 1983, p.127). Heaney, Price and Rafferty (1995) suggest that coping behaviours are restricted by the amount and quality of resources from which the individual can draw when faced with a challenge or stressor. Roskies and Lazarus (1980, in Heaney et al, 1995, p.335) explain that "if coping...strategies are conceptualised as the currency expended in a specific stress transaction, coping resources constitute the bank account from which this currency is drawn". Social support has been defined as the instrumental, emotional and informational "currency", which is able to be exchanged through social interactions (Heaney et al, 1995). As in the case of the stress process, there exists no one conceptualisation of social support. Weiss (1974, in Sarason et al, 1983) included such aspects as social integration, intimacy, alliance, worth, nurturance and guidance, while Kelly, Munoz and Snowden (1979, in Sarason et al, 1983) proposed a three-component model, comprised of personal, extraorganisational and intraorganisational support. The different conceptualisations appear, though, to agree that social support includes two elements, namely "the perception that there is a sufficient number of available others to whom one can turn in times of need, and...a degree of satisfaction with the available support" (Sarason et al, 1983, p. 128-129). The importance of these two factors might vary in relation to one another across individuals, and depends largely on the personality and interests of the individual (ibid.).

House (1981) agrees that social support has been widely identified as a potential resource to enable individuals to cope with the potential effects of stressors. This buffering hypothesis of social support suggests that the presence or absence (as well as the quality) of social support has the potential to moderate the stressor-strain relationship during the process of the individual's attempts at coping (see Diagram 2 overleaf) (Pierce, Sarason and Sarason, 1996, in Zeidner and Endler, 1996; Heaney, Price and Rafferty, 1995; Pretorius, 1993; Schonfeld, 1989; Etzion, 1984). Bowlby (1980, in Sarason et al, 1983) proposes that the presence or availability of social support has the potential to increase an individual's capacity to withstand and overcome challenges and stressors. Findings have shown that individuals with supportive social relationships are more easily able to cope with potential stressors, and thereby avoid experiencing psychological or physiological strain (Russell, Altmaier and Van Velzen, 1987). Conversely, individuals lacking in such social support have been found to be more vulnerable to potential strain, as a result of possessing less resources with which to cope with potential stressors (ibid.). Billings and Moos (1981) also reported results of studies where low levels of social support were significantly associated with psychological distress, psychosomatic complaints, and general psychological and physiological strain. Schwab and Iwanicki (1982) found that higher

levels of social support from colleagues were associated with lower levels of burnout, and Zabel and Zabel (1982) also reported findings that special education teachers who perceived high levels of social support from colleagues, family and friends also evidenced less symptoms of strain. However, similar to teacher coping strategies, limited research has been conducted on teacher social support and its possible moderating effects (Pierce et al, 1996; Russell et al. 1987; Cohen and Wills, 1985). Some research findings have indicated that social support possessed significantly more predictive value for females than for males (Billings and Moos, 1981), but findings on gender differences remain inconclusive as yet. Considering the potentially beneficial moderating effects of strong social support, and its possible use as a method of coping, further research into its effects appears to be warranted.

DIAGRAM 2: DIAGRAM OF STRESSOR-STRAIN MODEL WITH SOCIAL SUPPORT AND COPING STRATEGY AS MODERATORS



HYPOTHESES

HYPOTHESIS 1: The first hypothesis proposes that coping strategies have the potential to moderate the stressor-strain relationships in the teaching profession.

HYPOTHESIS 1A: Hypothesis 1a proposes that *problem-focused* coping strategies have the potential to moderate the stressor-strain relationships in the teaching profession.

HYPOTHESIS 1B: Hypothesis 1b proposes that *emotion-focused* coping strategies have the potential to moderate the stressor-strain relationships in the teaching profession.

HYPOTHESIS 1C: Hypothesis 1c proposes that *escape-avoidance* coping strategies have the potential to moderate the stressor-strain relationships in the teaching profession.

HYPOTHESIS 2: The second hypothesis proposes that social support of family, friends, supervisors and colleagues has the potential to moderate the stressor-strain relationships in the teaching profession.

HYPOTHESIS 2A: Hypothesis 2a proposes that social support of *family* has the potential to moderate the stressor-strain relationships in the teaching profession.

HYPOTHESIS 2B: Hypothesis 2b proposes that social support of *friends* has the potential to moderate the stressor-strain relationships in the teaching profession.

HYPOTHESIS 2C: Hypothesis 2c proposes that social support of *supervisors* has the potential to moderate the stressor-strain relationships in the teaching profession.

HYPOTHESIS 2D: Hypothesis 2d proposes that social support of *colleagues* has the potential to moderate the stressor-strain relationships in the teaching profession.

HYPOTHESIS 3: The third hypothesis proposes that problem-focused coping strategies are more effective than emotion-focused and avoidance-focused coping strategies in reducing the potential effects of stressors in the teaching profession.

METHODOLOGY

This chapter begins by detailing the data collection procedure which was carried out for the purposes of this study. Information regarding the subjects will be outlined, which will include the biographical data which were collected. This will be followed a description of the procedure which was used to collect the data, and then proceeded by a report of the measuring instruments used in this research. Finally, this chapter will provide an outline of the statistical procedures which will be used in the analysis of the data.

DATA COLLECTION

SUBJECTS

Data were collected from teachers in seventeen primary/elementary schools within the Gauteng province. All teachers were employed on a full-time basis, and all schools were English-medium schools. All of these schools are State-administered institutions, and were formerly maintained solely for the education of White students. The total number of questionnaires distributed was 308, with a total of 188 completed questionnaires returned (which is a response rate of 61.04%).

The majority of the respondents were female (176 of 188 respondents), which comprises approximately 93.62% of the total sample. In contrast, there were only 11 male respondents (5.85%). Of the 187 teachers who responded to the question regarding race group, 182 (96.81%) reported being White, which was followed by 1.06% of the sample (2 respondents) who reported being of Asian extract. The remaining three categories (Black, Coloured and Other) each accounted for 0.53% of the total sample (1 respondent each). Information on the marital status of the respondents was also requested. Of the 187 teachers responding to this question, 134 reported that they are married (71.28%), 16.49% reported being single (31 respondents), and 5.32% stated that they are divorced (10 respondents). Six individuals reported that they are cohabiting with a partner (3.19%), while the remaining categories (separated and widowed) each accounted for 1.59% of the total (3 respondents each).

TABLE 1: BREAKDOWN OF AGE, TENURE AND TIME IN PROFESSION BIOGRAPHICAL VARIABLES.

Biographical Variables	N	Minimum	Maximum	Mean	S.D.
Age (years and months)	180	22y 3mo	62y 9mo	37y 2mo	9y 7mo
Tenure (years and months)	185	1mo	28y 8mo	7y 3mo	6y 10mo
Time in Profession (years and months)	187	1mo	40y 0mo	13y 2mo	8y 4mo

As can be seen in **Table 1** (page 16), the ages of the respondents range from 22 years and 3 months old, through to 62 years and 9 months, with a mean age of 37 years and 2 months (S.D.=9 years 7months). The tenure of the respondents at their respective schools ranged from 1 month to 28 years and 8 months, with a mean of 7 years and 3 months being recorded (S.D.=6 years 10 months). Of the 187 individuals who responded to the question regarding the duration of the teaching experience of the individual (Time in Profession), the maximum length of time was reported to be 40 years, and the minimum was 1 month. The mean length of time spent in the teaching profession was 13 years and 2 months (S.D.=8 years 4 months).

Respondents were asked to estimate the average number of pupils taught in one class, and these ranged from 12 pupils through to 45 pupils per class. The reported number of pupils was then classified into low (12-28), medium (29-36), and high (37-45) numbers of pupils. It was found that the mean number of pupils falls within the medium (29-36 pupils) category range. As can be seen in **Table 2** below, 20 teachers reported teaching low numbers of pupils, which accounted for 10.69% of the total. The highest number of respondents reported teaching medium groups of pupils (122 respondents), which totalled 65.24% of all respondents. Finally, 45 respondents reported teaching high numbers of pupils (24.06%).

TABLE 2: BREAKDOWN OF LOW, MEDIUM AND HIGH GROUPS OF PUPILS

Number of Pupils	N	Percentage
Low (12-28)	20	10.69
Medium (29-36)	122	65.24
High (37-45)	45	24.06

PROCEDURE

Principals of schools were randomly approached to distribute questionnaires amongst co-operative teachers within their schools. The questionnaires are comprised of six scales, measuring occupational stressors; social support of family, friends, supervisors and colleagues; ways of coping with stressors, and physiological and psychological strain experienced. Information on a number of biographical variables was also requested. A covering letter accompanied the questionnaires, which explained the general aim of the study, the approximate time needed to complete the questionnaire, as well as instructions to aid in the ensuring of confidentiality and anonymity of the responses.

Teachers were asked to participate in the research on a voluntary basis, and the confidentiality of their responses was ensured through the provision of sealed return boxes at the respective schools.

These sealed boxes were collected after an appropriate period of time had elapsed. Anonymity of all respondents was enabled through the absence of any identifying markings on the questionnaires.

DESIGN

This study is an example of a cross-sectional, ex post facto design. The independent variables within this study are teacher stressors, ways of coping and social support. The dependent variable is comprised of psychological and physiological strain.

MEASURING INSTRUMENTS

STRESSORS: The occupational stressors which are experienced by teachers were measured through the use of Boyle, Borg, Falzon and Baglioni, Jr's (1995) *Teacher Stress Inventory*. This is a 20-item scale which measures occupational sources of stress (stressors), and consists of five distinct dimensions, namely: student misbehaviour; time/resource difficulties; professional recognition needs; workload; and poor colleague relations. The instructions for the scale asks: "As a teacher, how great a source of stress are these factors to you?", and responses to the scale are in a Likert-type format, ranging from 0="no stress" through to 4="extreme stress". This inventory has been largely based on the list of sources of stress reported by Kyriacou and Sutcliffe (1978), and has a high face validity (Chan, 1995; Boyle, Borg, Falzon and Baglioni, Jr, 1995). This scale is further able to make a distinction between the mere absence or presence of a potential stressor, and the *extent* to which the respondent regards the stimulus as potentially threatening or challenging. The ability to make this distinction therefore allows for the inclusion of the appraisal processes of the respondent, which can then be taken into account (Newton, 1989). Alpha coefficients ranging from .75 to .92 have been reported for this instrument (Russell, Altmaier and Van Velzen, 1987).

COPING: The different methods of coping used by individuals was measured using Folkman and Lazarus' (1988) *Ways of Coping Questionnaire* (WCQ). It is comprised of eight subscales, namely: confrontive coping; distancing; self-controlling; seeking social support; accepting responsibility; escape-avoidance; planful problem-solving; and positive reappraisal (Zeidner and Endler, 1996). These subscales have been further consolidated by Folkman and Lazarus (1988) into the three subscales which were used in this study, namely, Problem-focused, Emotion-Focused and Escape-Avoidance ways of coping. The Problem-Focused component consists of the confrontive coping, planful problem-solving and seeking social support subscales, while the Emotion-focused element is comprised of the distancing, self-controlling, accepting responsibility, and positive reappraisal subscales. The Escape-avoidance component is comprised solely of the escape-avoidance subscale.

The WCQ consists of 66 items, which asks the respondent to express to what extent he/she uses a number of behaviours as stress coping strategies. Each of these behaviours fall within one of the three aforementioned subscales. Responses are presented in a four-point Likert-type format, ranging from 0="Not Used" through to 3="Used a Great Deal". Folkman and Lazarus (1980, in Endler and Parker, 1990) have reported a reliability coefficient of .81 for this instrument. Furthermore, this questionnaire is reportedly one of the most used of the coping measures (Bjork and Cohen, 1993; Lazarus, 1993; Endler and Parker, 1990), and possesses a high degree of face validity.

SOCIAL SUPPORT: Procidano and Heller's (1983) *Perceived Social Support Scales* were utilised to determine the levels of perceived social support received from friends and family of the individual teachers. Separate scales have been devised to distinguish between family (Perceived Social Support, Family) and friend support (Perceived Social Support, Friends), and each of these is comprised of 20 items. Responses are restricted to "Yes", "No" and "Don't Know" for both of the scales. Procidano and Heller (1983) have reported good reliabilities, with alpha coefficients of .90 and .88 for Perceived Social Support, Family (PSS-Fa) and Perceived Social Support, Friends (PSS-Fr) respectively, in conjunction with high internal consistency for both scales. Tardy (1985) reported a high test-retest reliability (r<.80). The Perceived Social Support of Family and Friends Scales have been used previously within the South African context, with similar reported reliability coefficients (Pheiffer, 1988; Behrmann, 1986).

Perceived social support of supervisors and colleagues were measured using the scales of *Taylor and Bowers* (1972). As in the case of familial and friend social support, these scales also recognise a distinction between these two aspects of occupational social support. Each of the scales consists of three items, with the responses arranged in a five-point Likert-type format. The responses range from 1="To a very little extent" through to 5="To a very great extent". Cronbach's coefficient alphas of between .80 and .93 have been reported for this scale (Bluen, 1986 and Taylor and Bowers, 1972, in Pheiffer, 1988). Similar coefficient alphas have been obtained in a South African context (Pheiffer, 1988).

STRAIN: The presence and levels of physiological and psychological strain of an individual as a result of stress were measured using the 28-item version of the *General Health Questionnaire* (Goldberg and Hillier, 1979). This questionnaire is reported to concern itself with two types of phenomena, namely, the inability to carry out one's normal functioning, and the appearance of "new phenomena of a distressing nature" (Goldberg and Hillier, 1979, p.139). This scale is comprised of four factors, namely: somatic symptoms; anxiety and insomnia; social dysfunction; and severe depression, and is

presented in a four-point Likert-type format, ranging from 1="better than usual" through to 4="much worse than usual". The scale will be scored using the continuous scoring method, which will provide a severity rating from the sum of the four subscales (Goldberg and Hillier, 1979). However, the severity ratings of each of the four subscales (the sum of the scores on each subscale) will also be used for further refinement of the investigation. Goldberg (1972, in Thatcher, 1995) reported an alpha coefficient of .58, and a split-half reliability coefficient of .96. Banks, Clegg, Jackson, Kemp, Stafford and Wall (1980) report high test-retest reliability and high internal consistency. Thatcher (1995), in a South African study, reported a coefficient alpha of .90 for this scale.

The 28-item version of the General Health Questionnaire is said to be intended for the investigator requiring more information than is offered by a single severity score (Goldberg and Hillier, 1979). This additional information is provided through the utilisation of the four factor subscales within the questionnaire. The sensitivity (the ability to distinguish clinical patients) of this scale is reported to be 88%, with an overall misclassification rate of 14.5% at a 4/5 threshold score (ibid.). Similarly, the scale's ability to classify individuals (the level of specificity of the scale) has been reported to be 84.2% at the 4/5 threshold score (ibid.). The sensitivity and specificity rates of the General Health Questionnaire are similarly high with a 5/6 threshold score (80% and 88.8%, respectively, with an overall misclassification rate of 14.2%) (Goldberg and Hillier, 1979).

STATISTICAL PROCEDURES

CRONBACH'S COEFFICIENT ALPHA

The reliability coefficient is said to represent "the degree to which what is measured is relatively free from measurement fluctuations" (Rosenthal and Rosnow, 1991, p.46). For this purpose, the Cronbach coefficient alpha was used in this study. The coefficient alpha is derived by calculating the "average of the intercorrelations among all the single test items" (ibid.) from each of the scales used (namely, the Teacher Stress Inventory, Ways of Coping Questionnaire, Perceived Social Support of Family Scale, Perceived Social Support of Friends Scale, Social Support of Supervisors Scale, Social Support of Colleagues Scale, and the General Health Questionnaire). The range of acceptability of the alpha coefficient of scales is said to be significantly influenced by the variables being measured, as well as the situational specifics of the research. However, Murphy and Davidshofer (1994) suggest that scales with an alpha coefficient of approximately .65 or higher can be considered to be sufficiently reliable for use in most studies in the Social Sciences.

PEARSON'S PRODUCT-MOMENT CORRELATION COEFFICIENT

McCall (1990, p.136) defines the Pearson's product-moment correlation coefficient as "a number ranging from -1.00 through .00 to +1.00 that reflects the extent of a linear relationship " between the variables. A correlation coefficient of +1.00 implies a perfectly predictable, positive linear relationship between the respective variables, while a coefficient of -1.00 suggests that there exists a perfectly predictable, negative linear relationship between the respective variables. No relationship between the respective variables is expected to exist if a correlation coefficient of .00 is found (Rosenthal and Rosnow, 1991).

Correlational analyses were carried out between a number of biographical variables (namely, age, tenure, time spent in the teaching profession, and average number of pupils taught per class), and all the scales (namely, Teacher Stress Inventory, Ways of Coping Questionnaire, Perceived Social Support of Family Scale, Perceived Social Support of Friends Scale, Social Support of Supervisors Scale, Social Support of Colleagues Scale, and the General Health Questionnaire), as well as all their respective subscales. These were conducted in order to establish whether any of these variables were related to one another, either positively or negatively. The correlational analyses should also be able to give an indication of the validity of the claims of the third hypothesis, namely that problem-focused coping strategies are more effective than emotion-focused and avoidance-focused coping strategies in reducing the potential effects of stressors in the teaching profession.

Pearson's product-moment correlation coefficient is represented by the following equation:

$$r = \frac{sum\ (\hat{Y}_i - \bar{Y})^2}{\sqrt{sum\ (Y_i - \bar{Y})^2}}$$

where : sum $(\hat{Y}_i - \bar{Y})^2$ = squared deviations associated with the relationship

sum $(Y_i - \bar{Y})^2$ = total squared deviations

(McCall, 1990).

T-TESTS

Rosenthal and Rosnow (1991, p.301) explain that the function of a *t*-test is to test the hypothesis that within the populations from which the researcher has drawn the study's sample, there exists "no relationship between the independent variables of membership in one of the groups and the dependent variable of score on the response variable". The *t*-test is a test of significance through the

comparison of the means of the two groups, and is comprised of two factors, namely the size of the effect and the size of the study (ibid.).

A number of *t*-tests were carried out with the gender variable as the independent variable in each. Each of the scales and subscales used in this study were used as dependent variables. Following previous inconclusive research findings regarding the influence of gender on the coping process (Kelly and Berthelsen, 1995; Byrne, 1991), these *t*-tests were conducted in order to ascertain whether the scores on the dependent variables differed significantly on the variable of gender.

The formula for the value of *t* is :

$$t = \frac{r}{\sqrt{1 - r^2}} \times \sqrt{df}$$

where : r = size of the effect of the independent variable

df = number of pairs of scores less two (N - 2)

(Rosenthal and Rosnow, 1991).

ANALYSIS OF VARIANCE (ANOVA)

Howell (1989, p.220) defines the analysis of variance as "a statistical technique for testing the differences in the means of several groups", and points out that the ANOVA has no restriction on the number of means it can compare.

A number of ANOVAs were conducted in the statistical analysis of this research, two of which designated the variable of the average number of pupils taught per class as the independent variable. The General Health Questionnaire and its subscales, and the Teacher Stress Inventory and its subscales were the dependent variables in these cases. The aim of these ANOVAs was to be able to identify possible differences in scores on the General Health Questionnaire and Teacher Stress Inventory (and their respective subscales), relative to the average number of pupils taught per class.

A third ANOVA which was conducted was aimed at testing Hypothesis 3, namely, that problem-focused coping is more effective at reducing levels of strain than are emotion-focused and escape-avoidance coping strategies. In this case, the Ways of Coping Questionnaire subscales (namely, the Problem-focused (WCQPROB), Emotion-focused (WCQEMOT), and Escape-avoidance (WCQEA) subscales) were the independent variables, and the General Health Questionnaire and its subscales acted as the dependent variables. In order to refine our analysis, and based on the minimum and

maximum scores obtainable on the aforementioned Ways of Coping subscales, the levels of use of each of these coping strategies was divided into low, medium and high use.

Another series of ANOVAs was conducted, which was aimed at ascertaining whether there exist any significant differences between the teachers of varying levels of teaching experience, on the variables of occupational stressors, perceived availability of social support, ways of coping, and physiological and psychological strain. Levels of experience were categorised into four categories, namely: low experience (1 month to 2 years experience); medium experience (2 years to 10 years); high experience (10 years to 20 years); and very highly experienced (20 years to 40 years) categories of teachers.

ANOVA is defined as :

$$F = \frac{eta^2}{1 - eta^2} \times \frac{df\ error}{df\ means}$$

where: $F = MS_{between} \div MS_{within}$

eta^2 = proportion of variance in the dependent variable attributable to group membership.

***df* error** = degrees of freedom

***df* means** = number of means being compared less 1 (k-1)

(Rosenthal and Rosnow, 1991).

SCHEFFÉ TEST/LEAST SIGNIFICANT DIFFERENCE TEST

These post-hoc tests were used after the analyses of variance, in order to investigate the possibility of finding other significant effects which were not evident from the results of the ANOVAs. Kerlinger (1986) maintains that post-hoc tests require that the overall F for the initial ANOVA be significant, and can therefore prove very valuable when attempting to gain further insight into the relationship between variables after a contrast has already been formulated (Rosenthal and Rosnow, 1991).

MODERATED MULTIPLE LINEAR REGRESSION

Howell (1989, p.123) explains that a regression is involved in the "prediction of one variable from knowledge of one or more other variables", and that the multiple linear regression refers to a regression in which the relationship between the dependent variables and a number of independent variables is linear in nature. The moderated multiple linear regression introduces a moderator variable into the equation. Through this process, it is tested whether the moderator variable has a significant effect on the relationship between the dependent and independent variables.

In order to test the hypotheses that the coping strategies which an individual utilises, and the social support which an individual perceives, have the potential to moderate the relationship between the individual's occupational stressors and the resultant strain, a series of moderated multiple linear regressions were conducted with the General Health Questionnaire and its subscales as the dependent variables, and the Teacher Stress Inventory and its subscales as the independent variables. The moderator variables consisted of the Ways of Coping Questionnaire and its subscales, the Perceived Social Support of Family and Friends Scales, and the Social Support of Supervisors and Colleagues Scales.

The moderated multiple linear regression is represented by the following equation:

$$Y = B_1\chi_1 + B_2Z_2 + B_3\chi_1Z_1 + a$$

where: Y = dependent variable
B = regression coefficient
χ_1 = independent variable
z_1 = moderator variable
$\chi_1 z_1$ = product of independent variable and moderator variable
a = y-intercept

(Cohen, 1978).

The aim of this chapter was, in part, to outline the data collection procedure used within this study, and to detail various aspects of the subjects used. The design of the study was described, as were the measuring instruments which were used. Finally, the statistical procedures to be used have been detailed, along with the aim of their use in this research. The following chapter will illustrate and detail in what ways these statistical procedures have been utilised, and the results of these analyses.

RESULTS

During the course of this chapter, the results of the statistical analyses which were carried out in this study will be detailed. These results will begin with the internal reliabilities which were calculated for each of the scales and their respective subscales. The mean scores on each of these scales and subscales will also be included. The results of the intercorrelations between various biographical variables and the scales and subscales which were used will be proceeded by the results of the *t*-tests conducted with gender as the independent variable. This will be followed by the results of a series of analyses of variance which were carried out, one of which investigates the validity of the third hypothesis (that is, that problem-focused coping strategies are more effective than emotion-focused and avoidance-focused coping strategies in reducing the potential effects of stressors in the teaching profession). The results of the series of moderated multiple linear regressions follow, which were aimed at exploring the validity of the first and second hypotheses (namely, that coping strategies - including problem-focused, emotion-focused and escape-avoidance strategies - have the potential to moderate the stressor-strain relationship in the teaching profession; and that perceived social support of family, friends, colleagues and supervisors each has the potential to moderate the stressor-strain relationship in the teaching profession).

INTERNAL RELIABILITY AND MEANS

TABLE 3: INTERNAL RELIABILITIES FOR THE TEACHER STRESS INVENTORY AND ITS SUBSCALES.

Scale	Cronbach's Alpha	N	Mean	Standard Deviation
Teacher Stress Inventory (TSITOT)	0.89	169	42.07	12.61
TSI Poor Colleague Relations (TSIPCR)	0.66	183	4.36	2.73
TSI Workload (TSIWL)	0.62	182	8.44	3.01
TSI Professional Recognition Needs (TSIPRN)	0.71	183	6.46	2.73
TSI Student Misbehaviour (TSISM)	0.87	183	15.26	5.05
TSI Time/Resource Difficulties (TSITRD)	0.59	184	7.68	3.16

Table 3 (above) reflects the Cronbach's coefficient alpha, which was used to calculate the internal reliabilities, of the Teacher Stress Inventory (TSITOT) and its subscales, namely Poor Colleague Relations (TSIPCR), Workload (TSIWL), Professional Recognition Needs (TSIPRN), Student Misbehaviour (TSISM), and Time/Resource Difficulties (TSITRD). The alpha coefficient of the entire Teacher Stress Inventory (TSITOT) (consisting of 20 items) was found to be .89, which is an acceptably high reliability. Cronbach's alpha coefficients ranged from .87 for the Student Misbehaviour

subscale (comprised of 6 items), through to .59 for the Time/Resource Difficulties subscale (consisting of 4 items). The reliability of the Professional Recognition Needs subscale (3 items) was calculated at .71, which is also an acceptably high coefficient. The reliability of the Poor Colleague Relations subscale was calculated at .66, which, according to Murphy and Davidshofer (1994), is acceptable for use in the Social Sciences. However, considering that this subscale was comprised of only three items, it might be appropriate to treat with caution any conclusions drawn from the use of this subscale. The Workload (4 items) and Time and Resource Difficulties subscales were calculated at .62 and .59 respectively, which were the lowest coefficient alphas reported. These latter alpha coefficients were low relative to the other three subscales and the total scale, and could possibly also justify a measure of caution when interpreting data derived from these two subscales.

Based on possible minimum and maximum scores on the overall scale and each of the subscales, mild, moderate and high levels of stress were calculated. As illustrated in the table (on page 25), the average overall levels of teacher stress are moderate (M=42.07, S.D.=12.61). Average levels of stress resulting from Poor Colleague Relations (TSIPCR) are mild to moderate (M=4.36, S.D.=2.73), and the extent of stress emanating from Workload (TSIWL) is shown to be moderate to high, with M=8.44 and S.D.=3.01. Similarly, Student Misbehaviour (TSISM) is another cause of moderate to high levels of stress (M=15.26, S.D.=5.05), and Professional Recognition Needs (TSIPRN) has been found to result in mild to moderate levels of stress in teachers (M=6.46, S.D.=2.73). Time and Resource Difficulties (TSITRD) are evidently responsible for moderate levels of stress on teaching respondents, with M=7.68 and S.D.=3.16. Misbehaviour of students, along with excessive workloads, appear to present the most stressful experiences for teacher respondents, with moderate to high levels of stress being reported as a result of such factors.

Table 4 (overleaf) reports the internal reliabilities for the four Social Support Scales used in this study. The Taylor and Bowers Social Support of Supervisors Scale (3 items) reported a Cronbach alpha coefficient of .95, while the internal reliability of the Taylor and Bowers' Social Support of Colleagues Scale (3 items) was calculated at .94. Procidano and Heller's Perceived Social Support of Family Scale (20 items) yielded a coefficient alpha of .69, with the Perceived Social Support of Friends Scale (20 items) reporting an internal reliability of .44. The latter scale garnered a poor response rate, yielding an insufficient internal reliability coefficient and comprising a total of only fifty complete cases (that is, containing no missing responses to the items of the scale). (The implications of this finding will be further discussed later in the following chapter). Considering that the latter two scales consisted of only twenty items each, the poor alpha coefficients reported for both would appear to suggest that findings derived from the use of these scales should be approached with a measure of caution.

TABLE 4: INTERNAL RELIABILITIES FOR SOCIAL SUPPORT SCALES.

Scale	Cronbach's Alpha	N	Mean	Standard Deviation
Social Support Scale (Supervisor)	0.95	185	11.88	2.99
Social Support Scale (Colleagues)	0.94	186	11.61	2.48
Social Support Scale (Family)	0.69	68	14.58	1.73
Social Support Scale (Friends)	.44	50	13.62	1.92

As seen in the table above, teacher respondents reported receiving high levels of social support from their supervisors (M=11.88, S.D.=2.99). Similarly, teachers appear to receive relatively high social support from colleagues with whom they work (M=11.61, S.D.=2.48). High levels of social support were also reported for both social support provided by family (M=14.58, S.D.=1.73), and social support offered by friends (M=13.62, S.D.=1.92).

TABLE 5: INTERNAL RELIABILITIES FOR THE GENERAL HEALTH QUESTIONNAIRE (GHQ) AND ITS SUBSCALES.

Scale	Cronbach's Alpha	N	Mean	Standard Deviation
GHQTOT	0.95	173	57.03	15.21
GHQSOM	0.88	183	15.73	4.96
GHQANX	0.91	182	16.24	5.37
GHQSOCDYS	0.88	186	15.06	3.71
GHQSDEP	0.92	186	9.84	4.35

As reported in the above table (Table 5), the Cronbach's alphas calculated for the total General Health Questionnaire (GHQTOT) and all of its four subscales (each consisting of 7 items) were satisfactorily high. The 28-item General Health Questionnaire reported a coefficient of .95, which was the highest of the five calculated, followed by the Severe Depression (GHQSDEP), and Anxiety and Insomnia (GHQANX) subscales, which reported coefficients of .92 and .91 respectively. The Somatic Symptoms (GHQSOM) and Social Dysfunction (GHQSOCDYS) subscales reported the lowest alpha coefficients for this group, namely .88 each. However, this coefficient is regarded as sufficiently reliable.

Table 5 also reports on the levels of psychological and physiological strain which the respondents reported experiencing. Through a consideration of the possible minimum and maximum severity scores, mild, moderate and high levels of strain were determined. The severity of overall strain reported (GHQTOT) was moderate (M=57.03, S.D.=15.21). Somatic symptoms (GHQSOM) amongst

the respondents were found to be moderate (M=15.73, S.D =4.96), and symptoms of social dysfunction (GHQSOCDYS) were similarly moderate (M=15.06, S.D.=3.70). Symptoms of anxiety and insomnia (GHQANX) were evidently moderate to high (M=16.24, S.D.=5.37), while reports of symptoms of severe depression (GHQSDEP) were relatively low (M=9.84, S.D=4.35).

TABLE 6: INTERNAL RELIABILITIES FOR THE WAYS OF COPING QUESTIONNAIRE (WCQ) AND ITS SUBSCALES.

Scale	Cronbach's Alpha	N	Mean	Standard Deviation
WCQTOT	0.91	129	89.81	23.26
WCQPROB	0.61	164	27.96	8.45
WCQEMOT	0.75	148	49.72	15.23
WCQEA	0.81	177	10.26	6.11

Table 6 (above) reflects the internal reliabilities calculated for the Ways of Coping Questionnaire, as well as the three subscales of Problem-Focused, Emotion-Focused and Escape-Avoidance coping. The Cronbach's alpha for the total Ways of Coping Questionnaire (WCQTOT) (66 items) was .91. which is a suitably high reliability coefficient. The Escape-Avoidance subscale (WCQEA) (10 items) followed with a coefficient of .81, with the Emotion-Focused subscale (WCQEMOT) (39 items) reporting an alpha of .75. The lowest Cronbach's alpha was reported for the Problem-Focused subscale (WCQPROB) (17 items), which was calculated to be .61. Considering that the Problem-Focused subscale consists of only seventeen items, it could be prudent to use caution when attempting to derive any conclusive findings through the use of this subscale.

The reported levels of the use of problem-focused coping techniques was moderate to high (M=27.96, S.D. 8.45), while the use of emotion-focused coping strategies was evidently used less frequently (M=49.72, S.D.=15.23). Escape-avoidance techniques were evidently least used (M=10.26, S.D.=6.11).

CORRELATIONS

Table 7 (overleaf) represents the intercorrelations between the biographical variables of age, tenure, time spent in the teaching profession, and the average number of pupils taught in a single class by each teacher, and all the scales and subscales which were used in this study. Only four significant correlations were found between these biographical variables and the Teacher Stress Inventory and its five subscales. The total Teacher Stress Inventory (TSITOT), the Professional Recognition Needs subscale (TSIPRN), and the Time and Resource Difficulties subscale (TSITRD) were all found to be significantly correlated with the number of pupils taught (r=.20, r=.23, and r=.25 respectively). The

Workload subscale (TSIWL) was found to be significantly negatively correlated with tenure of the teachers (r=-.15).

TABLE 7: INTERCORRELATIONS BETWEEN BIOGRAPHICAL VARIABLES AND THE SCALES.

Biographical Variables	Age	Tenure	Experience in teaching profession	No. of pupils
Scales				
TSITOT	-0.03	0.11	0.05	0.20*
TSIPRN	-0.11	0.07	0.01	0.23*
TSISM	0.01	0.08	0.03	0.12
TSIWL	0.05	-.15*	0.06	0.11
TSITRD	-0.13	-0.04	-0.03	0.25*
TSIPCR	0.02	0.08	0.07	0.01
SSSTOT	-0.05	0.02	-0.04	-0.03
SSCTOT	0.07	0.04	0.05	-0.03
SSFaTOT	-0.13	-0.16	0.15*	0.03
SSFrTOT	-.26*	-0.14	-.24*	0.11
GHQTOT	-0.13	0.06	-0.08	0.15*
GHQSOM	-0.12	-0.02	-0.08	0.13
GHQANX	-0.14	0.11	-0.09	0.17*
GHQSOCDYS	-0.04	0.08	-0.01	-0.01
GHQSDEP	-0.13	0.01	-0.11	0.18*
WCQTOT	0.01	-.16*	-0.04	0.14
WCQPROB	-0.01	-0.12	-0.03	0.13
WCQEMOT	0.11	-0.11	0.07	0.21
WCQEA	-0.11	-0.09	-0.13	0.16*

*Significant at .05 alpha level

Of the four social support scales, only three significant correlations were found with the selected biographical variables, and these involved the Social Support of Family and Perceived Social Support of Friends Scales. The Perceived Social Support of Friends Scale (SSFrTOT) was found to be significantly negatively correlated with both age (r=-.26) and the amount of time spent by the individual in the teaching profession (r=-.24). The Perceived Social Support of Family Scale, on the other hand, was found to be significantly *positively* correlated with the amount of time spent by the individual in the teaching profession (r=.15).

As shown in Table 7 above, three significant correlations were found between the General Health Questionnaire and its subscales, and the selected biographical variables. One of these correlations exists between the total General Health Questionnaire (GHQTOT) and the average number of pupils taught (r=.15). Similarly, the Anxiety and Insomnia subscale (GHQANX) was also found to be significantly correlated with the average number of pupils taught (r=.17), as was the Severe Depression subscale (GHQSDEP) (r=.18).

An intercorrelation was tested between the Ways of Coping Questionnaire and its subscales (Table 7 on page 29), and the selected biographical variables, and two intercorrelations were found. The total Ways of Coping Questionnaire (WCQTOT) was found to be significantly negatively correlated with the tenure of the teachers (r=-.16), while the Escape-Avoidance subscale (WCQEA) is significantly correlated with the average number of pupils taught in a class (r=.16).

T-TESTS

The results of the *t*-test run using gender as the independent variable and the four social support scales as the dependent variables are shown in **Table 8** below. As shown, none of the social support scales (namely, Social Support of Supervisor (SSSTOT), Social Support of Colleagues (SSCTOT), Perceived Social Support of Family (SSFaTOT), and Perceived Social Support of Friends (SSFrTOT)), have been found to be significantly different on the variable of gender.

TABLE 8: RESULTS OF *T*-TEST WITH GENDER AS THE INDEPENDENT VARIABLE AND THE 4 SOCIAL SUPPORT SCALES AS THE DEPENDENT VARIABLES.

Dependent Variables	Gender					
	Male		Female			
	N	Mean	N	Mean	*t*	p
SSSTOT	12	12.17	172	11.87	0.334	0.739
SSCTOT	12	10.92	175	11.64	-0.982	0.327
SSFATOT	12	12.25	174	12.32	-0.067	0.946
SSFRTOT	12	11.25	175	11.61	-0.394	0.694

*Significant at .05 alpha level

TABLE 9: RESULTS OF *T*-TEST WITH GENDER AS THE INDEPENDENT VARIABLE, AND THE GENERAL HEALTH QUESTIONNAIRE AND ITS SUBSCALES AS THE DEPENDENT VARIABLES.

Dependent Variables	Gender					
	Male		Female			
	N	Mean	N	Mean	*t*	p
GHQTOT	12	52.33	175	56.85	-1.028	0.305
GHQSOM	12	13.17	170	15.89	-1.849	0.066
GHQANX	12	14.67	169	16.28	-1.015	0.311
GHQSOCDYS	12	14.51	172	15.05	-0.499	0.618
GHQSDEP	12	10.01	173	9.73	0.212	0.832

*Significant at .05 alpha level

Similarly, the General Health Questionnaire (GHQTOT) and its subscales (namely, Somatic Symptoms (GHQSOM), Anxiety and Insomnia (GHQANX), Social Dysfunction (GHQSOCDYS), and Severe Depression (GHQSDEP)), were not found to be significantly different on the variable of gender. The results of this *t*-test can be seen above in **Table 9.**

Table 10 (below) exhibits the results of the *t*-test in which no significant differences were found between male and female respondents on the total Ways of Coping Questionnaire (WCQTOT), as well as on the Problem-Focused (WCQPROB), Emotion-Focused (WCQEMOT) and Escape-Avoidance subscales (WCQEA).

TABLE 10: RESULTS OF *T*-TEST WITH GENDER AS THE INDEPENDENT VARIABLE, AND THE WAYS OF COPING QUESTIONNAIRE AND ITS SUBSCALES AS THE DEPENDENT VARIABLES.

Dependent Variables	Gender					
	Male		Female			
	N	Mean	N	Mean	t	p
WCQTOT	12	92.08	175	86.58	0.705	0.482
WCQPROB	10	21.51	158	19.13	1.255	0.211
WCQEMOT	4	61.75	62	51.06	1.457	0.151
WCQEA	12	10.67	165	10.23	0.238	0.812

*Significant at .05 alpha level

TABLE 11: RESULTS OF *T*-TEST WITH GENDER AS THE INDEPENDENT VARIABLE AND THE TEACHER STRESS INVENTORY AND ITS SUBSCALES AS THE DEPENDENT VARIABLES.

Dependent Variables	Gender					
	Male		Female			
	N	Mean	N	Mean	t	p
TSITOT	12	39.08	175	42.14	-0.818	0.414
TSIPRN	12	6.75	170	6.44	0.381	0.703
TSISM	12	12.33	171	12.66	-0.251	0.803
TSIWL	11	7.82	170	8.44	-0.656	0.513
TSITRD	9	3.67	174	5.55	-2.319	0.021*
TSIPCR	12	4.17	170	4.37	-0.278	0.781

*Significant at .05 alpha level

From Table 11 (above), it is evident that the means of the Time and Resource Difficulties subscale (TSITRD) of the Teacher Stress Inventory were found to be significantly different between male and female respondents (p=.021). Female teaching respondents (M=5.55) reported experiencing higher levels of stress as a result of time and resource difficulties than did their male counterparts (M=3.67). No other significant differences were found between males and females on the variables of the total Teacher Stress Inventory (TSITOT) or its subscales (namely, Professional Recognition Needs (TSIPRN), Student Misbehaviour (TSISM), Workload (TSIWL), and Poor Colleague Relations (TSIPCR)).

ANALYSES OF VARIANCE

In order to investigate whether the average number of pupils taught per class by a teacher is significantly related to the levels of strain reported (as measured by the General Health Questionnaire

and its subscales), a one-way analysis of variance (ANOVA) was carried out. The results of this ANOVA are displayed in **Table 12** below.

TABLE 12: RESULTS OF ANOVA WITH AVERAGE NUMBER OF PUPILS TAUGHT AS THE INDEPENDENT VARIABLE, AND THE GENERAL HEALTH QUESTIONNAIRE AND ITS SUBSCALES AS THE DEPENDENT VARIABLES.

Dependent Variables	Means			df	F	p
	Low Pupils	Med. Pupils	High Pupils			
GHQTOT	51.25	56.59	60.13	2	2.426	0.091
GHQSOM	13.41	15.84	16.53	2	2.742	0.067
GHQANX	14.35	16.13	17.33	2	2.074	0.129
GHQSOCDYS	14.31	15.21	15.05	2	0.537	0.585
GHQSDEP	9.21	9.41	11.23	2	3.051	0.049*

*Significant at .05 alpha level

The average number of pupils taught per class was categorised into low (12-28), medium (29-36) and high (37-45) numbers of pupils. Only one significant effect was found, which was for the Severe Depression subscale (p=.049). As shown in the above table, significant differences were found between the means of the teachers teaching low, medium and high numbers of pupils, with those teaching the high numbers reporting higher levels (M=11.23) of strain relating to Severe Depression-type symptoms than those tutoring low or medium numbers of pupils. Respondents who reported teaching medium numbers of pupils (M=9.41) reported higher levels of Severe Depression-type strain than did those who taught a low number of pupils (M=9.21). No other significant differences were found between the average number of pupils taught and the levels of psychological strain reported.

TABLE 13: RESULTS OF ANOVA WITH AVERAGE NUMBER OF PUPILS TAUGHT AS THE INDEPENDENT VARIABLE, AND THE TEACHER STRESS INVENTORY AND ITS SUBSCALES AS THE DEPENDENT VARIABLES.

Dependent Variables	Means			df	F	p
	Low Pupils	Med. Pupils	High Pupils			
TSSTOT	39.91	41.18	44.93	2	1.791	0.169
TSSPRN	6.01	6.16	7.49	2	4.114	0.018*
TSSSM	14.11	15.06	16.22	2	1.415	0.246
TSSWL	8.11	8.38	8.58	2	0.165	0.848
TSSTRD	7.01	7.51	8.48	2	2.013	0.137
TSSPCR	4.66	4.31	4.36	2	0.166	0.848

*Significant at .05 alpha level

Table 13 reports the results of the ANOVA which was performed using the average number of pupils taught per class as the independent variable and the Teacher Stress Inventory and its subscales as the dependent variables. Significant differences were found between the means of respondents teaching low, medium and high numbers of pupils on the Professional Recognition Needs (TSIPRN) subscale of the Teacher Stress Inventory (p=.018). Again, teachers teaching the highest category of

number of pupils reported the highest levels of stress resulting from Professional Recognition Needs (M=7.49), followed by those respondents teaching a medium average number of pupils (M=6.16). This reported stress was significantly more than the reported stress emanating from Professional Recognition Needs of teachers tutoring low average numbers of pupils (M=6.1). No other significant differences were found between the average number of pupils taught and the Teacher Stress Inventory and its subscales.

Table 14 below displays the results of the ANOVA which was performed using the teaching experiences of the respondents as the independent variable and the General Health Questionnaire and its subscales as the dependent variables.

TABLE 14: RESULTS OF ANOVA WITH TEACHING EXPERIENCE AS THE INDEPENDENT VARIABLE, AND THE GENERAL HEALTH QUESTIONNAIRE AND ITS SUBSCALES AS THE DEPENDENT VARIABLES.

Dependent Variables	Means				df	F	p
	Low Experience	Medium Experience	High Experience	Very High Experience			
GHQTOT	62.133	55.576	56.169	56.595	3	0.821	0.484
GHQSOM	17.533	16.569	15.261	16.001	3	0.926	0.429
GHQANX	18.267	15.912	15.871	16.282	3	0.901	0.442
GHQSOCDYS	14.933	14.724	15.257	15.024	3	0.224	0.879
GHQSDEP	11.401	9.576	9.855	9.238	3	1.033	0.379

*Significant at .05 alpha level

Based on the number of years experience within the teaching profession, respondents were divided into low experience (1 month to 2 years), medium experience (2 years to 10 years), high experience (10 years to 20 years), and very high experience (20 years to 40 years) categories. Evident from the above table, no significant differences were found between the levels of overall strain experienced on the variable of teaching experience. Similarly non-significant results were obtained for the four dimensions of strain which were investigated.

Table 15 (overleaf) shows the results of the ANOVA which was conducted with the teaching experience of the respondents as the independent variable and the General Health Questionnaire and its subscales as the dependent variables.

TABLE 15: RESULTS OF ANOVA WITH TEACHING EXPERIENCE AS THE INDEPENDENT VARIABLE, AND THE TEACHER STRESS INVENTORY AND ITS SUBSCALES AS THE DEPENDENT VARIABLES.

Dependent Variables	Means				df	F	p
	Low Experience	Medium Experience	High Experience	Very High Experience			
TSITOT	42.067	41.322	41.381	43.738	3	0.381	0.767
TSIPRN	5.467	6.535	6.435	6.751	3	0.811	0.489
TSIPCR	4.201	4.439	4.029	4.875	3	0.689	0.559
TSISM	16.429	14.542	15.443	15.601	3	0.381	0.767
TSITRD	8.401	7.655	7.279	8.071	3	1.061	0.367
TSIWL	7.801	8.293	8.435	8.744	3	0.846	0.471

*Significant at .05 alpha level

Again, it is apparent that no significant differences were found between the teachers of varying years of experience on the variable of teacher stressors. An examination of the individual five dimensions of teacher stressors also failed to produce any significant results.

Teachers with varying years of teaching experience also do not significantly differ in the use of coping strategies (from **Table 16** below). No significant results were found for the overall use of coping strategies, or for the use of problem-focused, emotion-focused, or escape-avoidance ways of coping.

TABLE 16: RESULTS OF ANOVA WITH TEACHING EXPERIENCE AS THE INDEPENDENT VARIABLE, AND THE WAYS OF COPING QUESTIONNAIRE AND ITS SUBSCALES AS THE DEPENDENT VARIABLES.

Dependent Variables	Means				df	F	p
	Low Experience	Medium Experience	High Experience	Very High Experience			
WCQTOT	90.067	88.254	84.366	88.311	3	0.386	0.763
WCQPROB	28.231	28.981	26.617	28.568	3	0.991	0.399
WCQEMOT	52.538	48.957	47.642	53.029	3	0.633	0.477
WCQEA	12.067	10.845	9.485	10.001	3	1.048	0.374

*Significant at .05 alpha level

In order to test the validity of the third hypothesis (that is, that problem-focused coping strategies are more effective than emotion-focused and avoidance-focused coping strategies in reducing the potential effects of stressors in the teaching profession), the following series of ANOVAs were carried out. **Table 17** (overleaf) illustrates the results of the ANOVA with problem-focused ways of coping as the independent variable, and the General Health Questionnaire and its subscales as the dependent variables.

TABLE 17: RESULTS OF ANOVA WITH PROBLEM-FOCUSED WAYS OF COPING AS THE INDEPENDENT VARIABLE, AND THE GENERAL HEALTH QUESTIONNAIRE AND ITS SUBSCALES AS THE DEPENDENT VARIABLES.

Dependent Variables	Means			df	F	p
	Low Use	Medium Use	High Use			
GHQTOT	51.501	57.144	58.143	2	1.297	0.276
GHQSOM	13.235	15.915	16.923	2	2.943	0.056
GHQANX	14.278	16.217	16.921	2	1.343	0.264
GHQSOCDYS	15.167	15.207	15.074	2	0.013	0.987
GHQSDEP	8.722	9.871	9.464	2	0.657	0.519

*Significant at .05 alpha level

No significant differences were found between the use of varying levels of problem-focused coping and the resultant overall psychological and physiological strain experienced from the analysis of variance conducted. However, in order to further investigate this potential relationship, the post-hoc test of Least Significant Differences (LSD) was carried out, the results of which are displayed in Table 18 below.

TABLE 18: RESULTS OF LSD TEST WITH PROBLEM-FOCUSED WAYS OF COPING AS THE INDEPENDENT VARIABLE, AND THE GHQSOM SUBSCALE AS THE DEPENDENT VARIABLE.

	Low Use	Medium Use	High Use
Low Use	¬	¬	¬
Medium Use	0.039*	¬	¬
High Use	0.019*	0.362	¬

*Significant at .05 alpha level

Apparent from the above table, significant differences were found between low and medium use of problem-focused coping (p=.039), and between low and high use of problem-focused strategies (p=.019) on somatic symptoms of strain. Medium use (M=15.915) of problem-focused coping has been shown to result in higher levels of somatic symptoms of strain than low frequency of use (M=13.235). Similarly, high frequency of use (M=16.923) results in significantly greater somatic symptoms of strain than low frequency of use.

Table 19 (overleaf) exhibits the results of the ANOVA which used emotion-focused coping as the independent variable, and the General Health Questionnaire and its subscales as the dependent variables.

TABLE 19: RESULTS OF ANOVA WITH EMOTION-FOCUSED WAYS OF COPING AS THE INDEPENDENT VARIABLE, AND THE GENERAL HEALTH QUESTIONNAIRE AND ITS SUBSCALES AS THE DEPENDENT VARIABLES.

Dependent Variables	Means			df	F	p
	Low Use	Medium Use	High Use			
GHQTOT	53.415	56.777	65.001	2	1.501	0.227
GHQSOM	14.801	15.784	21.001	2	2.399	0.095
GHQANX	14.551	16.307	19.001	2	2.043	0.134
GHQSOCDYS	14.537	15.031	15.751	2	0.377	0.686
GHQSDEP	9.439	9.733	11.251	2	0.361	0.699

*Significant at .05 alpha level

Similar to problem-focused coping, emotion-focused ways of coping were found not to be significantly related to levels of overall strain or its dimensions. However, in order to further explore the potential relationship between emotion-focused ways of coping and strain, the post-hoc test of Least Significant Differences (LSD) was carried out. The results are displayed in Table 20 below.

TABLE 20: RESULTS OF LSD TEST WITH EMOTION-FOCUSED WAYS OF COPING AS THE INDEPENDENT VARIABLE, AND THE GHQSOM SUBSCALE AS THE DEPENDENT VARIABLE.

	Low Use	Medium Use	High Use
Low Use	-	-	-
Medium Use	0.289	-	-
High Use	0.037*	0.073	-

*Significant at .05 alpha level

In the case of the somatic symptoms subscale of the General Health Questionnaire, a significant difference was found between low frequency of use of emotion-focused coping and high frequency of use. Higher frequency (M=21.001) of use of emotion-focused strategies was found to result in higher levels of somatic symptoms of strain than low frequency of use (M=14.801).

Table 21 (overleaf) displays the results of the ANOVA carried out, with escape-avoidance coping as the independent variable and the General Health Questionnaire and its subscales as the dependent variables.

TABLE 21: RESULTS OF ANOVA WITH ESCAPE-AVOIDANCE WAYS OF COPING AS THE INDEPENDENT VARIABLE, AND THE GENERAL HEALTH QUESTIONNAIRE AND ITS SUBSCALES AS THE DEPENDENT VARIABLES.

Dependent Variables	Means			df	F	p
	Low Use	Medium Use	High Use			
GHQTOT	51.379	59.987	66.143	2	27.283	<.0001*
GHQSOM	14.033	16.986	22.286	2	16.753	<.0001*
GHQANX	14.396	17.233	25.143	2	19.828	<.0001*
GHQSOCDYS	14.065	15.662	20.571	2	14.431	<.0001*
GHQSDEP	8.851	10.176	17.143	2	15.734	<.0001*

*Significant at .05 alpha level

From Table 21, it is evident that escape-avoidance coping was found to be significantly related to the levels of overall strain, as well as to the four dimensions of strain (that is, somatic symptoms, anxiety/insomnia, social dysfunction and severe depression). As can be seen, the greater the frequency of use of escape-avoidance coping strategies, the greater the reported levels of all aspects of strain.

MODERATED MULTIPLE LINEAR REGRESSIONS

In order to investigate the validity of the hypotheses that coping strategies and social support have the potential to moderate the stressor-strain relationship in the teaching profession, a series of moderated multiple linear regressions were conducted. The results of these are illustrated in the following tables.

Table 22 (below) displays the results of the moderated multiple linear regression with the total General Health Questionnaire (GHQTOT) as the dependent variable, the total Teacher Stress Inventory as the Independent Variable.

TABLE 22: RESULTS OF MODERATED MULTIPLE LINEAR REGRESSIONS WITH THE GENERAL HEALTH QUESTIONNAIRE AS THE DEPENDENT VARIABLES, THE TEACHER STRESS INVENTORY AS THE INDEPENDENT VARIABLES, AND WCQTOT, SSSTOT, SSCTOT, SSFATOT AND SSFRTOT AS THE MODERATOR VARIABLES.

Dependent Variable	Independent Variable	Moderator Variable	*Beta*	*R-squared*	*t*	p
GHQTOT	TSITOT	WCQTOT	34.237	0.241	3.268	.001*
GHQTOT	TSITOT	SSSTOT	45.955	0.231	2.901	.003*
GHQTOT	TSITOT	SSCTOT	37.419	0.231	2.399	.017*
GHQTOT	TSITOT	SSFaTOT	42.001	0.292	0.311	.002*
GHQTOT	TSITOT	SSFrTOT	57.318	0.246	3.778	<.001*

*Significant at .05 alpha level

The Ways of Coping Questionnaire (WCQTOT), the Social Support of Supervisor Scale (SSSTOT), the Social Support of Colleagues Scale (SSCTOT), the Perceived Social Support of Family Scale (SSFaTOT) and the Perceived Social Support of Friends Scale (SSFrTOT) were tested as moderators of the relationship between the scores of the Teacher Stress Inventory and the General Health Questionnaire. Significant relationships were found between the stressor-strain relationship and all five of the moderator variables. Coping strategies (as measured by the total Ways of Coping Questionnaire), were shown to significantly affect the relationship between stress (as measured by the total Teacher Stress Inventory) and strain (as measured by the total General Health Questionnaire) (β=34.237, R^2 =.241, p=.001). Similarly, social support of supervisors and social support of colleagues have also been found to be significantly related to the relationship between stressor and strain (β=45.955, R^2=.231, p=.003; and β=37.419, R^2=.231, p=.017, respectively). Social support of family and friends have also been found to be moderators of the stressor-strain relationship (SSFaTOT: β=42.001, R^2=.292, p=.002; SSFrTOT: β=57.318, R^2=.025, p<.001).

From **Table 23** (overleaf), significant relationships were found between the strain (as measured by the General Health Questionnaire) and stress as a result of a need for professional recognition (as measured by the Teacher Stress Inventory's Professional Recognition Needs subscale), and the total Ways of Coping Questionnaire (WCQTOT) and its three subscales (WCQPROB, WCQEMOT and WCQEA).

The total Ways of Coping Questionnaire is quite significantly related to the relationship between the two variables (β=45.833, R^2=.105, p<.001), and the Problem-Focused subscale is similarly significant (β=47.923, R^2=.098, p<.001). While the Emotion-Focused subscale reports a p-value of <.001 (β=46.837, R^2=.074), the Escape-Avoidance subscale reports the most highly significant relationship with the Professional Recognition Needs-based stressor-strain relationship (β=43.611, R^2=.309, p<.001).

Similar results were obtained for the Poor Colleague Relations subscale of the Teacher Stress Inventory, using the same moderator variables. Using the total Ways of Coping Questionnaire as the moderator variable, a significant relationship was found between the Poor Colleague Relations-based stressor-strain relationship and the moderator variable (β=34.699, R^2=.118, p<.001). Significant relationships were also found for the Problem-Focused and Emotion-Focused moderator variables (β=37.493, R^2=.095, p<.001, and β=39.326, R^2=.105, p<.001, respectively). Again, the most significant relationship was found between the Poor Colleague Relations-based stressor-strain relationship and the Escape-Avoidance Coping moderator variable (β=39.854, R^2=.312, p<.001).

TABLE 23: RESULTS OF THE MODERATED MULTIPLE LINEAR REGRESSIONS WITH THE TOTAL GENERAL HEALTH QUESTIONNAIRE AS THE DEPENDENT VARIABLES, THE TEACHER STRESS INVENTORY SUBSCALES AS THE INDEPENDENT VARIABLES, AND THE WAYS OF COPING QUESTIONNAIRE AND ITS SUBSCALES AS THE MODERATOR VARIABLES.

Independent Variable	Moderator Variable	*Beta*	*R-Squared*	*t*	p
TSIPRN	WCQTOT	45.833	0.105	5.119	<.001*
TSIPRN	WCQPROB	47.923	0.098	5.243	<.001*
TSIPRN	WCQEMOT	46.837	0.074	4.949	<.001*
TSIPRN	WCQEA	43.611	0.309	9.739	<.001*
TSIPCR	WCQTOT	34.701	0.118	4.783	<.001*
TSIPCR	WCQPROB	37.493	0.095	4.628	<.001*
TSIPCR	WCQEMOT	39.326	0.105	4.851	<.001*
TSIPCR	WCQEA	39.854	0.312	11.147	<.001*
TSISM	WCQTOT	44.068	0.234	4.394	<.001*
TSISM	WCQPROB	34.669	0.204	3.249	0.001*
TSISM	WCQEMOT	48.279	0.256	4.601	<.001*
TSISM	WCQEA	38.256	0.365	7.544	<.001*
TSITRD	WCQTOT	28.994	0.109	3.211	0.001*
TSITRD	WCQPROB	27.705	0.128	2.914	0.004*
TSITRD	WCQEMOT	38.969	0.095	3.775	<.001*
TSITRD	WCQEA	33.481	0.311	6.964	<.001*
TSIWL	WCQTOT	37.435	0.208	3.928	<.001*
TSIWL	WCQPROB	35.857	0.186	3.706	<.001*
TSIWL	WCQEMOT	40.959	0.215	4.262	<.001*
TSIWL	WCQEA	40.078	0.371	9.131	<.001*

*Significant at .05 alpha level

From the above table, all of the four coping scales (the total Ways of Coping Questionnaire, and the Problem-Focused, Emotion-Focused, and Escape-Avoidance subscales) were found to be significantly related to the stressor-strain relationship as a result of student misbehaviour. The total Ways of Coping Questionnaire reported a p-value of <.001 (β=44.068, R^2=.234), while the Problem-Focused subscale related less significantly with a p-value of .001 (β=34.669, R^2=.204). The Emotion-Focused subscale was very significantly related to this stressor-strain relationship (β=48.279, R^2=.256, p<.001), and the Escape-Avoidance subscale was again found to be most significantly related of the scales (β=38.256, R^2=.365, p<.001).

The reported stress resulting from time and resource difficulties and the resultant strain appears to potentially be moderated by the coping strategies of the individuals (as shown in Table 23 on page 39). The total Ways of Coping Questionnaire was found to be significantly related to this stressor-strain relationship, with a reported p-value of .001 (β=28.995, R^2=.109). Both the Problem-Focused and Emotion-Focused subscales were also shown to be significantly related to this relationship

(β=27.705, R^2=.128, p=.004, and β=38.969, R^2=.095, and p<.001, respectively). The Escape-Avoidance coping strategy was yet again found to have the most significant relationship to the stressor-strain relationship (β=33.481, R^2=.311, p<.001).

As with the other types of stressors displayed in this table, the most significant relationship was found between the Escape-Avoidance way of coping (β=40.078, R^2=.371, p<.001),and the stressor-strain relationship (the stressor, in this case, is Workload). This was followed by the Emotion-Focused coping strategy (β=40.959, R^2=.215, p<.001), and then by the total Ways of Coping Questionnaire (β=37.435, R^2=.208, p<.001). The Problem-Focused way of coping was also found to be significantly related to this stressor-strain relationship (β=35.857, R^2=.186, p<.001).

Table 24 (overleaf) displays the results of the moderated multiple linear regression with the Somatic Symptoms subscale of the General Health Questionnaire as the dependent variable, the Teacher Stress Inventory and its subscales as the independent variables, and the Ways of Coping Questionnaire and its subscales (Problem-Focused, Emotion-Focused and Escape-Avoidance) as the moderator variables.

Significant relationships were found between the overall stressors (as measured by the total Teacher Stress Inventory) and somatic strain (as measured by the Somatic Symptoms subscale of the General Health Questionnaire), and the total Ways of Coping Questionnaire (β=7.720, R^2=.229, p=.031), as well as the Emotion-Focused and Escape-Avoidance subscales (β=11.141, R^2=.204, p=.004; and β=8.865, R^2=.306, p<.001, respectively). No significant relationships were found between these stressor-strain variables and the Problem-Focused component of the Ways of Coping Questionnaire (β=5.512, R^2=.203, p=.168).

TABLE 24: RESULTS OF THE MODERATED MULTIPLE LINEAR REGRESSIONS WITH THE GHQSOM SUBSCALE AS THE DEPENDENT VARIABLES, THE TEACHER STRESS INVENTORY AND ITS SUBSCALES AS THE INDEPENDENT VARIABLES, AND THE WAYS OF COPING QUESTIONNAIRE AND ITS SUBSCALES AS THE MODERATOR VARIABLES.

Independent Variable	Moderator Variable	*Beta*	*R-Squared*	*t*	p
TSITOT	WCQTOT	7.721	0.229	2.181	0.031*
TSITOT	WCQPROB	5.512	0.203	1.384	0.168
TSITOT	WCQEMOT	11.141	0.204	2.901	0.004*
TSITOT	WCQEA	8.865	0.306	4.428	<.001*
TSIPRN	WCQTOT	9.928	0.131	3.325	0.001*
TSIPRN	WCQPROB	11.237	0.109	3.549	<.001*
TSIPRN	WCQEMOT	11.585	0.063	3.539	<.001*
TSIPRN	WCQEA	11.589	0.228	7.294	<.001*
TSIPCR	WCQTOT	8.511	0.119	3.479	<.001*
TSIPCR	WCQPROB	8.579	0.088	3.043	0.002*
TSIPCR	WCQEMOT	11.076	0.055	3.818	<.001*
TSIPCR	WCQEA	10.986	0.221	8.658	<.001*
TSISM	WCQTOT	9.666	0.206	2.779	0.006*
TSISM	WCQPROB	6.334	0.178	1.715	0.088
TSISM	WCQEMOT	0.261	0.212	3.254	0.001*
TSISM	WCQEA	9.508	0.261	5.238	< 001*
TSITRD	WCQTOT	7.331	0.147	2.455	0.015*
TSITRD	WCQPROB	6.219	0.133	1.885	0.061
TSITRD	WCQEMOT	10.397	0.098	2.918	0.004*
TSITRD	WCQEA	9.173	0.259	5.475	<.001*
TSIWL	WCQTOT	9.134	0.205	2.804	0.005*
TSIWL	WCQPROB	7.454	0.169	2.167	0.031*
TSIWL	WCQEMOT	12.137	0.161	3.53	<.001*
TSIWL	WCQEA	10.089	0.274	5.678	<.001*

*Significant at .05 alpha level

The Professional Recognition Needs-based stressor (TSIPRN) and Somatic Symptoms-based strain (GHQSOM) relationship was found to be significantly related to the total Ways of Coping Questionnaire (WCQTOT), as well as to the three subscales of the Ways of Coping Questionnaire (that is, problem-focused coping (WCQPROB), emotion-focused coping (WCQEMOT) and escape-avoidance coping (WCQEA),. The total Ways of Coping Questionnaire reported a p-value of .001078 (β=9.928, R^2=.131), and WCQPROB reported a p-value of < 001 (β=11.237, R^2=.109). WCQEMOT reported a similarly significant p-level of <.001 (β=11.585, R^2=.063), while WCQEA reported the most significant relationship, with a p-value of <.001 (β=11.589, R^2=.228).

Significant relations were found between the relationship between the Poor Colleague Relations-based stressor and the Somatic Symptom-based strain, and the Ways of Coping Questionnaire and

its subscales. The Escape-Avoidance subscale was found to have the most significant relationship with the stressor-strain relationship (β=10.987, R^2=.220, p<.001), which was followed by the Emotion-Focused way of coping (β=11.076, R^2=.055, p<.001). The total Ways of Coping Questionnaire was also found to be significantly related to this stressor-strain relationship (β=8.511, R^2=.119, p<.001), while the Problem-Focused ways of coping subscale reported the significant p-value of <.001 (β=8.579, R^2=.088).

Table 24 (on page 41) also illustrates the results of the multiple moderated linear regression conducted with the Student Misbehaviour subscale of the Teacher Stress Inventory as the independent variable. The total Ways of Coping Questionnaire (β=9.666, R^2=.201, p=.006), the Emotion-Focused subscale (β=12.165, R^2=.212, p=.001), and the Escape-Avoidance subscale (β=9.508, R^2=.261, p<.001) were all found to be significantly related to this stressor-strain relationship. The Problem-Focused ways of coping component was not found to be significantly related to this stressor-strain relationship.

The results of the moderated multiple linear regressions conducted with the Time and Resource Difficulties subscale of the Teacher Stress Inventory as the independent variable were similar to that of the Student Misbehaviour component. Again, the Problem-Focused component (WCQPROB) of the Ways of Coping Questionnaire was not found to be significantly related to this stressor-strain relationship (β=6.219, R^2=.133, p=.061). However, the total Ways of Coping Questionnaire (WCQTOT) (β=7.331, R^2=.147, p=.015), the Emotion-Focused subscale (WCQEMOT) (β=10.397, R^2=.098, p=.004), and the Escape-Avoidance subscale (WCQEA) (β=9.173, R^2=.259, p<.001) were found to be significantly related to the relationship between the Time and Resource Difficulties-based stressor and the Somatic Symptoms-based strain.

The most significant relationship found between the moderator variables and the Workload-based stressor and Somatic-Symptoms-based strain relationship concerned the Escape-Avoidance component of the Ways of Coping Questionnaire (β=10.089, R^2=.274, p<.001), which was followed by the Emotion-Focused subscale (β=12.137, R^2=.161, p<.001). The Problem-Focused subscale was found to be the least significant (β=7.454, R^2=.169, p=.032), while the total Ways of Coping Questionnaire reported a p-value of .006 (β=9.134, R^2=.205).

TABLE 25: RESULTS OF THE MODERATED MULTIPLE LINEAR REGRESSIONS WITH GHQANX SUBSCALE AS THE DEPENDENT VARIABLES, TEACHER STRESS INVENTORY AND ITS SUBSCALES AS THE INDEPENDENT VARIABLES, AND WAYS OF COPING QUESTIONNAIRE AND ITS SUBSCALES AS THE MODERATOR VARIABLES.

Independent Variable	Moderator Variable	*Beta*	*R-Squared*	t	p
TSITOT	WCQTOT	4.274	0.223	1.109	0.269
TSITOT	WCQPROB	0.947	0.235	0.228	0.821
TSITOT	WCQEMOT	7.919	0.245	1.954	0.053
TSITOT	WCQEA	7.057	0.349	3.296	0.001*
TSIPRN	WCQTOT	10.059	0.097	3.053	0.002*
TSIPRN	WCQPROB	10.603	0.094	3.133	0.002*
TSIPRN	WCQEMOT	10.723	0.073	3.066	0.002*
TSIPRN	WCQEA	11.415	0.264	6.745	<.001*
TSIPCR	WCQTOT	7.885	0.115	3.009	0.003*
TSIPCR	WCQPROB	8.518	0.097	2.869	0.004*
TSIPCR	WCQEMOT	9.232	0.106	3.116	0.002*
TSIPCR	WCQEA	10.081	0.261	7.427	<.001*
TSISM	WCQTOT	7.874	0.214	2.143	0.033*
TSISM	WCQPROB	3.057	0.211	0.788	0.432
TSISM	WCQEMOT	11.547	0.244	2.964	0.003*
TSISM	WCQEA	7.719	0.318	4.037	<.001*
TSITRD	WCQTOT	4.701	0.095	1.411	0.159
TSITRD	WCQPROB	3.343	0.113	0.942	0.348
TSITRD	WCQEMOT	7.864	0.081	2.023	0.045*
TSITRD	WCQEA	7.921	0.245	4.211	<.001*
TSIWL	WCQTOT	6.318	0.205	1.841	0.067
TSIWL	WCQPROB	4.976	0.194	1.413	0.159
TSIWL	WCQEMOT	7.641	0.223	2.183	0.031*
TSIWL	WCQEA	9.631	0.333	5.198	<.001*

*Significant at .05 alpha level

From **Table 25** (above), it is evident that of the Ways of Coping Questionnaire and subscales, only Escape-Avoidance subscale was found to be significantly related to the relationship between the stressor (as measured by the total Teacher Stress Inventory (TSITOT)) and the Anxiety and Insomnia-based strain (as measured by the Anxiety/Insomnia subscale of the General Health Questionnaire (GHQANX)). The reported p-value was .001 (β=7.057, R^2=.349). As seen in the table, no other significant relationships were found with the total Ways of Coping Questionnaire, nor with the Problem-Focused or Emotion-Focused subscales.

Another moderated multiple linear regression was conducted with the Professional Recognition Needs subscale (TSIPRN) of the Teacher Stress Inventory as the independent variable. In this case, the total Ways of Coping Questionnaire, as well as the three subscale were all found to be significantly related to the Professional Recognition Needs-based stressor and the Anxiety/ Insomnia-based strain

relationship. The Escape-Avoidance component again was found to be the most significantly related (β=11.415, R^2=.264, p<.001), followed by the Problem-Focused subscale (β=10.303, R^2=.094, p=.002). The total Ways of Coping Questionnaire and the Emotion-Focused subscale were similarly significant (β=10.059, R^2=.097, p=.002; and β=10.723, R^2=.073, p=.002, respectively).

The Poor Colleague Relations-based stressor and Anxiety/Insomnia-based strain relationship was shown to be moderated by the total Ways of Coping variable, as well as its subscale variables (Problem-Focused, Emotion-Focused and Escape-Avoidance coping). Problem-Focused coping was found to be the least significantly related to this stressor strain relationship (β=8.579, R^2=.088, p=.002), which was followed by the total Ways of Coping Questionnaire (β=8.511, R^2=.119, p<.001). The Emotion-Focused coping variable reported a p-value of <.001 (β=11.076, R^2=.055), and the Escape-Avoidance coping variable was again found to be most significantly related to the stressor-strain relationship (β=10.987, R^2=.221, p<.001).

Moderated multiple linear regressions were also conducted with the Student Misbehaviour and Time and Resource Difficulties variables of the Teacher Stress Inventory as the independent variables, and similar results were found for both of these. In both cases, the total Ways of Coping variables were found to be significantly related to the respective stressor-strain relationships (β=9.666, R^2=.201, p=.006; and β=7.331, R^2=.147, p=.015; respectively). Similarly, Emotion-Focused coping and Escape-Avoidance coping were both found to be significantly related to the stressor-strain relationship with both Student Misbehaviour (β=12.165, R^2=.212, p=.001 (WCQEMOT), and β=9.506, R^2=.261, p<.001 (WCQEA)), and Time and Resource Difficulties (β=10.397., R^2=.098, p=.004 (WCQEMOT), and β=9.173, R^2=.259, p<.001 (WCQEA)). In the case of both of the independent variables, Problem-Focused coping was not found to be significantly related to the respective stressor-strain relationships.

The independent variable of Workload (a subscale of the Teacher Stress Inventory) was also used in a moderated multiple linear regression (the results of which are displayed in Table 25 on page 43). It was found that the total Ways of Coping Questionnaire is significantly related to this stressor-strain relationship between the Workload variable and the Anxiety/Insomnia variable (β=9.134, R^2=.205, p=.006), as is the Problem-Focused Way of Coping subscale (β=7.454, R^2=.169, p=.032). The Emotion-Focused way of coping was found to be very significantly related to this relationship (β=12.137, R^2=.161, p<.001), but was surpassed by the Escape-Avoidance moderator's significant relationship with these variables (β=10.089, R^2=.274, p<.001).

Table 26 (below) exhibits the results of the moderated multiple linear regression which was conducted using the Social Dysfunction subscale of the General Health Questionnaire (GHQSOCDYS) as the dependent variable, the Teacher Stress Inventory and its subscales (TSITOT, TSIPRN, TSIPCR, TSISM, TSITRD, TSIWL) as the independent variables, and the Ways of Coping Questionnaire and its subscales (WCQPROB, WCQEMOT, and WCQEA) as the moderator variables

TABLE 26: RESULTS OF THE MODERATED MULTIPLE LINEAR REGRESSIONS WITH GHQSOCDYS SUBSCALE AS THE DEPENDENT VARIABLES, TEACHER STRESS INVENTORY AND ITS SUBSCALES AD THE INDEPENDENT VARIABLES, AND WAYS OF COPING QUESTIONNAIRE AND ITS SUBSCALES AS THE MODERATOR VARIABLES.

Independent Variable	Moderator Variable	*Beta*	*R-squared*	*t*	p
TSITOT	WCQTOT	13.928	0.138	5.038	<.001*
TSITOT	WCQPROB	13.894	0.161	4.609	<.001*
TSITOT	WCQEMOT	14.411	0.169	5.149	<.001*
TSITOT	WCQEA	12.924	0.293	8.342	<.001*
TSIPRN	WCQTOT	16.611	0.057	7.232	<.001*
TSIPRN	WCQPROB	17.062	0.072	7.189	<.001*
TSIPRN	WCQEMOT	15.719	0.057	6.737	<.001*
TSIPRN	WCQEA	13.376	0.165	10.938	<.001*
TSIPCR	WCQTOT	13.077	0.029	9.68	<.001*
TSIPCR	WCQPROB	13.473	0.029	6.368	<.001*
TSIPCR	WCQEMOT	13.954	0.046	6.903	<.001*
TSIPCR	WCQEA	13.238	0.176	13.778	<.001*
TSISM	WCQTOT	15.194	0.153	5.829	<.001*
TSISM	WCQPROB	15.175	0.161	5.521	<.001*
TSISM	WCQEMOT	14.989	0.186	5.632	<.001*
TSISM	WCQEA	12.958	0.243	9.542	<.001*
TSITRD	WCQTOT	11.572	0.058	5.033	<.001*
TSITRD	WCQPROB	11.652	0.082	4.705	<.001*
TSITRD	WCQEMOT	13.337	0.059	5.211	<.001*
TSITRD	WCQEA	11.757	0.139	8.975	<.001*
TSIWL	WCQTOT	13.852	0.099	5.514	<.001*
TSIWL	WCQPROB	14.052	0.104	5.443	<.001*
TSIWL	WCQEMOT	13.705	0.121	5.528	<.001*
TSIWL	WCQEA	13.243	0.199	9.657	<.001*

*Significant at .05 alpha level

It was found that the relationship between the total Teacher Stress Inventory-based stressor and Social Dysfunction-based strain is significantly related to the total Ways of Coping Questionnaire and its three subscales. The total Ways of Coping Questionnaire and the Emotion-Focused way of coping reported similar p-values of <.001 each (β=13.928, R^2=.138, and β=14.411, R^2=.169, respectively). The most highly significant moderator variable was the Escape-Avoidance way of coping (β=12.924,

R^2=.239, p<.001), and the Problem-Focused moderator variable reported a p-level of <.001 (β=13.894, R^2=.161).

All four of the moderator variables (WCQTOT, WCQPROB, WCQEMOT, AND WCQEA) were found to be similarly significantly related to the relationship between the Professional Recognition Needs-based stressor and the Social Dysfunction-based strain (p<.001). Their reported *beta* and R^2 values were slightly different (WCQTOT: β=16.611, R^2=.057; WCQPROB: β=17.062, R^2=.072; WCQEMOT: β=15.719, R^2=.057, and WCQEA: β=13.376, R^2=.165).

As shown in Table 26 (page 45), the total Ways of Coping Questionnaire (β=13.077, R^2=.029), the Problem-Focused subscale (β=13.473, R^2=.029), the Emotion-Focused subscale (β=13.554, R^2=.046), and the Escape-Avoidance subscale were all found to be similarly significantly related (p<.001) to the relationship between the Poor Colleague-Relations-based stressor and the Social Dysfunction-based strain.

Similarly, these moderator variables were also found to be related to the relationship between the Student Misbehaviour-based stressor and the Social Dysfunction-related strain (p<.001). The total Ways of Coping Questionnaire reported a *beta* of 15.194 and an R^2 of .153, while the Problem-Focused way of coping reported similar values (β=15.175, R^2=.161). The Emotion-Focused moderator variable reported a *beta* value of 14.989 and an R^2 of .186, and the *beta* value of the Escape-Avoidance variable is 12.958 (R^2=.243).

The Workload-based stressor-strain relationship was also similarly related to the four moderator variables (p<.001). The total Ways of Coping Questionnaire reported a *beta* value of 13.852 (R^2=.099), which was similar to both the Emotion-Focused variable (β=13.705, R^2=.121) and the Escape-Avoidance variable (β=13.243, R^2=.199). The Problem-Focused moderator variable reported an R^2 of .104 (β=14.052).

Levels of significance varied amongst the four moderator variables with regards to the Time and Resource Difficulties-based stressor-strain relationship. The total Ways of Coping Questionnaire reported a p-value of <.001 (β=11.572, R^2=.058), with the Problem-Focused subscale reporting a p-level of <.001 (β=11.652, R^2=.082). The Escape-Avoidance variable reported the most significant relationship with the stressor-stain relationship (β=11.757, R^2=.159, p<.001), while the Emotion-Focused subscale reported a p-value of <.001 (β=13.337, R^2=.059).

In Table 27, the results are shown of the moderated multiple linear regressions conducted with the Severe Depression variable of the General Health Questionnaire as the dependent variable, the Teacher Stress Inventory and its subscales as the independent variables, and the Ways of Coping Questionnaire and its three subscales as the moderator variables.

TABLE 27: RESULTS OF THE MODERATED MULTIPLE LINEAR REGRESSIONS WITH GHQSDEP AS THE DEPENDENT VARIABLES, TEACHER STRESS INVENTORY AND ITS SUBSCALES AS THE INDEPENDENT VARIABLES, AND WAYS OF COPING QUESTIONNAIRE AND ITS SUBSCALES AS THE MODERATOR VARIABLES.

Independent Variable	Moderator Variable	*Beta*	*R-Squared*	*t*	p
TSITOT	WCQTOT	7.721	0.101	2.335	0.021*
TSITOT	WCQPROB	8.054	0.099	2.378	0.019*
TSITOT	WCQEMOT	7.183	0.097	2.148	0.033*
TSITOT	WCQEA	6.496	0.209	3.575	<.001*
TSIPRN	WCQTOT	9.504	0.043	3.555	<.001*
TSIPRN	WCQPROB	9.682	0.039	3.746	<.001*
TSIPRN	WCQEMOT	8.792	0.031	3.272	.001*
TSIPRN	WCQEA	7.415	0.172	5.345	<.001*
TSIPCR	WCQTOT	4.781	0.084	2.221	0.028*
TSIPCR	WCQPROB	6.145	0.089	2.709	0.007*
TSIPCR	WCQEMOT	4.369	0.094	1.912	0.058
TSIPCR	WCQEA	5.551	0.198	5.037	<.001*
TSISM	WCQTOT	10.709	0.105	3.455	<.001*
TSISM	WCQPROB	9.825	0.067	3.092	0.002*
TSISM	WCQEMOT	9.353	0.077	2.948	0.003*
TSISM	WCQEA	7.839	0.192	4.626	<.001*
TSITRD	WCQTOT	4.813	0.036	1.765	0.079
TSITRD	WCQPROB	5.911	0.054	2.161	0.032*
TSITRD	WCQEMOT	6.811	0.036	2.221	0.028*
TSITRD	WCQEA	4.811	0.164	3.184	0.001*
TSIWL	WCQTOT	5.891	0.097	2.894	0.004*
TSIWL	WCQPROB	9.672	0.084	3.391	<.001*
TSIWL	WCQEMOT	7.771	0.106	2.712	0.007*
TSIWL	WCQEA	7.211	0.198	4.629	<.001*

*Significant at .05 alpha level

From this table, it is evident that all four of the moderator variables were found to be significantly related to the stressor- strain relationship (as measured by the total Teacher Stress Inventory and the Severe Depression component of the General Health Questionnaire, respectively). The total Ways of Coping Questionnaire (WCQTOT) reported reasonably significant results (β=7.721, R^2=.099, p=.021), as did both the Emotion-Focused and Problem-Focused variables (β=7.183, R^2=.097, p=.033; and

β=8.054, R^2=.099, p=.019; respectively). The Escape-Avoidance moderator variable was shown to be the most significantly related to this stressor-strain relationship (β=6.496, R^2=.209, p<.001).

The moderated multiple linear regression with Professional Recognition Needs as the dependent variable showed similarly significant results to that of the total Teacher Stress Inventory. Again, the Escape-Avoidance component of the Ways of Coping Questionnaire was found to be the most significantly related to the stressor-strain relationship (β=7.415, R^2=.172, p<.001). This was followed by the Problem-Focused way of coping (β=9.682, R^2=.039, p<.001), and then by the total Ways of Coping Questionnaire (β=9.504, R^2=.043, p<.001). Still significant is the relationship between the Emotion-Focused Way of Coping and the Professional Recognition Needs-related stressor-strain relationship (β=8.792, R^2=.030, p=.001).

The relationship between the Poor Colleague Relations-based stressor and the Severe Depression-related strain is shown to be moderated by three of the suggested moderator variables, namely: the total Ways of Coping Questionnaire (β=4.781, R^2=.084, p=.028), and the Problem-Focused (β=6.145, R^2=.069, p=.008) and Escape-Avoidance ways of coping (β=5.551, R^2=.198, p<.001). The Emotion-Focused way of coping was not found to be significantly related to this stressor-strain relationship (p=.058).

As seen in Table 27 (page 47), all four of the moderator variables were found to be significantly related to the relationship between the Student Misbehaviour-based stressor and the Severe Depression-related strain. The Escape-Avoidance coping was found to be most significantly related (β=7.839, R^2=.192, p=.000003), followed by the total Ways of Coping Questionnaire (β=10.709, R^2=.105, p<.001), and then by the Problem-Focused way of coping (β=9.825, R^2=.067, p=.002). The Emotion-Focused moderator variable was also found to be significantly related to this stressor-strain relationship (β=9.353, R^2=.076, p=.003).

Of the four moderator variables suggested in the regressions conducted with Time and Resource Difficulties as the independent variables and Severe Depression as the dependent variables, only the total Ways of Coping Questionnaire was found not to be significantly related to the stressor-strain relationship. The Problem-Focused way of coping reported a p-value of .032 (β=5.911, R^2=.054), and the Emotion-Focused component reported a similar p-level of .028 (β=6.611, R^2=.036). The Escape-Avoidance way of coping was found to be most significantly related to the stressor-stain relationship (β=4.211, R^2=.164, p=.001).

Using Workload as the independent variables in the final regressions with Severe Depression as the dependent variables, all four of the moderator variables were found to be significantly related to the stressor-strain relationship. Again, the most significant result was obtained from the Escape-Avoidance way of coping (β=7.211, R^2=.198, p<.001), which was followed by the Problem-Focused component of the Ways of Coping Questionnaire (β=9.672, R^2=.084, p<.001). The Emotion-Focused way of coping was found to be the least significantly related (β=7.771, R^2=.106, p=.007), and the total Ways of Coping Questionnaire reported a p-value of .004 (β=8.591, R^2=.097).

From **Table 28** (below), all four of the social support scales (Social Support of Supervisors (SSSTOT), Social Support of Colleagues (SSCTOT), Social Support of Family (SSFaTOT) and Social Support of Friends (SSFrTOT)) were found to be significantly related to the relationship between the Professional Recognition Needs-based stressor and the strain (as measured by the total General Health Questionnaire).

TABLE 28: RESULTS OF THE MODERATED MULTIPLE LINEAR REGRESSIONS WITH THE TOTAL (GHQTOT) AS THE DEPENDENT VARIABLES, TEACHER STRESS INVENTORY SUBSCALES AS THE INDEPENDENT VARIABLES, AND THE SOCIAL SUPPORT SCALES AS THE MODERATOR VARIABLES.

Independent Variable	Moderator Variable	*Beta*	*R-squared*	*t*	p
TSIPRN	SSSTOT	64.295	0.088	4.115	<.001*
TSIPRN	SSCTOT	57.976	0.086	4.151	<.001*
TSIPRN	SSFaTOT	65.359	0.156	5.964	<.001*
TSIPRN	SSFrTOT	72.744	0.124	6.818	<.001*
TSIPCR	SSSTOT	51.983	0.086	4.719	<.001*
TSIPCR	SSCTOT	60.844	0.088	5.731	<.001*
TSIPCR	SSFaTOT	63.765	0.149	7.546	<.001*
TSIPCR	SSFrTOT	64.331	0.101	7.602	<.001*
TSISM	SSSTOT	38.264	0.211	3.029	0.002*
TSISM	SSCTOT	61.181	0.212	3.683	<.001*
TSISM	SSFaTOT	48.131	0.267	4.091	<.001*
TSISM	SSFrTOT	48.031	0.213	3.702	<.001*
TSITRD	SSSTOT	54.971	0.084	4.751	<.001*
TSITRD	SSCTOT	57.666	0.085	4.498	<.001*
TSITRD	SSFaTOT	62.291	0.163	5.968	<.001*
TSITRD	SSFrTOT	78.761	0.133	7.389	<.001*
TSIWL	SSSTOT	54.686	0.199	4.411	<.001*
TSIWL	SSCTOT	24.889	0.203	1.896	0.059
TSIWL	SSFaTOT	40.961	0.234	3.345	<.001*
TSIWL	SSFrTOT	42.376	0.203	2.912	0.004*

*Significant at .05 alpha level

Social Support of Supervisors (SSSTOT) reported a p-value of <.001 (β=64.295, R^2=.088), while Social Support of Colleagues (SSCTOT) was only slightly more significantly related to the stressor-strain relationship (β=57.976, R^2=.086, p<.001). The Social Support of Family and of Friends were found to both be very significant (β=65.359, R^2=.156, p<.001; and β=72.744, R^2=.124, p<.001; respectively).

Poor Colleague Relations was also used as an independent variable, and the results of these regressions are also shown in Table 28 (page 49). All of the social support moderator variables are shown to be significantly related to the stressor-strain relationship, with SSCTOT (β=60.844, R^2=.088), SSFaTOT (β=63.765, R^2=.149), and SSFrTOT (β=64.331, R^2=.101) all reporting p-values of <.001. The SSSTOT reported a slightly lower significance level of <.001 (β=51.983, R^2=.086).

Regressions were also conducted using Student Misbehaviour (TSISM) and Time and Resource Difficulties (TSITRD) as independent variables, and all of the moderator variables in both cases were found to be significantly related to the respective stressor-strain relationships. In the case of Student Misbehaviour as the independent variables, the most significant result was shown to be related to SSFaTOT (β=48.131, R^2=.267, p<.001), which was followed by SSFrTOT (β=48.031, R^2=.213, p<.001). The least significant of the results relates to social support of supervisors (SSSTOT) (β=38.264, R^2=.211, p=.002), and SSCTOT reported a p-value of <.001 (β=51.181, R^2=.212). In the case of Time and Resource Difficulties as the independent variables, the two most significant results related to SSFaTOT and SSFrTOT (β=62.291, R^2=.163, p<.001; and β=78.761, R^2=.133, p<.001; respectively). SSSTOT was also found to be very significantly related to the stressor-strain relationship (β=54.971, R^2=.084, p<.0014), and the social support of colleagues component reported a p-level of <.001 (β=57.666, R^2=.212).

The relationship between the Workload-related stressor and the strain (as measured by the General Health Questionnaire) was found to be moderated by three of the four of the social support variables. Social support of colleagues was not found to be significantly related to this stressor-strain relationship (β=24.889, R^2=.203, p=.059), while social support of supervisors reported the most significant p-value of <.001 (β=54.686, R^2=.199). This was followed by the SSFaTOT (β=40.961, R^2=.264, p=.001), and by the SSFrTOT (β=42.376, R^2=.203, p=.004).

Table 29 displays the results of the moderated multiple linear regressions which were conducted using the Somatic Symptoms (GHQSOM) subscale of the General Health Questionnaire as the dependent variables, the Teacher Stress Inventory and its subscales as the independent variables, and the four social support scales as the moderator variables.

TABLE 29: RESULTS OF THE MODERATED MULTIPLE LINEAR REGRESSIONS WITH THE GHQSOM SUBSCALE AS THE DEPENDENT VARIABLES, TEACHER STRESS INVENTORY AND ITS SUBSCALES AS THE INDEPENDENT VARIABLES, AND THE SOCIAL SUPPORT SUBSCALES AS THE MODERATOR VARIABLES.

Independent Variable	Moderator Variable	*Beta*	*R-squared*	*t*	p
TSITOT	SSSTOT	15.645	0.196	2.968	0.003*
TSITOT	SSCTOT	10.711	0.179	2.001	0.046*
TSITOT	SSFaTOT	9.986	0.219	2.113	0.036*
TSITOT	SSFrTOT	13.806	0.191	2.636	0.009*
TSIPRN	SSSTOT	18.411	0.079	3.535	<.001*
TSIPRN	SSCTOT	14.154	0.074	3.033	0.002*
TSIPRN	SSFaTOT	17.353	0.109	4.644	<.001*
TSIPRN	SSFrTOT	16.852	0.081	4.565	<.001*
TSIPCR	SSSTOT	16.099	0.055	4.345	<.001*
TSIPCR	SSCTOT	15.869	0.055	4.314	<.001*
TSIPCR	SSFaTOT	18.285	0.089	6.249	<.001*
TSIPCR	SSFrTOT	17.891	0.064	6.221	<.001*
TSISM	SSSTOT	12.388	0.156	2.825	0.005*
TSISM	SSCTOT	17.819	0.167	3.685	<.001*
TSISM	SSFaTOT	12.619	0.193	3.032	0.002*
TSISM	SSFrTOT	12.414	0.155	2.753	0.006*
TSITRD	SSSTOT	17.175	0.097	4.459	<.001*
TSITRD	SSCTOT	14.285	0.091	3.335	0.001*
TSITRD	SSFaTOT	14.941	0.131	4.178	<.001*
TSITRD	SSFrTOT	19.532	0.111	5.394	<.001*
TSIWL	SSSTOT	17.527	0.176	4.169	<.001*
TSIWL	SSCTOT	5.774	0.163	1.278	0.203
TSIWL	SSFaTOT	9.251	0.195	2.162	0.032*
TSIWL	SSFrTOT	9.728	0.157	1.942	0.054

*Significant at .05 alpha level

All four of the social support moderator variables were found to be significantly related to the relationship between the total Teacher Stress-related stressors and the Somatic Symptoms-based strain, the most significant of which was the social support of supervisors component (β=15.645, R^2=.196, p=.003). The SSFrTOT was also found to be significantly related (β=13.806, R^2=.191, p=.009), as well as the SSFaTOT (β=9.99, R^2=.219, p=.036). The social support of colleagues component was found to be the least significantly related of the four moderator variables (β=10.711, R^2=.179, p=.046).

Professional Recognition Needs was also used as an independent variable, and the results were similarly significant. The SSFaTOT was found to be the most significantly related to this stressor-strain relationship (β=17.353, R^2=.109, p<.001), which was followed by the SSFrTOT (β=16.852, R^2=.081, p<.001). The social support of supervisors reported a p-value of <.001 (β=18.411, R^2=.079), and the social support of colleagues was shown to have a p-level of .002 (β=14.154, R^2=.074).

All four of the social support moderator variables have been shown to be significantly related to the relationship between the Poor Colleague Relations-related stressor and the Somatic Symptoms-based strain variable. Social support of family and friends were again found to be the two most significant results (β=18.285, R^2=.089, p<.001; and β=17.078, R^2=.084, p<.001; respectively). Both the social support of supervisors and colleagues were also similarly significantly related (β=16.099, R^2=.0[illegible], p<.001; and β=15.869, R^2=.055, p<.001; respectively).

Similarly, all four of the social suppo[illegible] moderator variables were found to be significantly related to both the Student Misbehaviour-based stressor-strain relationships and the Time and Resource Difficulties-related stressor-strain relationships. In the case of the Student Misbehaviour-related relationship, SSCTOT was found to be the most significantly related (β=17.819, R^2=.167, p<.001), which was followed by SSFaTOT (β=12.619, R^2=.193, p=.002), and then the social support of supervisors component (β=12.388, R^2=.156, p=.005). The least significantly related social support moderator variable was shown to be SSFrTOT (β=12.414, R^2=.155, p=.006). In contrast, in the case of the Time and Resource Difficulties-based stressor-strain relationships, SSFrTOT was shown to be the most significantly related to this stressor-strain relationship (β=19.532, R^2=.111, p<.001). The social support of supervisors variable followed (β=17.175, R^2=.097, p<.001), and then SSFaTOT (β=14.941, R^2=.131, p<.001). The social support of colleagues was found to be the least significantly related to the stressor-stain relationship in this case (β=14.285, R^2=.091, p=.001).

Only two of the social support moderator variables were found to be significantly related to the Workload-based stressor-strain relationship, namely SSSTOT (β=17.578, R^2=.176, p<.001), and SSFaTOT (β=9.251, R^2=.195, p=.032). Both social support of colleagues and social support of friends did not yield significant results (p=.203, and p=.054, respectively).

Table 30 illustrates the results of the moderated multiple linear regressions which were conducted with the Anxiety/Insomnia subscale of the General Health Questionnaire as the dependent variables, the Teacher Stress Inventory and its subscales as the independent variables, and the social support scales used in this study as the moderator variables. The relationship between the total stressors (as measured by the Teacher Stress Inventory) and the Anxiety/Insomnia-related strain variable is potentially moderated by the social support of supervisors (β=12.082, R^2=.218, p=.036), social support of colleagues (β=12.312, R^2=.221, p=.039), and social support of friends (β=16.168, R^2=.231, p=.004). The social support of family variable was not found to be significantly related to this stressor-strain relationship (β=8.71, R^2=.263, p=.081).

TABLE 30: RESULTS OF THE MODERATED MULTIPLE LINEAR REGRESSIONS WITH GHQANX SUBSCALE AS THE DEPENDENT VARIABLES, THE TEACHER STRESS INVENTORY AND ITS SUBSCALES AS THE INDEPENDENT VARIABLES, AND THE SOCIAL SUPPORT SCALES AS THE MODERATOR VARIABLES.

Independent Variable	Moderator Variable	*Beta*	*R-squared*	*t*	p
TSITOT	SSSTOT	12.082	0.218	2.100	0.036*
TSITOT	SSCTOT	12.312	0.221	2.179	0.031*
TSITOT	SSFaTOT	8.714	0.263	1.754	0.081
TSITOT	SSFrTOT	16.168	0.231	2.934	0.003*
TSIPRN	SSSTOT	19.446	0.087	3.356	<.001*
TSIPRN	SSCTOT	11.123	0.036	2.674	0.008*
TSIPRN	SSFaTOT	13.016	0.137	3.973	<.001*
TSIPRN	SSFrTOT	20.019	0.116	5.188	<.001*
TSIPCR	SSSTOT	14.672	0.082	3.702	<.001*
TSIPCR	SSCTOT	19.019	0.091	4.985	<.001*
TSIPCR	SSFaTOT	17.49	0.133	5.711	<.001*
TSIPCR	SSFrTOT	19.597	0.105	6.456	<.001*
TSISM	SSSTOT	8.662	0.209	1.895	0.059
TSISM	SSCTOT	16.168	0.215	3.233	0.001*
TSISM	SSFaTOT	13.212	0.247	3.083	0.002*
TSISM	SSFrTOT	14.123	0.212	3.019	0.002*
TSITRD	SSSTOT	16.221	0.057	3.788	<.001*
TSITRD	SSCTOT	18.591	0.064	3.947	<.001*
TSITRD	SSFaTOT	15.497	0.121	3.993	<.001*
TSITRD	SSFrTOT	23.848	0.099	6.064	<.001*
TSIWL	SSSTOT	16.512	0.204	3.706	<.001*
TSIWL	SSCTOT	5.978	0.208	1.272	0.205
TSIWL	SSFaTOT	9.269	0.253	2.099	0.037*
TSIWL	SSFrTOT	10.993	0.201	2.093	0.037*

*Significant at .05 alpha level

On the other hand, the social support of family variable was found to be significantly related to the relationship between the Professional Recognition Needs-based stressor and the Anxiety/Insomnia-related strain (β=16.016, R^2=.137, p<.001), as was the social support of friends variable (β=20.019, R^2=.116, p<.001). The social support of supervisors and colleagues variables were also found to be significantly related to this stressor-strain relationship (β=19.446, R^2=.087, p<.001; and β=11.123, R^2=.036, p=.008; respectively).

All of the four social support moderator variables were shown to be significantly related to the relationship between the Poor Colleague Relations-based stressor and the Anxiety/Insomnia-related strain, the most significant of which are the SSFaTOT and SSFrTOT variables (β=17.491, R^2=.133, p<.001; and β=19.597, R^2=.105, p<.001; respectively). This was followed by the social support of colleagues variable (β=19.019, R^2=.091, p<.001), and then by the social support of supervisors variable (β=14.672, R^2=.082, p<.001). Similarly, all four of the social support moderators were found to be significantly related to the relationship between the Time and Resource Difficulties-related stressor and the Anxiety/Insomnia-based strain. Again, the most significant results were obtained from the social support of friends variable (β=23.848, R^2=.0999, p<.001), and was again followed by the social support of family variable (β=15.497, R^2=.129, p<.001). The SSSTOT and SSCTOT variables were similarly significant (β=16.221, R^2=.057, p<.001; and β=18.591, R^2=.064, p<.001; respectively).

All but one of the four social support moderator variables was found to be significantly related to the relationship between the Student Misbehaviour-based stressor and the Anxiety/Insomnia-related strain, namely the social support of supervisors variable (β=8.662, R^2=.209, p=.059). The social support of colleagues variable was shown to be most significantly related (β=16.168, R^2=.215, p=.001), followed by the SSFaTOT variable (β=13.216, R^2=.247, p=.002), and the SSFrTOT variable (β=14.123, R^2=.212, p=.002).

In the case of the relationship between the Workload-related stressor and the Anxiety/Insomnia-based strain, the social support of colleagues variable was not found to be significantly related (β=5.979, R^2=.208, p=.205). The remaining three social support moderator variables, namely SSSTOT, SSFaTOT and SSFrTOT were all shown to be significantly related to this stressor-strain relationship (β=16.512, R^2=.204, p<.001; β=9.269, R^2=.253, p=.037; and β=10.993, R^2=.201, p=.038; respectively).

The results of the moderated multiple linear regressions with the Social Dysfunction component of the General Health Questionnaire as the dependent variables, the Teacher Stress Inventory and its subscales as the independent variables, and the four social support scales as the moderator variables are all reflected in Table 31.

TABLE 31: RESULTS OF THE MODERATED MULTIPLE LINEAR REGRESSIONS WITH THE GHQSOCDYS SUBSCALE AS THE DEPENDENT VARIABLES, THE TEACHER STRESS INVENTORY AND ITS SUBSCALES AS THE INDEPENDENT VARIABLES, AND THE SOCIAL SUPPORT SCALES AS THE MODERATOR VARIABLES.

Independent Variable	Moderator Variable	*Beta*	*R-squared*	*t*	p
TSITOT	SSSTOT	11.313	0.135	2.771	0.006*
TSITOT	SSCTOT	9.987	0.132	2.438	0.016*
TSITOT	SSFaTOT	11.543	0.174	3.181	0.001*
TSITOT	SSFrTOT	16.255	0.149	4.076	<.001*
TSIPRN	SSSTOT	15.421	0.045	3.882	<.001*
TSIPRN	SSCTOT	13.109	0.042	3.682	<.001*
TSIPRN	SSFaTOT	17.069	0.091	5.977	<.001*
TSIPRN	SSFrTOT	19.658	0.084	7.251	<.001*
TSIPCR	SSSTOT	14.305	0.026	5.117	<.001*
TSIPCR	SSCTOT	16.682	0.032	6.193	<.001*
TSIPCR	SSFaTOT	17.132	0.069	7.849	<.001*
TSIPCR	SSFrTOT	16.085	0.043	7.482	<.001*
TSISM	SSSTOT	11.069	0.139	3.402	<.001*
TSISM	SSCTOT	10.731	0.138	2.998	0.003*
TSISM	SSFaTOT	11.087	0.177	3.605	<.001*
TSISM	SSFrTOT	14.364	0.146	4.309	<.001*
TSITRD	SSSTOT	12.189	0.057	4.189	<.001*
TSITRD	SSCTOT	15.654	0.059	4.869	<.001*
TSITRD	SSFaTOT	15.661	0.113	5.835	<.001*
TSITRD	SSFrTOT	19.298	0.094	7.167	<.001*
TSIWL	SSSTOT	12.727	0.101	3.914	<.001*
TSIWL	SSCTOT	9.641	0.101	2.801	0.005*
TSIWL	SSFaTOT	14.171	0.139	4.323	<.001*
TSIWL	SSFrTOT	15.476	0.111	4.079	<.001*

*Significant at .05 alpha level

The relationship between the total stressors (as measured by the Teacher Stress Inventory) and the Social Dysfunction-related strain is shown to be moderated by the four social support moderator variables. The social support of friends variable has been found to be the most significantly related (β=16.255, R^2=.149, p<.001), which was followed by SSFaTOT (β=11.543, R^2=.174, p=.001). The social support of supervisors component is also shown to be significantly related to this stressor-strain relationship (β=11.313, R^2=.135, p=.006), as is the social support of colleagues variable (β=9.997, R^2=.174, p=.016).

Similar results were obtained for the moderated multiple linear regressions which were conducted with the Professional Recognition Needs variable of the Teacher Stress Inventory as the independent variables. The social support of family and friends variables were found to be the most significantly related to this stressor-strain relationship (β=17.069, R^2=.091, p<.001; and β=19.658, R^2=.084, p<.001; respectively). However, the social support of supervisors and colleagues variables were also found to be highly significantly related (β=15.421, R^2=.045, p<.001; and β=13.109, R^2=.042, p<.001; respectively).

The four sets of moderated multiple linear regressions conducted with Poor Colleague Relations, Student Misbehaviour, Time and Resource Difficulties and Workload as the independent variables were all found to be significant across all four of the social support moderator variables. The regressions with Poor Colleague Relations as the independent variables yielded very significant results, with social support of colleagues, family and friends all reporting p-levels of <.001 (β=16.682, R^2=.032; β=17.132, R^2=.069; and β=16.085, R^2=.043; respectively). The social support of supervisors variable is also shown to be significantly related (β=14.305, R^2=.026, p<.001).

The relationship between the Student Misbehaviour-related stressor and the Social Dysfunction-based strain has been shown in Table 31 (page 55) to be moderated by social support of supervisors and colleagues (β=11.069, R^2=.139, p<.001; and β=10.731, R^2=.138, p<.001; respectively), as well as by the social support of family and friends variables (β=11.087, R^2=.177, p<.001; and β=14.364, R^2=.146, p<.001; respectively).

The two most significant results yielded by the regressions with Time and Resource Difficulties as the independent variables are for the social support of family and friends variables (β=15.551, R^2=.113, p<.001; and β=19.298, R^2=.094, p<.001; respectively). This is followed by the results for the social support of friends and family variables (β=15.654, R^2=.059, p<.001; and β=12.179, R^2=.057, p<.001; respectively).

The regressions involving Workload as the independent variables and Social Dysfunction as the dependent variables yielded significant results for all four of the social support moderator variables. Social support of family was found to be most significantly related (β=14.171, R^2=.139, p<.001), which was followed by social support of friends (β=15.476, R^2=.111, p<.001). The social support of supervisors and colleagues variables were also shown to be significantly related to this specific stressor-strain relationship (β=12.727, R^2=.100, p<.001; and β=9.641, R^2=.101, p=.005; respectively).

Table 32 represents the results of the moderated multiple linear regressions which were conducted with the Severe Depression variable of the General Health Questionnaire as the dependent variables, the Teacher Stress Inventory and its subscales as the independent variables, and the four social support scales as the moderator variables.

TABLE 32: RESULTS OF THE MODERATED MULTIPLE LINEAR REGRESSIONS WITH GHQSDEP SUBSCALE AS THE DEPENDENT VARIABLES, THE TEACHER STRESS INVENTORY AND ITS SUBSCALES AS THE INDEPENDENT VARIABLES, AND THE SOCIAL SUPPORT SCALES AS THE MODERATOR VARIABLES.

Independent Variable	Moderator Variable	*Beta*	*R-squared*	t	p
TSITOT	SSSTOT	7.167	0.091	1.464	0.145
TSITOT	SSCTOT	4.275	0.098	0.871	0.385
TSITOT	SSFaTOT	12.619	0.145	2.906	0.004*
TSITOT	SSFrTOT	12.602	0.109	2.618	0.009*
TSIPRN	SSSTOT	11.688	0.034	2.519	0.013*
TSIPRN	SSCTOT	11.123	0.034	2.674	0.008*
TSIPRN	SSFaTOT	15.763	0.084	4.751	<.001*
TSIPRN	SSFrTOT	16.607	0.076	5.216	<.001*
TSIPCR	SSSTOT	7.118	0.069	2.207	0.029*
TSIPCR	SSCTOT	8.725	0.069	2.788	0.005*
TSIPCR	SSFaTOT	11.735	0.116	4.652	<.001*
TSIPCR	SSFrTOT	11.783	0.084	4.709	<.001*
TSISM	SSSTOT	6.44	0.076	1.656	0.099
TSISM	SSCTOT	7.081	0.075	1.651	0.101
TSISM	SSFaTOT	10.805	0.117	2.933	0.003*
TSISM	SSFrTOT	7.623	0.076	1.891	0.061
TSITRD	SSSTOT	9.391	0.027	2.717	0.007*
TSITRD	SSCTOT	9.432	0.028	2.446	0.015*
TSITRD	SSFaTOT	17.294	0.102	5.418	<.001*
TSITRD	SSFrTOT	16.809	0.068	5.185	<.001*
TSIWL	SSSTOT	9.144	0.085	2.366	0.019*
TSIWL	SSCTOT	3.161	0.098	0.774	0.441
TSIWL	SSFaTOT	9.677	0.136	2.469	0.015*
TSIWL	SSFrTOT	6.157	0.096	1.787	0.076

*Significant at .05 alpha level

The first regressions shown relate to the use of the total Teacher Stress Inventory as the independent variables, and only the social support of family and friends variables were found to be significant (β=12.619, R^2=.145, p=.004, and β=12.602, R^2=.109, p=.009, respectively). The social support of supervisors and colleagues variables were found not to be significant, related to this stressor-strain relationship (β=7.167, R^2=.091, p=.145, and β=4.275, R^2=.098, p=.385, respectively).

When the Professional Recognition Needs, Poor Colleague Relations and Time and Resource Difficulties variables were used as independent variables in the regressions, all four of the social support moderator variables were found to be significantly related to the respective relationships. The SSFrTOT and SSFaTOT variables were found to be most significantly related to the relationship between the Professional Recognition Needs-based stressor and the Severe Depression-related strain variable (β=16.607, R^2=.076, p<.001; and β=15.763, R^2=.094, p<.0014; respectively). The social support of colleagues variable followed this (β=11.123, R^2=.036, p=.008), and then the social support of supervisors variable (β=11.688, R^2=.034, p=.013). Similarly, the most significant results obtained from using the Poor Colleague Relations-based stressor as the independent variable were for the SSFrTOT and SSFaTOT variables (β=11.783, R^2=.084, p<.001; and β=11.735, R^2=.116, p<.001; respectively). These results were again followed by the social support of colleagues component (β=8.725, R^2=.069, p=.006), followed by the social support of supervisors variable (β=7.118, R^2=.069, p=.029).

The results of the regressions with Time and Resource Difficulties as the independent variables followed a similar pattern to the two aforementioned variables. The social support of family and friends variables yielded the most significant results (β=17.294, R^2=.102, p<.001; and β=16.809, R^2=.068, p<.001; respectively). The social support of supervisors variable reported a p-value of .007 (β=9.391, R^2=.028), and the social support of supervisors component was also found to be significantly related to this stressor-strain relationship (β=9.432, R^2=.028, p=.015).

Of the results of the Student Misbehaviour-based regressions, only one of the moderator variables was found to be significant, namely the social support of family variable (β=10.805, R^2=.117, p=.003). The social support of supervisors, social support of colleagues and social support of friends variables were all shown not to be significantly related to this stressor-strain relationship (β=6.444, R^2=.076, p=.099; β=7.081, R^2=.075, p=.101; and β=7.623, R^2=.076, p=.061; respectively). Similarly, of the four social support variables in the Workload-based regressions, only two were found to be significant, namely social support of supervisors and social support of family (β=9.144, R^2=.085, p=.019; and β=9.677, R^2=.136, p=.015; respectively). Social support of colleagues and friends were not found to be significantly related to this stressor-strain relationship (β=3.161, R^2=.098, p=.441; and β=8.157, R^2=.096, p=.076; respectively).

Conclusion

Within this chapter, the results of all the statistical procedures conducted within this study were detailed. These included: Cronbach's alpha coefficients; Pearson's product-moment correlation coefficients; *t*-tests; analyses of variance; Scheffé and Least Significant Differences post-hoc tests; and moderated multiple linear regressions. The implications of these results will be discussed in relation to the hypotheses which were outlined in the Methodology chapter. These implications are discussed in the chapter that follows.

DISCUSSION

The aim of this research was to begin to further investigate the potential effects of both coping strategies and the coping resource of social support on the psychological and physiological strain of teachers. This was in order to attempt to ascertain whether coping strategies and social support (and/or types of either) have the potential to mitigate the effects of strain as a result of perceived stressors. In addition, this study aimed to gauge which are the most effective types of coping strategies to be used in coping with some of the more 'typical' stressors of teachers. The hypotheses of this study were outlined following the review of the literature (page 15), and the results of the research will be discussed with reference to these hypotheses and the relevant literature. General findings which were not necessarily included within the hypotheses, but which are of interest, will also be discussed. Limitations of this research will follow the theoretical and practical implications of the research findings. Suggested future directions of research in this area will be mentioned.

HYPOTHESIS 1: COPING STRATEGIES HAVE THE POTENTIAL TO MODERATE THE STRESSOR-STRAIN RELATIONSHIP IN THE TEACHING PROFESSION.

As was hypothesised, the use of general coping strategies was found to significantly moderate the relationship between the potential general stressors experienced and the resultant general psychological and physiological strain suffered. The use of general coping strategies was, indeed, found to moderate all but four of the relationships which were investigated (see Tables 22 (page 37), 23 (page 39), 24 (page 41), 25 (page 43), 26 (page 45), and 27 (page 47)). (These investigated relationships comprised the six categories of teacher stressors, namely, general stressors, and stressors emanating from professional recognition needs, poor colleague relations, student misbehaviour, time and resource difficulties, and workload. The strain components of the relationships were comprised of general psychological and physiological strain, somatic symptoms, anxiety and insomnia symptoms, symptoms of social dysfunction, and symptoms of severe depression). The cases in which the use of general coping strategies failed to moderate the stressor-strain relationships included the relationships between general teacher stressors, time and resource difficulties-based stressors, and the workload-based stressors, and the strain component of anxiety and insomnia symptoms. It was also found that the use of general coping strategies failed to alleviate the symptoms of severe depression experienced as a result of the stressor of time and resource difficulties.

The significant results are in accordance with the literature (for example, Zeidner and Endler, 1996; Higgins and Endler, 1995; Decker and Borgen, 1993; Koeske, Kirk and Koeske, 1993; Lazarus,

1990), which suggests that the employment of coping strategies by individuals has the potential to change the levels of strain perceived by the individual, through the process of feedback. Lazarus' (1990, p.11) theory of reciprocal determinism (or recursiveness) suggests that each variable within the stress process has the potential to have an effect on any other variables within the process, and these significant results of the study appear to support this hypothesis. However, the non-significant findings, in which the use of general coping strategies was not found to alleviate the relevant symptoms of strain, would appear to contradict the theory of the potential effects of coping within the transactional theory of stress. These findings could indicate that the use of more specific types of coping behaviours would be more effective in coping with the effects of these specific stressors, in relation to these types of resultant physiological and psychological strain. These findings could then possibly corroborate the suggestion of Cooper (1995) and others, who have proposed that a particular coping strategy could prove very effective in one situation, but highly ineffective and inappropriate for another situation.

HYPOTHESIS 1A: *PROBLEM-FOCUSED* COPING STRATEGIES HAVE THE POTENTIAL TO MODERATE THE STRESSOR-STRAIN RELATIONSHIP IN THE TEACHING PROFESSION.

Since coping in general is purported to have the potential to moderate the relevant stressor-strain relationships, by extension, it can be expected that problem-focused, emotion-focused, and escape-avoidance ways of coping will also have the potential to moderate such relationships. It has been posited that problem-focused coping strategies are more effective for use in moderating the relationships between work-related stressors and general physiological and psychological strain (Folkman and Lazarus, 1980, in Billings and Moos, 1981). A number of authors (for example, Cockburn, 1996; Higgins and Endler, 1995; Lehmicke and Hicks, 1995; Salo, 1995; McCrae and Costa, 1986, in Bjork and Cohen, 1993; Lazarus, 1993; Okebukola and Jegede, 1992) have suggested that problem-focused ways of coping have been found to be more effective than emotion-focused and avoidance strategies in coping with teacher stress in particular.

Most of the stressor-strain relationships which were investigated were found to be significantly moderated by the problem-focused way of coping (see Tables 23 (page 39), 24 (page 41), 25 (page 43), 26 (page 45), and 27 (page 47)). However, seven of the relationships investigated failed to render significant results. Four of these relationships involved the relationships between anxiety and insomnia symptoms of strain, and the general teacher stressors, and stressors emanating from student misbehaviour, time and resource difficulties and excessive workloads. The remaining three relationships referred to the relationships between somatic symptoms of strain, and general teacher

stressors, and the stressors of student misbehaviour and time and resource difficulties. The significant findings appear to reinforce the theories that problem-focused coping strategies are effective in moderating the work-related stressor-strain relationships in specific incidences.

Contrary to these, though, the non-significant findings seem to contradict these suggestions. However, these non-significant findings do correspond to the theories which have been posited that coping strategies which have been found to be effective in moderating the stressor-strain relationship in one circumstance, can be found to be wholly ineffective in other situations (Cooper, 1995). These results therefore suggest that problem-focused strategies are less effective than others in attempts to mitigate the strain symptoms of anxiety and insomnia caused by general stressors, and those generated by student misbehaviour, time and resource difficulties, and excessive workloads. Similarly, it is possible that other ways of coping would prove more effective when coping with general teacher stressors, and stressors caused by student misbehaviour and time and resource difficulties, in an attempt to moderate their effects on somatic symptoms of strain. However, considering that the experience of strain has been viewed to be as a result of "the combined effects of the teacher and school characteristics, potential stressors in the school environment, actual stressors, overall perceived work-related stressors, stress reactions/symptoms and health status, personality characteristics and coping mechanisms, as well as non-work related stressors" (Brenner and Bertell, 1984, in Boyle, Borg, Falzon and Baglioni, Jr, 1995, p.51), it is possible that other confounding variables have resulted in these non-significant findings. For example, the effective use of problem-focused coping strategies could be mitigated by personality characteristics, or characteristics of the school, and thereby render such coping strategies ineffectual for this situation.

HYPOTHESIS 1B: *EMOTION-FOCUSED* COPING STRATEGIES HAVE THE POTENTIAL TO MODERATE THE STRESSOR-STRAIN RELATIONSHIP IN THE TEACHING PROFESSION.

The results of the regressions involving emotion-focused ways of coping, and the relevant types of stressors and strains, were largely in accordance with the literature (see Tables 23 (page 39), 24 (page 41), 25 (page 43), 26 (page 45), and 27 (page 47)). All but two of the results concurred with the view that coping strategies are able to mitigate the effects of potential strain which occur as a result of the perception of stressors. The two results which failed to conform to this hypothesis involved general teacher stressors and the symptoms of anxiety and insomnia, and the stressor originating as a result of poor relations with colleagues and the strain symptoms of severe depression. These results would suggest that emotion-focused coping is an inadequate method of coping with anxiety and insomnia symptoms as a result of general teacher stressors, and should rather be replaced with another

strategy or group of strategies. From these findings, it would similarly appear that, with respect to the stressor of poor colleague relations, the symptoms of severe depression cannot be mitigated by the employment of emotion-focused coping. In this case, it would seem appropriate to employ other ways of coping as a substitute for emotion-focused coping. Therefore, the significant findings regarding emotion-focused coping strategies contradict a number of findings (for example, Cockburn, 1996; Higgins and Endler, 1995; Salo, 1995; Folkman and Lazarus, 1980, in Billings and Moos, 1981; Pearlin and Schooler, 1978), which have suggested that work-related stressors are more effectively coped with through the employment of problem-focused strategies. However, these findings could provide further support for the view that specific situations demand specific relevant ways of coping, rather than employing a particular strategy to cope with all types of work-related stressors. Similarly to problem-focused coping, though, the potentially effective use of emotion-focused coping could have been moderated by other specific characteristics of the situations.

HYPOTHESIS 1C: *ESCAPE-AVOIDANCE* COPING STRATEGIES HAVE THE POTENTIAL TO MODERATE THE STRESSOR-STRAIN RELATIONSHIP IN THE TEACHING PROFESSION.

Escape-avoidance coping strategies have been found to moderate all of the investigated relationships between teacher stressors and psychological and physiological strains (see Tables 23 (page 39), 24 (page 41), 25 (page 43), 26 (page 45), and 27 (page 47)). Invariably, the escape-avoidance way of coping was also found to moderate these relationships most significantly. However, the moderating relationship was found to be a positive one, in which the increased use of escape-avoidance strategies resulted in increases in the levels of strain experienced. This could suggest that escape-avoidance strategies are most deleterious to the well-being of individuals in terms of the effects of all potential aspects of strain, resulting from all investigated aspects of teacher stressors. These findings appear to dispute the suggestions that escape-avoidance ways of coping have the potential to provide a protective function in situations in which there is perceived to exist little opportunity for control or feedback (Cohen, Evans, Stokols and Krantz, 1986, in Koeske, Kirk and Koeske, 1993). Alternatively, the teacher respondents might not have viewed their occupational environment as one which is intractable, and offering little feedback. If this was the case, then these findings would not necessarily dispute the proposals regarding the potential efficacy of escape-avoidance strategies.

CONCLUSION

Although the relative efficacy of the three ways of coping (that is, problem-focused, emotion-focused and avoidance-focused coping) will be fully examined in investigating the third hypothesis, these

results appear to suggest that escape-avoidance coping strategies could prove to be the least effective (and, indeed, most harmful) of the three strategies in terms of coping with the teacher stressors examined. Rather, emotion-focused coping would appear to present the most promising results, followed by problem-focused ways of coping. However, the majority of these results appear to concur with the general assertions that the use of coping strategies has the potential to moderate the relationship between the stressor and the resultant strain (in both negative and positive directions). It would appear, though, that the existence of these moderating relationships seem to be more situation-specific than was hypothesised.

HYPOTHESIS 2: SOCIAL SUPPORT OF FAMILY, FRIENDS, SUPERVISORS AND COLLEAGUES HAS THE POTENTIAL TO MODERATE THE STRESSOR-STRAIN RELATIONSHIP IN THE TEACHING PROFESSION.

Generally, as was hypothesised, the perceived presence of social support was found to be a significant moderator of the majority of stressor-strain relationships which were investigated (see Table 22 on page 37). However, due to the use of four separate scales which have the ability to measure the perceived existence of the four investigated types of social support (namely, perceived social support of family, friends, supervisors and colleagues), the potential of social support to moderate the stressor-strain relationships within teaching will be better understood in terms of the discussions of the four hypotheses which follow.

HYPOTHESIS 2A: SOCIAL SUPPORT OF *FAMILY* HAS THE POTENTIAL TO MODERATE THE STRESSOR-STRAIN RELATIONSHIP IN THE TEACHING PROFESSION.

Only one investigated stressor-strain relationship was found not to be moderated by the perceived social support of family, and this involved the anxiety/insomnia symptoms of strain and general teacher stressors (see Tables 28 (page 49), 29 (page 51), 30 (page 53), 31 (page 55) and 32 (page 57)). The significant results involving this moderator variable suggest that the support of family is a very significant coping resource, which can be used across a range of occupational stressors of teachers, as well as for the alleviation of a variety of potential symptoms of strain. The inability of this type of social support to moderate the relationship between general teacher stressors and symptoms of anxiety and insomnia could possibly indicate an area in which perceived social support of family is excluded as an effective coping resource. Alternatively, these findings could be as a result of the poor response rate which the Perceived Social Support of Family Scale received. Out of a total of 188 completed questionnaires, a total of 68 complete sets of responses were received (36%). Although

the Cronbach's alpha coefficient for this scale was sufficiently high for the purposes of this study (α=.69), the poor response rate raises questions about the effective use of this scale.

HYPOTHESIS 2B: SOCIAL SUPPORT OF *FRIENDS* HAS THE POTENTIAL TO MODERATE THE STRESSOR-STRAIN RELATIONSHIP IN THE TEACHING PROFESSION.

Similar doubts are raised regarding the use of the Perceived Social Support of Friends Scale. This scale also received a very low response rate (50 complete sets of responses, or 27%), thereby presenting concerns for the effective use of the scale. This scale yielded a Cronbach's alpha coefficient of only .44, which is not considered a sufficiently reliable scale for the purposes of such a study. From the results of the moderated multiple linear regressions, only three of the investigated stressor-strain relationships were found not to be moderated by this form of social support. (These involved the stressors emanating from excessive workloads and resulting in somatic and severe depression symptoms of strain, as well as stressors originating from student misbehaviour and resulting in severe depression symptoms of strain). The significant results appear to concur with the hypothesis that social support has the potential to moderate stressor-strain relationships. However, the poor reliability coefficient of the scale renders all results as highly questionable and inconclusive.

HYPOTHESIS 2C: SOCIAL SUPPORT OF *SUPERVISORS* HAS THE POTENTIAL TO MODERATE THE STRESSOR-STRAIN RELATIONSHIP IN THE TEACHING PROFESSION.

In the case of perceived social support of supervisors, only three of the stressor-strain relationships examined were found not to be significantly moderated by this type of social support (see Tables 28 (page 49), 29 (page 51), 30 (page 53), 31 (page 55) and 32 (page 57)). These relationships involved anxiety and insomnia symptoms of strain and student misbehaviour-based stressors, and severe depression symptoms and general teacher stressors and stressors based on student misbehaviour. It would appear that supervisor support is not as effective in mitigating the potential effects of stressors relating to student misbehaviour, with particular reference to anxiety/insomnia and severe depression symptoms. Similarly, it seems that the potential effects of general stressors on severe depression symptoms of strain are also not significantly affected by supervisory support. This could suggest that the effects of supervisory support are not necessarily generalisable to all situations, but are rather more specific to particular types of stressors and strains. This could also indicate a reluctance on the part of teachers to seek out social support of supervisors for these types of stressors, which could be linked to the suggestion that many teachers harbour a reluctance to admit difficulties to colleagues (Kyriacou, 1987, in Seidman and Zager, 1992).

HYPOTHESIS 2D: SOCIAL SUPPORT OF *COLLEAGUES* HAS THE POTENTIAL TO MODERATE THE STRESSOR-STRAIN RELATIONSHIP IN THE TEACHING PROFESSION.

An outstanding feature of the results of the regressions involving perceived social support of colleagues was that in all but one case (symptoms of social dysfunction), this type of perceived social support failed to moderate the relationship between the workload-related stressors and symptoms of strain (see Tables 28 (page 49), 29 (page 51), 30 (page 53), 31 (page 55) and 32 (page 57)). This could possibly have occurred as a result of the reluctance of teachers to "admit to colleagues that one is having difficulties", particularly if it seems that colleagues are not experiencing such difficulties (Kyriacou, 1987, in Seidman and Zager, 1992). For this reason, teachers could fail to fully utilise the support of their colleagues, which could account for these findings.

CONCLUSION

The presence of social support was generally found to be a potential moderator of stressor-strain relationships. Exceptions of these moderating effects would appear to suggest that certain exclusions to this relationship may exist, and that certain situations require more specific forms of social support. However, some of these exceptions might be a function of the weaknesses of the scales used to measure perceived social support of family and friends. It would appear, though, that the perceived presence of social support has the potential to play a valuable role as a coping resource in moderating possible strain.

HYPOTHESIS 3: PROBLEM-FOCUSED COPING STRATEGIES ARE MORE EFFECTIVE THAN EMOTION-FOCUSED AND AVOIDANCE-FOCUSED COPING STRATEGIES IN REDUCING THE POTENTIAL EFFECTS OF STRESSORS IN THE TEACHING PROFESSION.

Problem-focused coping was not found to be more effective than emotion-focused and avoidance-focused ways of coping in reducing potential effects of teacher stressors (see Tables 17 (page 35), 18 (page 35), 19 (page 36), 20 (page 36), and 21 (page 37)). As was suggested by the findings examined within the discussion of Hypothesis 1c, escape-avoidance strategies were not found to be the most effective ways of coping with the psychological and physiological strains investigated, and appeared to present damaging consequences to frequent users of this strategy. The more frequently individuals reported using the escape-avoidance coping strategies, the higher the reports of all types of strain (that is, general physiological and psychological strain, somatic symptoms, anxiety/ insomnia, social dysfunction and severe depression). These findings appear to offer a kind of converse theory to the suggestion that efficacy of strategies can be situation-specific. These results seem to suggest that

when escape-avoidance ways of coping are used inappropriately, they prove not only to be ineffectual, but potentially deleterious to the individual's psychological and physiological well-being. It would appear that a more active-directive approach to coping with teacher stressors is necessary for the alleviation of strain.

Problem-focused strategies, on the other hand, were found to be effective in only one case. High frequency of use of problem-focused coping strategies resulted in lower reported levels of social dysfunction symptoms of strain, in relation to low frequencies of the use of problem-focused coping strategies. These results concur with the literature suggesting that the efficacy of certain types of ways of coping can be specific to situations, rather than relevant to all work-related stressors (Cooper, 1995). However, significant differences were also found between low and medium levels of use of problem-focused coping, whereby medium levels of use evoked higher levels of reported somatic and social dysfunction symptoms of strain. Similarly, high frequencies of use of problem-focused coping resulted in higher levels of somatic symptoms of strain. These results reinforce the suggestion that inappropriate coping strategies could prove to be harmful to the well-being of the individual.

Similar conclusions can be reached regarding the effective use of emotion-focused strategies in teacher stress. In the case of somatic symptoms of strain, high frequency of use of emotion-focused coping strategies produced significantly higher reported levels of somatic and social dysfunction symptoms of strain than low frequencies. Likewise, medium frequencies of use evoked higher reported levels of symptoms of social dysfunction than low levels of use of emotion-focused ways of coping. Again, it would appear that the use of inappropriate coping strategies has the potential to result in detrimental effects to the individual's psychological and physiological health.

Of the three strategies, problem-focused coping did indeed produce the most significant results. However, it seems that none of the three ways of coping was found to be generally effective for coping with the 'typical' stressors of teachers. It has been suggested that social and economic changes have rendered the so-called 'typical' stressors being measured as outdated and not really a reflection of the true stressors of contemporary teachers (Glowinkowski and Cooper, 1985, in Dewe, 1989). In this case, the results derived from an examination of these outdated stressors could yield results which would not necessarily be true to life. On the other hand, Dewe and Guest (1990) have suggested a new conceptualisation of coping strategies which are utilised specifically for work-related issues. This conceptualisation incorporates a number of the strategies which currently fall under the classification of problem-focused, emotion-focused and avoidance strategies, but also incl. .s a few others. Dewe and Guest (1990) further suggest that each population also incorporates one unique

coping category, which therefore requires researchers to constantly confirm the identification of the coping strategies in each group studied. If these suggestions are correct, then the results of this study could have been inhibited by the insensitivity of the measurements taken from the teacher sample.

General Discussion

Biographical variables have often been found to be significantly related to teacher stressors, ways of coping, and resultant psychological and physiological strain (for example, Furnham, 1987; Anderson and Iwanicki, 1984; Schwab, Jackson and Schuler, 1984; Beck and Gargiulo, 1983). A discussion of the results of the investigation into age, teaching experience, tenure, and gender variables will follow. The potential differences in teacher stressors in relation to the average number of pupils taught will also be discussed.

Age of the teacher has been found to be significantly related to the levels of strain experienced by the individual teacher (for example, Laughlin, 1984, in Borg and Riding, 1991; Maslach and Jackson, in Byrne, 1991).. In this study, age of the respondent was not found to be significantly inversely correlated to the levels of psychological and physiological strain, as was hypothesised by the aforementioned authors (see Table 7 (page 29)). However, although the results were not significant, the direction of the relationships were all as were to be expected following the findings of others. The only significant relationship which was found was the negative correlation between age of the respondent and the perceived social support of friends (see Table 7). This result would suggest that younger teachers tend to utilise the support of friends more than their older counterparts. However, the doubts surrounding the reliability of the scale renders the accuracy of this result questionable.

For the same reasons, the negative correlation which was found between experience in the teaching profession and perceived social support of friends is questionable (see Table 7 (page 29)). This result would suggest that the more experience a teacher has, the lower the levels of perceived support of friends. There have not been any reported findings in the literature of the existence of such a relationship, and it is possible that this relationship is merely a function of the weaknesses of the scale.

The tenure of the respondent at that particular school was found to be significantly inversely correlated with the teacher stressor of workload (see Table 7). This suggests that teachers working in a particular school could become accustomed to the workload assigned to them at that school, and therefore fail to appraise the workload as a stressor. Tenure was also found to be significantly

negatively related to general ways of coping, suggesting that the longer the individual's tenure at a school, the lower the frequency of use of general coping strategies. This is perhaps as a result of the individual's experience of the school and the relevant stressors presented by the school. The time spent with this one school might have afforded the individual time to begin to cope with these stressors, so that they now may fail to be appraised as stressors. This would, therefore, negate the need for the use of coping strategies.

The average number of pupils taught per class was found to be significantly positively correlated with general teacher stressors, as well as the stressors derived from professional recognition needs and time and resource difficulties (see Table 7). It was found that the higher the average numbers of pupils taught, the higher the levels of professional recognition needs-based stressors reported. Such results would appear to concur with the suggestion that strain can result from the characteristics of the school (Brenner and Bertell, 1984, in Boyle, Borg, Falzon and Baglioni, Jr, 1995). Furthermore, the average number of pupils taught was found to be significantly related to the reported symptoms of severe depression (see Table 12 (page 32)). It was found that the higher the average number of pupils taught, the higher the reported symptoms of severe depression. This result is possibly linked to the higher levels of strain reported for the average number of pupils. An increase in perceived stressors, without a corresponding increase in the efficacy of the coping strategies, has the potential to produce additional strain, which could manifest itself as symptoms of severe depression.

T-tests failed to confirm that there existed any differences in perceived social support, psychological and physiological strain, ways of coping and teacher stressors across the variable of gender (see Tables 8 (page 30), 9 (page 30), 10 (page 31), 11 (page 31)). However, the breakdown of male and female respondents was highly uneven, with 176 of 188 respondents being female and a total of 11 male respondents. The validity of such results are therefore questionable, and cannot conclusively confirm or deny the existence of such gender differences.

The hypothesis that individuals with high levels of teaching experience suffer from lower levels of psychological and physiological strain has been investigated in a number of studies (Byrne, 1991; Anderson and Iwanicki, 1984; Schwab and Iwanicki, 1982, in Byrne, 1991). To date, the validity of this hypothesis is disputed. This study has found no significant differences between the levels of general strain experienced, or its components (that is, somatic symptoms, anxiety/ insomnia, social dysfunction and severe depression), across the variable of teaching experience (see Table 14 (page 33)). These results therefore concur with the findings of authors such as Anderson and Iwanicki

(1984) and Schwab and Iwanicki (1982, in Byrne, 1991), who assert that no such relationships between these factors exist.

Years of teaching experience can also be linked to the age of the individual, with the higher levels of experience corresponding to a higher number of years of age. Therefore, the teaching experience of respondents was compared to the levels and types of teacher stress (see Table 15 (page 34)). The results show no significant differences between the varying levels of experience on the variable of teacher stressors (which comprised general teacher stressors, as well as stressors originating from professional recognition needs, poor colleague relations, student misbehaviour, time and resource difficulties, and excessive workloads). This result is in accordance with this study's failure to find significant differences between levels of strain across the age variable.

There were also no differences found between the ways in which experienced and inexperienced teachers cope with stressors (see Table 16 (page 34)). This result appears to indicate that teachers might be failing to acquire appropriate and effective ways of coping through their general experiences of teaching and its stressors. This could suggest the need for teachers (of all experience levels) to be instructed and sensitised to the various ways of coping, and specifically those strategies which could be most effective for the particular stressors and situations which they face. Linked to this study's findings related to the individual's tenure and levels of strain experienced and the use of general ways of coping, it is possible that teachers acquire coping skills which are specific to the school's characteristics, and which are derived through tenure at that school. However, it is possible that teachers are failing to acquire more general effective coping strategies for the 'typical' stressors facing teachers. This would imply that teachers relocating to a new school will need to begin to learn new ways of coping to adapt to the specifics of the school, rather than arriving equipped with a range of potentially effective coping strategies. Such a situation would therefore present implications for the psychological and physiological well-being of teachers with each change of organisation.

THEORETICAL IMPLICATIONS

Theoretically, the findings of this study may concur with the assertions made (Puffer and Brakefield, 1989; Billings and Moos, 1981), that it is, indeed, impossible to identify general ways of coping which are consistently most effective for the mitigation of the potential effects of stressors. It would appear that the efficacy of coping strategies could be very much more specific to particular situations within the teaching occupation. Along with the situation, the effectiveness of any coping strategy also has the potential to be affected by the characteristics of the individual and the school, and their

environment (Lazarus, 1990), and these complexities render the intended sole use of any one coping strategy to be inadequate. Therefore, overall occupational stressors of teachers would appear not to be most effectively coped with through the use of any one coping strategy. Rather, the educated and discriminating use of a range of ways of coping has the potential to more effectively mitigate the potential consequences of such stressors.

Similarly, the effective utilisation of the four investigated aspects of social support resources as a coping resource would also appear to be more situation-specific than was anticipated. Although the presence of this coping resource generally has a moderating effect on the relationship between teacher stressors and strains, it seems that certain circumstances require more specific types of social support for effective mitigation of potentially deleterious effects on particular aspects of the well-being of the individual.

PRACTICAL IMPLICATIONS

Cockburn (1996) found that there is a general lack of awareness of ways of coping within the teaching profession, and that teachers tend to adopt coping strategies as the need arises. In view of this, teachers should be educated as to what coping strategies have the potential to be effective and successful in coping with their more 'typical' occupational stressors. With the knowledge that different situations could require the utilisation of various coping strategies, teachers could be made aware of the range of coping strategies available to them, thereby enabling them to adopt the most effective strategy for their particular circumstances.

Similarly, teachers could be made more aware of the potential value in the effective utilisation of social support. The apparent reluctance to use social support of colleagues as a coping resource denies the individual a potentially valuable 'tool' with which to combat the effects of stressors. Conversely, an awareness of the potential significance of such social support of colleagues and supervisors could serve to encourage colleagues and supervisors alike to more readily offer such a coping resource.

LIMITATIONS OF THIS STUDY

One significant limitation of this study was the apparent low rates of reliability of a number of its scales, most significantly, the Perceived Social Support of Family and Friends Scales. Owing to this, a number of the interpretations and conclusions drawn from the data should be considered with caution.

Another limitation is that the study relied solely on self-report data. It is possible that respondents may have provided socially desirable responses, rather than honest descriptions of their stressors, social support resources, strains and ways of coping, in order to enhance their self-image (Latack, 1986).

Due to this study's reliance on volunteer respondents (and considering the response rate of 61.04%), it is possible that non-respondents may have possessed varying occupational stressors, or personality traits, which could have produced different findings regarding coping behaviours.

The generalisability of the findings of this study could potentially be limited by the size of the sample. Considering the relatively small sample size of 188 subjects, it could prove difficult to generalise these results to other situations and groups of teachers.

Similarly, this study was conducted using data collected from a sample of mainly female, English-speaking teachers, from schools which were formerly reserved for the education of solely White students. Caution could be advised in attempting to generalise these findings to historically disadvantaged schools, which were previously maintained for the education of non-White (that is, Black, Coloured and Asian) students. Accordingly, it could also prove very difficult to attempt to generalise this study's findings to male groups of teachers, owing to the gender bias of the sample.

Suggested Directions for Future Research

It would appear that further research into teacher stressors could prove valuable to the study of teacher stress. Considering the changes which have occurred within the teaching profession within the recent past, in addition to the changes which face the teaching profession at present, a more accurate gauge of the actual stressors experienced by South African teaching professionals could prove invaluable to the further study of the relationships between teacher stress and ways of coping and social support.

Furthermore, more refined studies need to be conducted regarding the specific types of coping strategies which could prove most effective for coping with particular teacher stressors. Further investigation into such variables could have implications for the education of teachers to cope effectively with occupational stress. Similarly, further refinements of studies into the various types of social support (which were not investigated within this study) could be equally useful in understanding how the many types of social support interact and relate to the stressor-strain relationships within the teaching profession.

CONCLUSION

The increasing concerns regarding teacher stress and coping has thus far produced much research studies, but, it would seem, few conclusive findings as yet. Clearly, considering the potential consequences of teacher stress for both the individual teachers, and the educational system and its students, there persists the need for still further research into this phenomenon. Cooper (1995, p.70) maintains that "to develop teachers to deal more effectively with the pressures imposed on them, we must understand what coping strategies work with what particular stressors". The same requirements would seem to apply to the area of social support also. In order for teachers to continue to educate South Africa's students, the educators need to be educated as to how to effectively and successfully cope with the stressors experienced by them. And in order for them to be educated, further information needs to be gathered on this imposing and potentially threatening phenomenon that is teacher stress.

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APPENDIX 1

QUESTIONNAIRE

Dear Madam/Sir

I am currently an Industrial Psychology Masters student at the University of the Witwatersrand. I am interested in conducting research on stress and coping strategies of school teachers.

I would greatly appreciate it if you would be able to assist me in this study by completing the attached questionnaire. This questionnaire should take up approximately 20 minutes of your time. Please do not write your name on the questionnaire, so as to ensure the anonymity and confidentiality of your responses. There are no right or wrong answers to these questions.

The contribution of your input and time is greatly appreciated.

Yours sincerely

Melanie Fong Chong

Biographical Information

Please answer the following questions about yourself. These answers are strictly confidential, and I ask that you please refrain from writing your name on this paper in order to ensure your anonymity.

Date of Birth: ...../...../.....
Day Month Year

Sex: Male Female

Race Group: Black White Asian Coloured Other

If other, please specify:.....

Marital Status: Single Married Separated Divorced Widowed
Co-habiting with partner

Approximately how long have you taught at this school? ...../.....
Years Months

Approximately how long have you been in the teaching profession? ...../.....
Years Months

What is your average number of pupils taught in one class?.....

As a teacher, how great a source of stress are these factors to you?
(Please tick the appropriate response)

	0 No Stress	1 Mild Stress	2 Moderate Stress	3 Much Stress	4 Extreme Stress
1. poor career structure (poor promotion prospects)	None	Mild	Moderate	Much	Extreme
2. difficult class	None	Mild	Moderate	Much	Extreme
3. lack of recognition for good teaching	None	Mild	Moderate	Much	Extreme
4. responsibility for pupils (eg. exam success)	None	Mild	Moderate	Much	Extreme
5. noisy pupils	None	Mild	Moderate	Much	Extreme
6. too short rest periods (eg. mid-morning/-day breaks)	None	Mild	Moderate	Much	Extreme
7. pupils' poor attitude to work	None	Mild	Moderate	Much	Extreme
8. inadequate salary	None	Mild	Moderate	Much	Extreme
9. too much work to do (eg. lesson preparation; marking)	None	Mild	Moderate	Much	Extreme
10. having a large class (ie. too many pupils)	None	Mild	Moderate	Much	Extreme
11. maintaining class discipline	None	Mild	Moderate	Much	Extreme
12. administrative work (eg, filling in forms)	None	Mild	Moderate	Much	Extreme
13. pressure from parents	None	Mild	Moderate	Much	Extreme
14. ill-defined syllabuses (eg. not detailed enough)	None	Mild	Moderate	Much	Extreme
15. lack of time to spend with individual pupils	None	Mild	Moderate	Much	Extreme
16. shortage of equipment and poor facilities	None	Mild	Moderate	Much	Extreme
17. attitudes and behaviours of other teachers	None	Mild	Moderate	Much	Extreme
18. pupils' impolite behaviour or cheek	None	Mild	Moderate	Much	Extreme
19. pressure from headteacher and education officers	None	Mild	Moderate	Much	Extreme
20. having extra students because of absent teachers	None	Mild	Moderate	Much	Extreme

Please tick your responses to the following questions.
To what extent is your supervisor:

	To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent
1. friendly and easy to approach					
2. attentive to what you say					
3. willing to listen to your problems					

Please tick your responses to the following questions.
To what extent are the colleagues with whom you work:

	To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent
1. friendly and easy to approach					
2. attentive to what you say					
3. willing to listen to your problems					

The statements which follow refer to feelings and experiences which occur to most people at one time or another in their relationships with their *families*. Please tick your responses to the following statements.

	Yes	*Don't Know*	*No*
1. My family gives me the moral support I need.			
2. I get good ideas about how to do things from my family.			
3. Most other people are closer to their family than I am.			
4. When I confide in members of my family who are closest to me, I get the idea that it makes them uncomfortable.			
5. My family enjoys hearing what I think.			
6. Members of my family share many of my interests.			
7. Certain members of my family come to me when they have problems or when they need advice.			
8. I rely on my family for emotional support.			
9. There is a member of my family I could go to if I were just feeling down, without feeling funny about it later.			
10. My family and I are very open about what we think about things.			
11. My family is sensitive to my personal needs.			
12. Members of my family come to me for emotional support.			
13. Members of my family are good at helping me solve problems.			
14. I have a deep, sharing relationship with a number of members of my family.			
15. Members of my family get good ideas about how to do things from me.			
16. When I confide in members of my family, it makes me uncomfortable.			
17. Members of my family seek me out for companionship.			
18. I think that my family feels that I'm good at helping them solve problems.			
19. I don't have a relationship with a member of my family that is as close as other people's relationships with family members.			
20. I wish my family were much different.			

The statements which follow refer to feelings and experiences which occur to most people at one time or another in their relationships with their *friends*. Please tick your responses to the following statements.

	Yes	*Don't Know*	*No*
1. My friends give me the moral support I need.			
2. Most people are closer to their friends than I am.			
3. My friends enjoy hearing what I think.			
4. Certain friends come to me when they have problems or need advice.			
5. I rely on my friends for emotional support.			
6. If I felt that one or more of my friends was upset with me, I'd just keep it to myself.			
7. I feel that I'm on the fringe of my circle of friends.			
8. There is a friend I could go to if I was just feeling down, without feeling funny about it later.			
9. My friends and I are very open about what we think about things.			
10. My friends are sensitive to my personal needs.			
11. My friends come to me for emotional support.			
12. My friends are good at helping me solve problems.			
13. I have a deep, sharing relationship with a number of friends.			
14. My friends get good ideas about how to do things from me.			
15. When I confide in friends, it make me feel uncomfortable.			
16. My friends seek me out for companionship.			
17. I think that my friends feel that I'm good at helping them solve problems.			
18. I don't have a relationship with a friend that is as intimate as other people's relationships with friends.			
19. I've recently gotten a good idea about how to do something from a friend.			
20. I wish my friends were much different.			

Please tick your responses to the following questions. Have you:

1. been feeling perfectly well and in good health?	*Better than usual*	*Same as usual*	*Worse than usual*	*Much worse than usual*
2. been feeling in need of a good tonic?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
3. been feeling run down and out of sorts?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
4. felt that you are ill?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
5. been getting any pains in your head?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
6. been getting a feeling of tightness or pressure in your head?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
7. been having hot or cold spells?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
8. lost much sleep over worry?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
9. had difficulty in staying asleep once you are off?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
10. felt constantly under strain?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
11. been getting edgy and bad-tempered?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
12. been getting scared or panicky for no good reason?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
13. found everything getting on top of you?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
14. been feeling nervous and strung-up all the time?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
15. been able to keep yourself busy and occupied?	*More so than usual*	*Same as usual*	*Rather less than usual*	*Much less than usual*
16. been taking longer over the things that you do?	*Quicker than usual*	*Same as usual*	*Longer than usual*	*Much longer than usual*
17. felt on the whole you were doing things well?	*Better than usual*	*About the same*	*Less well than usual*	*Much less well*
18. been satisfied with the way you've carried out your task?	*More satisfied*	*About same as usual*	*Less satisfied than usual*	*Much less satisfied*
19. felt that you are playing a useful part in things?	*More so than usual*	*Same as usual*	*Less useful than usual*	*Much less useful*
20. felt capable of making decisions about things?	*More so than usual*	*Same as usual*	*Less so than usual*	*Much less capable*
21. been able to enjoy your normal day-to-day activities?	*More so than usual*	*Same as usual*	*Less so than usual*	*Much less than usual*

22. been thinking of yourself as a worthless person?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
23. felt that life is entirely hopeless?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
24. felt that life isn't worth living?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
25. thought of the possibility that you might make away with yourself?	*Definitely not*	*I don't think so*	*Has crossed my mind*	*Definitely have*
26. found at times that you couldn't do anything because your nerves were too bad?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
27. found yourself wishing that you were dead and away from it all?	*Not at all*	*No more than usual*	*Rather more than usual*	*Much more than usual*
28. found that the idea of taking your own life kept coming into your mind?	*Definitely not*	*I don't think so*	*Has crossed my mind*	*Definitely has*

Please try to recall a recent stressful situation (preferably one which could be regarded as typical or a frequent occurrence). Please read each item below and indicate, by circling the appropriate category, to what extent you used it in the above recalled situation.

	Not used	*Used somewhat*	*Used quite a bit*	*Used a great deal*
1. Just concentrated on what I had to do next - the next step.	*0*	*1*	*2*	*3*
2. I tried to analyse the problem in order to understand it better.	*0*	*1*	*2*	*3*
3. Turned to work or substitute activity to take mind off things.	*0*	*1*	*2*	*3*
4. I felt that time would make a difference - the only thing to do was to wait.	*0*	*1*	*2*	*3*
5. Bargained or compromised to get something positive from the situation.	*0*	*1*	*2*	*3*
6. I did something which I didn't think would work, but at least I was doing something.	*0*	*1*	*2*	*3*
7. Tried to get the person responsible to change his or her mind.	*0*	*1*	*2*	*3*
8. Talked to someone to find out more about the situation.	*0*	*1*	*2*	*3*
9. Criticised or lectured myself.	*0*	*1*	*2*	*3*
10. Tried not to burn my bridges, but leave things open somewhat.	*0*	*1*	*2*	*3*
11. Hoped a miracle would happen.	*0*	*1*	*2*	*3*
12. Went along with fate; sometimes I just have bad luck.	*0*	*1*	*2*	*3*
13. Went on as if nothing had happened.	*0*	*1*	*2*	*3*
14. I tried to keep my feelings to myself.	*0*	*1*	*2*	*3*
15. Looked for the silver lining; tried to look on the bright side of things.	*0*	*1*	*2*	*3*
16. Slept more than usual.	*0*	*1*	*2*	*3*
17. I expressed anger to the person(s) who caused the problem.	*0*	*1*	*2*	*3*
18. Accepted sympathy and understanding from someone.	*0*	*1*	*2*	*3*
19. I told myself things that helped me to feel better.	*0*	*1*	*2*	*3*
20. I was inspired to do something creative.	*0*	*1*	*2*	*3*
21. Tried to forget the whole thing.	*0*	*1*	*2*	*3*
22. I got professional help.	*0*	*1*	*2*	*3*
23. Changed/grew as a person in a good way.	*0*	*1*	*2*	*3*
24. I waited to see what would happen before doing anything.	*0*	*1*	*2*	*3*

25. I apologised or did something to make up.	*0*	*1*	*2*	*3*
26. I made a plan of action and followed it.	*0*	*1*	*2*	*3*
27. I accepted the next best thing to what I wanted.	*0*	*1*	*2*	*3*
28. I let my feelings out somehow.	*0*	*1*	*2*	*3*
29. Realised I brought the problem on myself.	*0*	*1*	*2*	*3*
30. I came out of the experience better than when I went in.	*0*	*1*	*2*	*3*
31. Talked to someone who could do something concrete about the problem.	*0*	*1*	*2*	*3*
32. Got away from it for a while; tried to take a rest or a vacation.	*0*	*1*	*2*	*3*
33. Tried to make myself feel better by eating, drinking, smoking, using drugs or medication.	*0*	*1*	*2*	*3*
34. Took a big chance or did something risky.	*0*	*1*	*2*	*3*
35. I tried not to act too hastily or follow my first hunch.	*0*	*1*	*2*	*3*
36. Found new faith.	*0*	*1*	*2*	*3*
37. Maintained my pride and kept a stiff upper lip.	*0*	*1*	*2*	*3*
38. Rediscovered what is important in my life.	*0*	*1*	*2*	*3*
39. Changed something so things would turn out alright.	*0*	*1*	*2*	*3*
40. Avoided being with people in general.	*0*	*1*	*2*	*3*
41. Didn't let it get to me; refused to think too much about it.	*0*	*1*	*2*	*3*
42. I asked a relative or friend I respected for advice.	*0*	*1*	*2*	*3*
43. Kept others from knowing how bad things were.	*0*	*1*	*2*	*3*
44. Made light of the situation; refused to get too serious about it.	*0*	*1*	*2*	*3*
45. Talked to someone about how I was feeling.	*0*	*1*	*2*	*3*
46. Stood my ground and fought for what I wanted.	*0*	*1*	*2*	*3*
47. Took it out on other people.	*0*	*1*	*2*	*3*
48. Drew on my past experiences; I was in a similar situation before.	*0*	*1*	*2*	*3*
49. I knew what had to be done, so I doubled my efforts to make things work.	*0*	*1*	*2*	*3*
50. Refused to believe that it had happened.	*0*	*1*	*2*	*3*
51. I made a promise to myself that things would be different next time.	*0*	*1*	*2*	*3*
52. Came up with a couple of different solutions to the problem.	*0*	*1*	*2*	*3*

53. Accepted it, since nothing could be done.	*0*	*1*	*2*	*3*
54. I tried to keep my feeling from interfering with other things too much.	*0*	*1*	*2*	*3*
55. Wished that I could change what had happened or how I felt.	*0*	*1*	*2*	*3*
56. I change something about myself.	*0*	*1*	*2*	*3*
57. I daydreamed or imagined a better time or place than the one I was in.	*0*	*1*	*2*	*3*
58. Wished that the situation would go away or somehow be over with.	*0*	*1*	*2*	*3*
59. Had fantasies or wishes about how things might turn out.	*0*	*1*	*2*	*3*
60. I prayed.	*0*	*1*	*2*	*3*
61. I prepared myself for the worst.	*0*	*1*	*2*	*3*
62. I went over in my mind what I would say or do.	*0*	*1*	*2*	*3*
63. I thought about how a person I admire would handle this situation, and used that as a model.	*0*	*1*	*2*	*3*
64. I tried to see things from the other person's point of view.	*0*	*1*	*2*	*3*
65. I reminded myself how much worse things could be.	*0*	*1*	*2*	*3*
66. I jogged or exercised.	*0*	*1*	*2*	*3*
67. I tried something entirely different from any of the above. (Please describe below).	*0*	*1*	*2*	*3*

Further comments:.....

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Thank you very much for your time and input into this research. Results of this study should be available at the end of January 1998, and I will endeavour to make a copy of the results available to your school.

Yours sincerely

Melanie Fong Chong

APPENDIX 2

OVERVIEW OF CURRICULUM 2005

Curriculum 2005 is an outcomes-based curriculum. Rather than the use of rigid subject definitions, this curriculum is said to be based on eight primary areas of learning (Pienaar, 1998), namely:

1. Communication, literacy and language
2. Mathematical literacy, mathematics and mathematical sciences
3. Human and social sciences
4. Natural sciences
5. Technology
6. Arts and culture
7. Economic and management sciences
8. Life orientation

The aim of this approach is to promote a number of principles, which includes the attainment of life skills, the development of critical thinking, and the integration of different types of knowledge (rather than adhering to strict subject boundaries) (Pienaar, 1998). This new curriculum is also said to encourage a more child-centred type of schooling, rather than content-centredness (ibid.).

The success of this new curriculum is said to depend on the teachers' understanding and implementation of the system (Pienaar, 1998). This approach will require teachers to quickly master new methods of teaching and evaluation, and will result in changes in the teacher-student relationships in the classroom. This new system remains a controversial issue. It has been viewed by some as still in its experimental stages, and therefore unsuitable for what is often viewed as a struggling South African education system. Furthermore, this system's introduction in countries such as Australia, New Zealand and the United Kingdom has been viewed by many as unsuccessful and problematic (ibid.). Such uncertainty surrounding the appropriateness and efficacy of Curriculum 2005 is a potential cause of concern for many elementary school teachers throughout South Africa.

Author: Fong Chong, Melanie.
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