

**TOWARDS A MODEL FOR DETERMINANTS OF
OCCUPATIONAL STRESS AMONG TEACHERS IN KWAZULU -
NATAL**

By

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DECLARATION

I declare that *Towards a model for determinants of occupational stress among teachers in KwaZulu-Natal* is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.



SIGNATURE

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30/10/98

DATE

SUMMARY

The present study examines determinants of occupational stress among teachers in KwaZulu-Natal. The first aim was to ascertain the extent to which teachers in KwaZulu-Natal experience stress from work-related factors. The second aim was to determine whether any relationship exists between teachers' personality dimensions and their stress levels. The third aim was to determine which personality dimension (s) best predict (s) stress in different work situations. The last aim was to determine whether any significant effects exist between teachers' biographical characteristics and perception of the nature of work-related stress factors. To this end, a standardized scale (EPQ) was used for eliciting teachers' personality dimensions and the researcher's own scale, Occupational Stress Inventory for Teachers (OSIT) for measuring teachers' occupational stress. The OSIT scale was validated by the researcher using the method of factor analysis. The research instruments were administered to a randomly selected sample of four hundred and forty four teachers.

The findings reveal that teachers differ in the extent to which they experience stress from work-related factors. A very high percentage (67,1%) of teachers report an above average level of occupational stress. The findings show that there is a negative relationship between extraversion and educational changes. The relationship between neuroticism and time pressures; neuroticism and administrative problems and neuroticism and pupil misbehaviour is positive. The findings also indicate that neuroticism is the best predictor of stress in situations involving time pressures; administrative problems and pupil misbehaviour, whereas extraversion is the best predictor

of stress in situations involving educational changes. The last findings show that teachers' sex, qualification and teaching experience have an influence on teachers' perception of time pressures; educational changes; administrative problems and pupil misbehaviour.

On the basis of the findings of this study, both curative and preventative strategies were recommended for dealing with occupational stress which is experienced by teachers.

OPSOMMING

Die studie ondersoek oorsake van beroepstres van onderwysers in KwaZulu-Natal. Die doel met hierdie studie is eerstens om te bepaal in welke mate onderwysers in KwaZulu-Natal stres ervaar wat met hulle werk verband hou. Tweedens is die doel om te bepaal of daar enige verband tussen die onderwyser se persoonlikheid en stresvlakke bestaan. Die derde doel is om te bepaal watter persoonlikheiseienskappe stres in verskillende werksituasies die beste voorspel. Laastens is die doel van hierdie studie om te bepaal of daar enige beduidende gevolge bestaan tussen die onderwyser se biografiese eienskappe en die persepsie van die aard van werkverwante faktore. Om hierdie inligting te bekom is 'n gestandaardiseerde skaal (EPQ) gebruik om onderwysers se persoonlikheideienskappe te bepaal. Die navorser se eie skaal (OSIT) is ook gebruik om beroepstres te meet. Faktoranalise as 'n metode is gebruik om die navorser se OSIT skaal te geldig. Vier honderd en veertig onderwysers het deelgeneem aan hierdie ondersoek. Die onderwysers is ewekansig gekies vir die navorsing.

Uit die ondersoek het dit geblyk dat onderwysers verskil in die mate waarin hulle werkverwante stres ervaar. Hoë persentasie (67.1%) van onderwysers toon 'n bo-gemiddelde vlak van beroepstres. Die bevindinge toon aan dat daar 'n negatiewe verband tussen ekstroverte en opvoedkundige veranderinge bestaan. Daar is 'n positiewe verband tussen neurose en tydsbeperking; neurose en administratiewe probleme en neurose en wangedrag van leerlinge. Die bevindinge toon ook aan dat neurose die beste voorspeller is van stres in omstandighede waar tydsdruk; administratiewe probleme en wangedrag van leerlinge betrokke is. Ekstroverte eienskappe is daarenteen die beste

voorspeller van stres waar opvoedkundige veranderinge teenwoordig is. Laastens is bevind dat die geslag van die onderwyser, kwalifikasie en onderwys-ervaring 'n invloed het op die onderwyser se persepsie van tydsdruk; opvoedkundige verandering; administratiewe probleme en wangedrag van leerlinge.

Op grond van die resultaat van die ondersoek is beide behandelings en voorkomende strategieë aanbeveel om met beroepstres van die onderwyser te deal.

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CHAPTER ONE

1.0 ORIENTATION

1.1 MOTIVATION FOR THE STUDY

With the advent of the Government of National Unity “on the 27th of April 1994”, many educational changes which affect teachers have taken place. They started with the abolition of corporal punishment which has been a dominant measure for disciplining misbehaving pupils in most historically black schools. The move to ban corporal punishment was a logical consequence of the country’s adoption of the Bill of Rights. However, no new forms of discipline were suggested by the Department of Education to stand in place of corporal punishment.

One gets the impression that those teachers who have no desire to use other available forms of discipline will leave pupils undisciplined. As a matter of fact, some teachers have been using corporal punishment in the presence of other forms of discipline. The end result may be teachers’ experience of stress from pupil misbehaviour.

The abolition of corporal punishment was followed by the right- sizing policy which encompassed a redeployment of teachers from schools with abundant teachers to those which have a shortage of teachers. The unfortunate situation is that the schools which are short of teachers are in rural areas. As studies have shown, teachers have negative attitudes towards teaching in rural schools (Ngidi, 1995). Knowing and thinking that there is a possibility of

being redeployed, may be a source of stress to teachers.

One wonders whether many radical changes which are imposed on teachers, without sufficient consultation with them, are not sources of teachers' occupational stress. Some of the changes are: uniform examinations at standard 10 which are imposed without adequate preparation; inclusive education; a new South African schools Act (1996) and Curriculum 2005, with its 'Outcome Based Education' (OBE).

An examination of the figures shows that about 3000 teachers under the Department of Education and Culture in KwaZulu-Natal province took voluntary severance packages (Mercury, 1997:1). The failure of officials within the Department to honour the circular (HRM 14 of 1996) from the department, which was sent to schools assuring them that schools would be staffed adequately after teachers took their severance packages, led to chaos and frustration among teachers in some schools. As teachers took severance packages at the beginning of May, 1997, some schools in the Lower Tugela area became short of about 15 staff members. At the Tugela Secondary school; for example, classes were cancelled for the rest of the week after all seven (100%) management members had taken severance packages (Stanger Weekly, 1997:1). This situation is not peculiar to the Lower Tugela area, but it affects other areas as well. Many other teachers have gone to an extent of pretending to be ill, and seek doctors' help so as to secure early retirement packages (Sunday Tribune, 1997:1). One gets the impression that most teachers are stressed by the radical changes in education. The changes may make teachers feel insecure or incompetent to deal or cope with them, thus deciding to quit the teaching profession. The situation outlined above shows

that whatever merits the changes may have or their final outcomes, there is no doubt that radical change in itself, is a source of stress.

Very few if any studies have been conducted in the Republic of South Africa which have either reported educational changes as sources of teacher occupational stress, or reported sources of occupational stress using factor analysis as a study technique. The present study will use this technique to report educational changes and other work-related factors as sources of occupational stress to teachers.

Studies carried out in several countries indicate that a large proportion of teachers report relatively high levels of occupational stress. This is well documented in reviews (Borg, 1990; Kyriacou, 1987; Turk, Meeks & Turk, 1982). Studies conducted in South Africa (Buwalda & Kok, 1991; Marais, 1992) hold the same view. Buwalda and Kok (1991) reported that 84,2 per cent of teachers in English medium secondary schools, in one of the provinces of South Africa, viewed teaching as stressful. Marais (1992) reported that 63,7 per cent of teachers in both English and Afrikaans medium schools, selected from the former Orange Free State and Cape provinces, also viewed teaching as stressful. Studies which have compared teachers with other white-collar professional groups have also found that teachers reported high levels of occupational stress (Cox & Brockely, 1984; Nerell & Wahlund, 1981).

Travers and Cooper (1996:20) assert that research into the experience of stress in teachers is justified for two main reasons, firstly, "stress has serious implications for particular attitudes and behaviours". Secondly, "there are

many costs incurred by the presence of negative stress at an individual, organisational and national level". As such, teacher occupational stress has become an international concern. The major concerns stem from the evidence that prolonged teacher stress can lead to both mental and physical ill-health (Fletcher & Payne, 1982; Galloway, Panckhurst, Boswell, Boswell & Green, 1984; Kyriacou & Pratt, 1985), job dissatisfaction, absenteeism and intention to leave teaching (Kyriacou & Sutcliffe, 1979a) and impaired quality of teaching and working relationships with pupils (Laughlin, 1984). It is on the strength of these conditions that a study of occupational stress among black teachers, who have all along been neglected, be conducted.

Widely cited major stress factors generally have to do with pupils' behaviour, time demands, work conditions and staff relations (Borg & Riding, 1991; Okebukola & Jegede, 1989; Payne & Furnham, 1987; Laughlin, 1984; Kyriacou & Sutcliffe, 1978b). It is clear from these findings that stress amongst teachers emanates from the demands of their occupation. Cobb (1973) asserts that generally, more stress may occur when the worker does not fit the job very well. The implication of this statement is that teachers may differ in reporting levels of stress. Teachers who are not suitable for teaching are prone to report relatively high levels of stress than those who are suitable.

Researchers have shown that responses to potentially stressful situations can vary greatly from individual to individual. To this end, they have investigated the role of variables such as sex, age and teaching experience in relation to the levels of teachers' occupational stress. Generally speaking, these studies attest to very little association. Consequently, some writers argue that

personality characteristics, rather than biographical ones are more important determinants of individual differences in teacher stress (Fontana & Abouserie, 1993; Tellenbach, Brenner & Lofgren, 1983; Kyraicou & Sutcliffe, 1977a, 1978b, 1979a). The role of personality factors and fluctuation of the level of teacher stress has been neglected by South African researchers (Mwamwenda, Monyooe & Glencross, 1997; Marais, 1992; Buwalda & Kok, 1991; Beard, 1990).

Knowledge about the role played by personality characteristics in determining teachers' levels of occupational stress in South Africa may assist in the consideration of establishing procedures for admitting prospective teachers. Esteve (1989: 147) states that if one wants to tackle the problem of stress among teachers, the establishment of adequate selection procedures for admission to the teaching profession, based on criteria which rely more on personality than on intellectual qualifications is needed. This point was also mentioned by Wall (1959) in a report for UNESCO. Peretti (1982) has also proposed that some sort of test, based on the personalities of those wishing to become teachers should be established. The aim of this testing is to bar those with unstable personalities and whose fragility would expose them to certain failures in education.

In other countries, several studies have attempted to address the question of personality in teacher stress by focussing on the association between teacher stress (and burnout) and aspects of personality such as extraversion, neuroticism, locus of control and hardiness (Pierce & Molloy, 1990; Wilson & Mutero, 1989; Soh, 1986; Kyriacou & Sutcliffe, 1979b; Pratt, 1976). In South Africa, Van der Linde (1992) paid attention to 'type A' and 'type B'

personalities while Rigby, Bennett and Boshoff (1996) examined only 'type A' personality. The study which seems relevant to the present one is that of Fontana and Abouserie (1993). Another one is that of Pratt (1976). Fontana and Abouserie examined the relationship between teacher stress levels and aspects of personality, namely, Extraversion-Introversion, Neuroticism and Psychoticism. They found that there is a positive relationship between the levels of teacher stress and personality factors, namely, Introversion, Neuroticism and Psychoticism. These findings confirm those of Pratt (1976) where he examined the relationship between stress levels and both Neuroticism and Extraversion. The two dimensions of personality, Neuroticism and Extraversion-Introversion contribute more to a description of personality (Eysenck & Eysenck, 1975:7), therefore are relevant to the present study.

Although limited in scope, as it involved ninety five teachers, the study by Fontana and Abouserie (1993) shows that levels of professional stress appear to be related to personality characteristics. These personality characteristics contribute more to teachers' stress levels than do the variables of age and gender. These researchers insist that future research should concentrate particularly on these personality characteristics and attempt to identify exactly how they interact with specific professional tasks with which teachers are faced. They further assert that if confirmed by subsequent research, their findings have considerable implications both for the selection of teachers and for the degree of support with which teachers should be provided while they are in their posts (Fontana & Abouserie, 1993:266). The present study attempts to find out whether there is evidence to confirm these findings.

The significance and contribution of the present study for a doctoral degree are as follows :

1. It will reveal empirical evidence on the extent to which teachers of KwaZulu-Natal experience stress from work-related factors. Such information will be useful in determining the extent to which teachers, already in their posts, need psychological support.
2. It will report on the relationship between teachers' personality dimensions and their (teachers) reported stress levels on work-related stress factors, as well as on personality factor(s) which account(s) for work-related stress factors. The latter information will bring to light the significance of using personality factors as criteria for selecting prospective teachers. The former will make it possible to understand exactly how personality characteristics interact with specific stress factors. In that way, it can assist in deciding on the intervening strategies to help those teachers who are vulnerable to specific work-related stress factors.
3. The existing effects between various main stress factors and biographical information (sex, teaching experience, qualification and rank) of teachers will also be reported. This information may contribute to the existing findings.
4. Identification of work- related stress factors so that they can be eliminated.

5. Discover causes of job dissatisfaction and labour turn-over so that these can be eliminated.
6. It will affirm that our education system can flourish if teachers experience job satisfaction and high motivation.

1.2 STATEMENT OF THE PROBLEM

- 1.2.1 To what extent do teachers in KwaZulu-Natal experience stress from work-related factors?
- 1.2.2 Is there a relationship between teachers' personality characteristics and levels of stress on work-related stress factors?
- 1.2.3 Which personality factor (s) account (s) better for work-related stress factors?
- 1.2.4 Will there be any significant effects (interaction effects between variables and main effects of the variables) between sex, teaching experience, qualification, rank of teachers and perception of the nature of work-related stress factors.

The present study intends to answer these questions.

1.3 AIMS OF STUDY

The following specific aims are formulated :

- 1.3.1 To ascertain the extent to which teachers in KwaZulu-Natal experience stress from work-related factors.
- 1.3.2 To determine whether there is any relationship between teachers' personality factors, namely, Neuroticism (N) and Extraversion-Introversion (E) and teachers' stress levels on work-related stress factors.
- 1.3.3 To determine which personality factor (s) account (s) better for work-related stress factors.
- 1.3.4 To determine whether there will be any significant effects (interaction effects between variables and main effects of the variables) between sex, teaching experience, qualification, rank of teachers and perception of the nature of work-related stress factors.

1.4 HYPOTHESES

Hypotheses will be formulated and will be based on the above aims of study.

1.5. DEFINITION OF THE TERM OCCUPATIONAL STRESS

Occupational stress is a condition in which an individual experiences psychological, physiological and behavioural reactions as a result of demands from work-related factors. In this situation, an individual feels unable to cope with the demands made upon him/her. These demands are related to the job description for teachers.

1.6 THE PLAN OF STUDY

This study will be organised as follows:

1.6.1 CHAPTER ONE

This chapter consists of: motivation for the study, statement of the problem, aims of the study and a plan for the organisation of the whole study.

1.6.2 CHAPTER TWO

1.6.2.1 A theoretical background to the study is provided in this chapter. Theories of occupational stress and the burnout syndrome are discussed.

1.6.2.2 A review of previous and relevant research findings in this field is provided. Previous research is primarily focused on empirical studies on teacher occupational stress in other countries where most studies have been conducted.

1.6.3 CHAPTER THREE

Chapter three details the research design and methodology of the study. This includes the collection of data, the selection of subjects, a plan for organizing and analysis of data.

1.6.4 CHAPTER FOUR

In this chapter, empirical investigation is discussed, that is, describing how fieldwork was carried out and the scale administered. This chapter also concerns itself with the analysis and interpretation of data. The formulated hypotheses are tested.

1.6.5 CHAPTER FIVE

In this chapter the main findings of this study are presented, that is, teachers' levels of occupational stress; the relationship between stress factors and teachers' personality factors; personality factor (s) which account (s) for work-related factors and the effects of teachers' biographical characteristics on perception of work-related stress factors .

1.6.6 CHAPTER SIX

The research report is concluded in this chapter. A summary, conclusions and recommendations of this study are outlined.

CHAPTER TWO

2.0 A CONSIDERATION OF CONCEPTUAL MODELS AND EMPIRICAL STUDIES ON TEACHER OCCUPATIONAL STRESS

2.1 INTRODUCTION

Occupational stress is an inescapable aspect of teaching. Consequently, there is a growing body of literature indicating that occupational stress in teaching is widespread and is a cross-cultural phenomenon. Occupational stress is pervasive to teachers and may affect not only the teachers but also have a negative impact on their pupils as well. Teacher stress is therefore a problem for the individual teacher, the student, the school, the teaching profession and the education system (Rigby, Bennett & Boshoff, 1996:38).

The teacher occupational stress phenomenon is as complicated as the term 'stress' itself. It is therefore imperative that the problem of conceptualising it be considered first in this chapter.

2.2 CONCEPTUALISATION OF TEACHER OCCUPATIONAL STRESS

Although the term occupational stress has been widely used, there appears to be little consensus as to how the term should be defined, and how it should be measured. The proliferation of similar terms such as 'work stress', 'organisational stress', 'job stress', 'job pressure', and 'job strain' only add

to the conceptual confusion (Kyriacou & Sutcliffe, 1978a : 1).

One easily perceived outcome emerging from an examination of literature on teacher occupational stress, is confusion about the term 'stress' itself. The term means different things to different people, teachers and researchers alike. The major problem for anyone attempting to read about and understand stress, is that it has taken on many different meanings which are sometimes contradictory and confusing. The word 'stress' has become largely a buzz word that is used in a variety of settings, and most people do not define what they mean by the word. Seyle (1983 :1) also makes the point that stress, as a concept suffers 'from the mixed blessing of being too well known and too little understood'. Stress is defined in terms of an external environmental stimulus or an individual emotional state or the interaction variable emphasising the relationship between individuals and their environments (Boyle, Borg, Falzon & Baglioni, 1995:50). Consequently, stress has an elusive nature or feature. It has no single agreed upon definition. The concept is loosely used by both professionals and non professionals (Cox, 1978:1, 1981:94). Such concepts often create problems for scientific and academic scrutiny or enquiry. These problems become evident in the multiplicity of methods employed in scientific or academic investigations.

The first approach wherein stress results from environmentally exerted pressure is referred to as 'an engineering model'. The second approach involving emotional states is known as the physiological model. The third approach involving the relationship between individuals and their environments is called the interactional or transactional model (Kyriacou & Sutcliffe, 1978a:1-2).

2.3 THE CONCEPTUAL MODELS OF TEACHER OCCUPATIONAL STRESS AND THEIR IMPLICATIONS FOR THE STUDY

In this section the three models or approaches to occupational stress will be discussed so as to throw light on the teacher occupational stress concept or process.

2.3.1 ENGINEERING MODEL

This model defines stress in terms of the stimulus characteristics of the environment. Therefore, it is also referred to as a stimulus-based model of stress. It examines stress via its stimulus conditions and conceptualises stress as pressure exerted by the environment on an individual. In this model the focus is on occupational stressors and their perceived strength. The methodology employed in this approach usually attempts to focus on the identification of potentially stressful stimuli. The important questions for a stimulus-based model are: what conditions can be accepted as stressful and what are their characteristics? This approach has been given a tremendous amount of attention in research on occupational stress and studies have attempted to isolate features in the work environment that are assumed to be detrimental to the individual's psychological well-being. It is popular in organisations seeking to identify common stressors that might affect the majority of the workforce (Cox, 1978:15; Pithers, 1995:388; Travers & Cooper, 1996:15).

The engineering model has been so called because engineers used the term

stress to refer to environmental forces acting upon a body. This engineering model has been widely used to define occupational stress as negative environmental factors or stressors such as, workload, role conflict, role ambiguity, poor working conditions associated with a particular job (Cooper & Marshall, 1976 :11; Kyriacou, 1978a:1; Sutherland & Cooper, 1990:17).

The implication of this model for the present study is that it is only useful in identifying work-related factors from which teachers experience stress, but, as Lazarus and Folkman (1984:19) argue, what is stressful for some may not be so for others. There is no objective way of defining stress at the level of the environment without reference to the characteristics of a person. In other words, this model, per se, without taking individuals' characteristics into account is inadequate for this study. The researcher of the present study proposes that individuals' characteristics such as personality factors and some biographical variables, be considered when teachers' experience of stress from work-related factors is investigated.

2.3.2 PHYSIOLOGICAL MODEL

This is the approach in which stress is typically defined in terms of an individual's emotional state. Therefore, it is referred to as a response-based model. This approach is known as a physiological model, in view of stress-induced physiological responses within the individual, including psychological and emotional changes (Boyle et al.,1995:50). A stress response may occur at three levels, namely, the psychological level, for example, depression and anxiety; the behavioural level, for example, deterioration in work performance and interpersonal relationships; and the

physiological level, for example, increased heart rate (Kyriacou, 1980a:122).

According to the physiological model, a person experiences stress where there are threatening stimuli. Hence the terms tension, strain and pressure are used interchangeably in literature (Sutherland & Cooper, 1990:11; Travers & Cooper,1996:14).

The problem with this model is that one's response cannot reliably be judged as psychological stress reaction without reference to the stimulus to which one is responding (Lazarus & Folkamn, 1984:15). Therefore, this implies that if this model is adopted, it would not be easy to establish the cause of stress among many work-related factors.

Both engineering and physiological models of occupational stress have been found to be inadequate, as they fail to account for the individual differences evident in relation to stress, and the cognitive processes which underpin these differences (Ross & Atmeier, 1994:13). The significance of personality factors in the stress process is emphasised by Lazarus (1966:5) when he writes: "the important role of personality factors in producing stress reactions requires that we define stress in terms of transaction between individuals and the situations rather than of either one in isolation". This suggests that for the present study, teachers' personality factors should be considered when investigating the extent to which teachers experience stress from work-related factors.

2.3.3 INTERACTIONAL/TRANSACTIONAL MODELS

In this model stress is not seen as a response or stimulus, but rather as a complex process incorporating both the previously mentioned models. Kyriacou and Sutcliffe (1978 a :2) summarize definitions given by other authors. In these summaries stress is regarded as a result of some appraisal mechanism, either the perception of threat from the environment or the endangerment of well-being. Stress is viewed as the perception of an imbalance or discrepancy between the demands made upon the individual and the individual's ability to meet or cope with these demands.

The interactional model represents a shift from viewing psychological stress as either an environmental demand or as a response, to viewing it rather in relational terms. Researchers working in terms of these relational models conceptualise stress as an interaction or transaction between the person and the environment. These theories assume that people influence and respond to their environments. Therefore, stress is essentially the degree of fit between the person and the environment. In other words, it is not the environment per se that is stressful, but it is the relationship between the person and the environment which may result in the experience of stress. The experience of stress is determined by peoples' perceptions of their relationship to their environment. Stress occurs at the point at which the magnitude of stress stimuli exceeds the individual's capacity to resist. In order to deal with the experience of stress, a person may attempt either to alter his or her environment or to learn ways of trying to change how he or she reacts to a particular situation. Therefore, coping occurs in order to try and reach a state of fit between the person and the environment (Ross &

Atmeier, 1994 :13, Cohen, Kessler & Gordon, 1995:7, Travers & Cooper, 1996:17).

The transactional models have resulted in an increasing recognition of the importance of mental activity as a crucial factor in determining stress. The assumption is made that mental states or structures determine the presence or absence of stress (Fisher, 1986). In other words, it is the individual's perception of the stress stimulus, rather than the objective existence of the stimulus which is important. The concepts of cognitive appraisal (primary appraisal) and coping responses (secondary appraisal) are, therefore, the essence of these models. The assumption is made that intervening structures, such as cognition, will influence whether a person will experience a situation as stressful or not (Lazarus, 1978, 1981). Primary appraisal is by its nature subject to mediation by individual differences. Firstly, individual differences may exist in relation to the teacher's perception of job demands and pressures. Secondly, teachers may vary in their ability to cope with demands, and in their perception of those abilities (Cox & Ferguson, 1991:9).

The definition of stress in this context emphasizes the relationship between the person and the environment, which takes into account characteristics of the person on the one hand and the nature of the environmental event on the other (Lazarus & Folkman, 1984:21). Sutherland and Cooper (1990:20) remark that the interactive model of stress provides the basis for a person - environment fit approach to the understanding of stress at work, and that this model is useful where certain personality traits are relatively stable. This model is therefore suitable for the present study which intends to investigate teachers' stress at work and which uses relatively stable personality traits.

In their model, Kyriacou and Sutcliffe (1978 a : 2) define teacher stress 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 or release of adrenocorticotrophic hormones into the blood stream) 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 self-esteem or well-being and coping mechanisms activated to reduce the perceived threat”. These authors differentiate between potential and actual occupational stressors. Potential occupational stressors are the objective aspects of the teacher’s job that could cause excessive stress, for example, noise levels, heavy work load, inadequate buildings and physical working conditions. Actual stressors, on the other hand, are the potential stressors that an individual teacher has perceived as being a threat to his or her well-being or self-esteem. They also emphasize the point of perception or appraisal, individual differences and coping strategies. Appraisal refers to how potential stressors in the teachers’ working environment are perceived, that is, whether they are perceived as constituting a threat to one’s well-being or not. Lazarus (1995:6) refers to this as primary appraisal. This perception will largely depend upon the personal characteristics of the individual teacher such as his/her personality, demographics, attitudes, values systems and ability to cope with the demands encountered in the workplace. Coping strategies are the attempts than an individual teacher makes in order to reduce a perceived threat. Lazarus (1995:6) refers to this as secondary appraisal. If the individual teacher’s coping mechanisms fail, teacher stress occurs.

According to Kyriacou and Sutcliffe (1978a:5) teacher stress describes an individual teacher's response of negative affect that has corresponding psychological, physiological and behavioural reactions. If nothing is done to reduce stress, chronic symptoms are the result, that is, feelings of negative affect that are both persistent and prolonged and have extreme psychological, physiological and behavioural reactions.

Kyriacou and Sutcliffe's definition of teacher stress is perhaps one of the most well-cited and influential of the contemporary definitions. The definition reveals that the issue of teacher stress is one of a complex 'interaction' of factors, whose result may well be the negative feelings that are associated with stress. A vital assumption inherent in these authors' definition is that an important contributory factor in the experience of stress in teachers is not only on the aspects of the job, but also on elements of the individual teacher - emphasising the individual subjective perception of work experience and supporting the 'transactional approach' (Laughlin, 1984:7). This has a bearing on the present study, which intends to investigate the role of personality characteristics in teachers' perception of the potential sources of occupational stress.

The interactional model of teacher occupational stress will be adopted for the present study because it emphasizes the importance of individual differences in the perception of potential stressors in the work place. It also conceptualizes occupational stress as an interaction between the person and his/her environment, which means that understanding of both the person and the work environment is important. Following the interactive model of stress, Travers and Cooper (1996:36) emphasise that if we want to alleviate stress

at the teacher level or at the level of the school, we need to understand both the aspects of the individual teacher that have an effect on the response to stress, and the aspects of the school that may exacerbate stress.

2.4 BURNOUT SYNDROME

There seem to be two separate developments in the field of teacher stress, namely, those studies which focus on 'occupational' stress and those that explore 'burnout'. For inexplicable reasons, these two orientations are perceived as distinct, with few overlaps in terms of literature integration or measurement, even though they are assessing the same phenomena, albeit by exploring different dependent or strain variables. This is highlighted by Chan and Hui (1995) in an article which adopts an occupational stress slant (Cooper, 1995:20).

From the time it was first identified by Freudenberger in 1974, burnout has been identified as a separate phenomenon to stress, but stress and burnout research have progressively overlapped. Burnout may be identified as a type of chronic response to the cumulative long-term negative impact of work stress. Burnout may be defined as a reaction to job-related stress that varies in nature with the intensity and duration of stress itself, resulting in workers becoming emotionally detached from their jobs altogether (Capel 1987:279). Teacher burnout is the syndrome resulting from prolonged teacher stress, primarily characterised by physical, emotional and attitudinal exhaustion (Kyriacou, 1987:146; Capel, 1991:36).

Maslach (1982:3) defines burnout as a syndrome of *emotional exhaustion, depersonalization and reduced personal accomplishment* that can occur among individuals who do 'people work' of some kind. It is a response to the chronic emotional strain of dealing extensively with other human beings, particularly when they are troubled or having problems. Thus, it can be considered as one type of stress. Although it has some of the same deleterious effects as other stress responses, what is unique about burnout is that the stress arises from the social interaction between helper and recipient, the teacher and pupil in the case of the present study. A pattern of emotional overload and subsequent emotional exhaustion is at the heart of the burnout syndrome. A person (teacher) gets overly involved emotionally, over extends himself or herself and feels overwhelmed by the emotional demands imposed by other people (pupils). The response to this situation, and thus one aspect of burnout is *emotional exhaustion*. People (teachers) feel drained and used up. They lack enough energy to face another day. Their emotional resources are depleted and there is no source of replacement.

It seems that burnout is a response to or a consequence of stress which has not received therapeutic intervention for a long time. It is considered as a type of stress which emanates from social interaction. According to this definition it seems that burnout manifests itself through emotional exhaustion, depersonalization and reduced personal accomplishment when dealing with people.

Once emotional exhaustion sets in, people (teachers) feel they are no longer able to give of themselves to others (to pupils). One way in which people try to get out of their emotional burden is by cutting back on their involvement

with others. They want to reduce their contact with people to the bare minimum required to get the job done. Consequently, their dealings with people are strictly by the book and they respond to the category of people rather than the individual. By applying a formula, rather than a unique response, they avoid having to get to know the other person and becoming emotionally involved. This petty bureaucratic routine is one of the many ways people detach themselves psychologically from any meaningful involvement with others. This detachment puts some emotional distance between oneself and the people whose needs and demands are overwhelming (Maslach, 1982:3).

The development of detachment, signals a second aspect of the burnout syndrome called *depersonalization*. In depersonalization, it is though the individual is developing a poor opinion of other people, expecting the worst from them, and even actively disliking them. Feeling negatively about others can progress until one feels negative about him/herself. Caregivers (teachers) feel distress or guilt about the way one thought about or mistreated others (pupils). One senses that he or she is turning into the very type of person, that is, cold and uncaring, and who is not liked much. At this point, a third aspect of burnout syndrome appears, that is, a feeling of *reduced personal accomplishment*. Providers (teachers) have a gnawing sense of inadequacy about their ability to relate to recipients (pupils), and this may result in a self-imposed verdict of failure (Maslach, 1982:4-6).

On the basis of the three aspects of the burnout syndrome, Maslach and Jackson (1981) developed a standardized scale measure, the Maslach Burnout Inventory (MBI). The MBI measures the three aspects of the burnout

syndrome, that is, emotional exhaustion, depersonalization and reduced personal accomplishment. This scale measure has been used in the studies of teacher burnout (Iwanicki & Schwab, 1981; Pierce & Molloy, 1990; Capel, 1991; Chan & Hui, 1995).

The difference between stress and burnout seems to be embedded in the conceptual models of these two concepts. While stress is conceptualised in terms of stimulus-based, response-based or interactional/transactional models, burnout is conceptualised in terms of emotional exhaustion, depersonalization and reduced personal accomplishment. Stress manifests itself psychologically and behaviourally as well as physiologically. Emotional exhaustion, which is the core of burnout is, however, traditionally regarded as a stress related variable.

2.5 EMPIRICAL STUDIES ON TEACHER OCCUPATIONAL STRESS

The studies which were carried out in South Africa used whites as subjects of study of occupational stress (Rigby, Bennet & Boshoff, 1996; Van der Linde, 1992; Marias, 1992; Buwalda & Kok, 1991; Beard, 1990). To the writer's knowledge, there are no studies of black teachers' occupational stress in this country, except for a recent one conducted in the former homeland of Transkei (Mwamwenda et al., 1997).

Investigations on teacher occupational stress have been carried out world wide and they are pertinent to our situation in this country. Most of the studies have been conducted in Britain. This study will review literature on

empirical studies of teachers' stress and work-related factors; the relationship between personality factors and stress factors and the relationship between biographical characteristics of teachers and stress.

2.5.1 TEACHERS' STRESS AND WORK-RELATED FACTORS

The demands facing teachers have changed quite drastically with the emergence of the South African schools Act (1996). Among other demands, the curriculum 2005, with its 'Outcomes Based Education' (OBE) leads to greater responsibility being imposed upon teachers, for example, continuous assessment of the learners' progress without the emphasis of passing or failing them. In terms of the National Qualifications Framework (NQF) teachers have to teach learners of any age, with any level of education and regardless of their circumstances (Bhengu, 1997:4). The latter point implies that teachers have to teach the learner even if he or she needs special education. Other educational changes such as the abolition of corporal punishment; right sizing policy; school governance policy and many others, add fuel to the fire because they demand that teachers should quickly adjust themselves to be in line with such changes.

The major problems facing teachers are due to the fact that the increases in responsibility, have not adequately been accompanied by appropriate changes in facilities and training, to equip teachers to deal with these new demands. Consequently, teachers may feel threatened by the new demands, thus feeling stressed. Changes in education have been identified as a major factor among sources of stress for teachers in Britain (Cox, Boot, Cox & Harrison, 1988; Travers & Cooper, 1996). It is not only change, but change-on-change

beyond the control of most teachers, that is a cause of stress. In the province of KwaZulu-Natal alone, about 3000 teachers took voluntary severance packages. It is also reported that many teachers are feigning illness with the help of a small group of doctors as a way of getting early retirement packages (Sunday Tribune, 1997:1; Mercury, 1997:1). These may be signs that some teachers find educational changes a major factor among sources of occupational stress in this province.

Various studies have been conducted worldwide with the aim of identifying major work-related stress factors. In what is probably the first study which focused exclusively on the sources of stress in the comprehensive school context, Kyriacou and Sutcliffe (1978b) asked their sample of 257 teachers in 16 medium sized, mixed schools to rate each of the 51 items regarding sources of stress to the question: "as a teacher, how great a source of stress are these factors to you?" A five point scale labelled 'no stress', 'mild stress', 'moderate stress', 'much stress' and 'extreme stress' was used. Results of the analysis of each item showed that of the 51 sources of stress, four factors emerged. These factors were labelled 'pupil misbehaviour', 'poor working conditions', 'time pressures' and 'poor school ethos' (Borg, 1990:103). These factors were also identified by other researchers in other countries (Laughlin, 1984; Payne & Furnham, 1987; Okebukola & Jegede, 1989; Borg & Riding, 1991).

While the pupil misbehaviour factor covers such aspects as dealing with pupils who continually misbehave and poor work attitudes of pupils, the time demands factor is composed of sources of stress like having to cover the syllabus in the time available, lack of time for marking and lesson

preparation. The poor working conditions factor typically encompasses items dealing with aspects of professional development such as poor career structure, that is, chances of promotions, inadequate salary, poor school facilities such as large classes and shortage of equipment. The poor school ethos factor on the other hand, includes aspects like an inadequate school disciplinary policy and lack of opportunity to express one's point of view in the school decision making (Borg & Riding, 1991:356).

These factors are pertinent to the South African situation, especially to historically black schools. For example, there is great concern and a campaign about cultivating the culture of learning among the black youth in schools. This campaign stems from awareness that most black pupils show a lack of interest in their school work. This becomes evident as they misbehave in various ways such as roaming around town during school hours, failing to do homework, resisting punishment from teachers and not obeying teachers' instructions in general (Mercury, 1998:1). The pupil misbehaviour factor is becoming a thorn in the flesh in the South African context because corporal punishment is no longer permitted. Teachers from historically black schools have been relying more on this type of punishment than on any other form. Therefore, with the abolition of corporal punishment, dealing with pupil misbehaviour might be stressful to them.

Conditions under which black teachers work in schools are demoralising as the black teacher has to cope with poor physical conditions like overcrowding, inadequate equipment and lack of adequate facilities (Ngidi, 1995:60-61). This is a result of disparities in financial provision during the apartheid era in South Africa. The poor working conditions factor, might

therefore be a major source of stress for teachers in this study. Poor physical conditions such as overcrowding may in turn lead to problems of teachers having to cover the syllabus in the time available, lack of time for marking and lesson preparation. Therefore, the time pressure factor may be relevant to the present study. In some schools principals are authoritative, such that teachers have to take orders instead of taking part in the decision making process. Consequently, the relations between teachers and the principal become tense. With the abolition of corporal punishment in South African Schools, there might be no other effective disciplinary measures to be used. This may perpetuate pupils' misbehaviour in schools. The poor school ethos factor might therefore be a source of stress among teachers in this study.

Kyriacou and Sutcliffe's (1978b) style of questionnaire has been utilized by other authors and some of the items were derived from their work (Laughlin, 1984; Payne & Furnham, 1987; Okebukola & Jegede, 1989; Borg & Riding, 1991). Therefore, Kyriacou and Sutcliffe can be regarded as the researchers who broke the ice in the field of identifying sources of work-related stress among teachers. Although their study was conducted in Britain, it however laid the foundation and served as a guide for researchers in other countries in their attempt to identify sources of teachers' stress in their own countries.

In Australia, Laughlin (1984) used a style of questionnaire similar to that of Kyriacou and Sutcliffe to measure teacher stress in an Australian setting. One of his aims was to identify major sources of teacher stress. To this end 20 items commonly regarded as sources of teacher stress, were used on a sample of 493 teachers from a total of 57 schools, that is, 23 secondary schools and 34 primary schools. Results revealed four factors. Three of these factors were

similar to those of Kyriacou and Sutcliffe and were labelled: 'Pupil recalcitrance', similar to pupil misbehaviour; time or resource difficulties, similar to time pressures; 'Professional recognition needs', similar to poor working conditions; and curriculum demands (Laughlin, 1984:11). Dealing with pupils' misbehaviour; management of time and conditions under which teachers work, are therefore the major sources of stress in British and Australian settings.

In another study which was conducted in Barbados in the West Indies (Payne & Furnham, 1987) a style of questionnaire similar to that of Kyriacou and Sutcliffe (1978b) was also used. In this study, a sample of 444 teachers from 14 of the 21 state secondary schools was drawn. Teachers were asked to rate each of 36 work-related items on a five point scale, in terms of the extent to which each item caused them stress. The aim was to identify major stress factors. Results revealed eight factors. These factors were labelled: 'time pressure or time management'; 'authority structure'; 'student behaviour'; 'professionalism'; teacher confidence or competence'; bureaucratic interference; 'staff relations' and 'working conditions'. Four of these factors are similar to those of Kyriacou and Sutcliffe (1978b). These are: time pressure or time management; student behaviour; working conditions and authority structure. Therefore, work-related stress factors experienced by teachers in Britain, Australia and the West Indies are common.

A study conducted in Malta (Borg & Riding, 1991) aimed at presenting a model of the dimensional structure underlying the sources of stress for secondary school teachers, and to determine whether this factor structure is fundamentally different from that reported in literature. One of the objectives

of this study was to identify major stress factors. To this end, an inventory of 35 items covering a wide range of stress in teaching, derived mainly from Kyriacou and Sutcliffe (1978b) were used. A style of questionnaire similar to that of Kyriacou and Sutcliffe was also used. The sample of this study comprised of 545 secondary school teachers. Results showed that four factors were extracted. These factors were labelled 'pupil misbehaviour'; 'poor working conditions'; 'time pressure' and poor staff relations (Borg & Riding, 1991:363-364). The first three factors were therefore similar to those of Kyriacou and Sutcliffe (1978b).

Although most studies on teacher occupational stress were conducted in Europe, a few were also conducted in Africa. For example, in Nigeria, a remarkable study was conducted (Okebukola & Jegede, 1989) on determinants of occupational stress among teachers. One of the aims of this study was to find out those events, objects or circumstances that are perceived by teachers in Nigeria to be stress factors within the context of their being engaged in the teaching profession.

Using Kyriacou and Sutcliffe's (1978b) style of questionnaire, 1024 teachers were used to collect data on a 31 item self-report inventory called 'Occupational Stress Inventory for Teachers' (OSIT). Results revealed five major work-related factors. These factors were labelled: 'stress factors due to student characteristics'; 'stress factors due to teacher characteristics'; 'stress factors due to school environment'; 'stress factors due to administrative procedures' and 'stress factors due to the conditions of service' (Okebukola & Jegede, 1989:25). These factors are not different from those already identified (Kyriacou & Sutcliffe, 1978b; Laughlin, 1984; Payne

& Furnham, 1987; Borg & Riding, 1991). Student characteristics are similar to pupil misbehaviour; teacher characteristics to time pressures; school environment to poor working conditions; administrative procedures and conditions of service are both similar to poor school ethos.

A recent major nationwide study of stress among UK teachers has been conducted (Travers & Cooper, 1996). The aim of this study was to assess the extent and sources of teacher stress throughout England, Wales, Scotland and Northern Ireland. After conducting 40 interviews in seven schools, a questionnaire of 98 items dealing with sources of pressure was designed. The sample of this study was composed of 1790 teachers. Teachers had to use a six-point Likert-type scale to rate the items in terms of their degree of pressure in their roles as teachers. Through factor analysis, 10 separate teacher stress factors were identified. These factors were given subjective names for convenient references: Pupil/teacher interaction; management/structure of the school; class sizes/overcrowding; changes taking place in education; appraisal of teachers; concerns of management; lack of status/promotion; 'cover' and staff shortages; job insecurity and ambiguity of the teacher's role. The findings also reveal that the items under changes taking place in the education factor, namely, lack of information as to how the changes are to be implemented; the constant changes taking place within the profession and the move towards a national curriculum, were rated second, third and fifth respectively. This indicates that changes in education are regarded as one of the major sources of teacher stress.

It is apparent from the aforementioned studies that sources of work-related stress are somehow common across countries. However, it is worth

mentioning that in spite of commonality in sources of teacher stress related to teachers' work, it has become difficult to have a reliable and valid standardized instrument to measure and compare teacher stress across countries and across cultural groups. One of the reasons may be that people perceive and respond to the same stimulus differently, as a function of their personality or psychological make-up (Chan, 1995:383).

2.5.2 TEACHERS' STRESS AND PERSONALITY FACTORS

The area of study of personality and occupational stress is a minefield for researchers in various disciplines. The literature on this aspect is found in abundance (Amirkhan, Risinger & Swickert, 1995; Hart, Wearing & Heady, 1995; Topf, 1989; Evans, Palsane & Carrere, 1987; Krause & Stryker, 1984). Several writers remark that the response of a teacher to the demands made upon him/her, will depend upon the interaction between the teacher's individual characteristics, such as personality traits, and the teacher's perception of these demands (Kyriacou 1980a:125; Fontana & Abouserie 1993:262; Travers & Cooper 1996: 68). Kyriacou and Sutcliffe (Boyle et al., 1995:50) also pointed out that intrapersonal characteristics, such as enduring personality traits, may interact with an individual's perceptions of the stressful stimuli, so that stress reactions will vary among individuals, even when the objective external conditions are the same. When individuals are exposed to stressful stimuli, personality dispositions play a mediating role in the onset of stress reactions (Boyle, 1983; Evans, 1986; Grossarth-Maticek, Eysenck & Boyle, 1994; Krohne, 1990; Ormel & Wohlfarth, 1991). Clearly, there are considerable individual differences in terms of personality, in susceptibility to stress.

There are several dimensions of personality used to understand the role of personality in stress. These include: Extraversion-Introversion (E); Neuroticism (N), Psychoticism (P); Type A behaviour; Locus of control and the "Hardy" personality. However, it will be of benefit to discuss the first two dimensions, namely, extraversion and neuroticism because they will be used in the present study. These personality dimensions are selected because it is not practically possible to include all personality factors in this study. Should they all be included, it will be impossible for teachers to complete the questionnaire in a reasonable time. Moreover, literature shows that most research studies on stress and personality factors, emphasize these two dimensions. Therefore, literature on them is readily available. Eysenck and Eysenck (1975:7) also maintain that "while not wishing to deny the existence and importance of factors additional to E and N, we believe that these two factors contribute more to a description of personality than any other set of two factors outside the cognitive field". Eysenck (1967) describes personality in terms of 'type' or second higher order factors, where 'type' is defined as a group of correlated traits. Traits are simply described as groups of correlated behavioural acts or action tendencies (Sutherland & Cooper, 1990:67).

Although there is still a need for consensus on the structure of personality, the extraversion - introversion dimension consistently emerges as an enduring personality characteristic of the individual. This dimension of personality is regarded as one of the most salient aspects of individual differences (Mathews, 1992:95; McCrae & Costa, 1986:393). A typical extravert is seen as sociable, cheerful, talkative, lively and outgoing, with sociability in particular, capturing the essence of the disposition. On the other hand, the

introvert is quieter, shy, more withdrawn and unsociable. Extraverts are generally more able to deal with stressful situations than introverts (Amirkhan et al., 1995:192; Eysenck & Eysenck, 1975:9). A low scorer in the extraversion scale in this study would typically be more prone to stress.

A measure of the emotionality dimension of personality, neuroticism, is contrasted by Eysenck and Eysenck (1975:9) with emotional stability. A high scorer in the neuroticism scale in this study, would typically be prone to stress, that is, anxious, worrying, overly reactive, react in an irrational and rigid ways in his/her responses.

In one word, a person who scores high on neuroticism may be described as a worrier. That is a constant preoccupation with things that might go wrong, and a strong emotional reaction of anxiety to these thoughts.

Furnham (Sutherland & Cooper, 1990:72) found that neurotic individuals tend to avoid stimulating, active and unusual situations more than stable individuals, and that in intimate, interpersonal situations, attempts are made to reduce the level of intimacy by gaze avoidance. Although shyness is associated with anxious behaviour, Eysenck (1967) postulates two distinct forms of social shyness, namely, introverted shyness and neurotic shyness. Introverted shyness stems from the preference of being alone, although the introvert is capable of functioning effectively in company. On the other hand, a neurotic individual may desire the company of others but is also fearful of it, because of worriers of inadequacy. In the work environment, neurotics and neurotic introverts are the most susceptible to stressful situations (Sutherland & Cooper, 1990:73). Since neurotic individuals in general, and neurotic

introverts in particular, are susceptible to stress, it might be that people would prefer jobs that involve minimal stress (Furnham, 1992:73). If that was the case with teachers, studies would not be reporting that teachers experience relatively high levels of occupational stress.

The implication of the two dimensions of personality is that teachers who score high on neuroticism and low on extraversion scales will find teaching stressful. Generally speaking, results indicate that teachers who report greater stress, tend to be introverts and neurotics (Borg & Riding, 1993:27).

Attempts have been made by other authors to establish the relationship between personality factors and self-reported teacher stress. Pratt (1976) in his study of 124 primary school teachers in the United Kingdom (UK) employed the Eysenck Personality Inventory and reported a strong relationship between his measure of reported stress and both neuroticism (emotionality) and extraversion (Kyriacou, 1980a:125). Fontana and Abouserie (1993) in a study they carried out on 95 teachers in Wales, also employed the Eysenck Personality Questionnaire and reported a significant positive relationship between teacher stress and both neuroticism and psychoticism. A strong negative relationship between teacher stress and extraversion was reported, which suggests a positive relationship between introversion and teacher stress (Fontana & Abouserie, 1993:264). Although studies on the relationship between personality factors and teacher stress have been conducted, very few, if any have attempted to identify exactly how personality characteristics interact with specific stress factors. To this end, Fontana & Abouserie (1993:266) suggest that "it would be appropriate to explore whether a characteristic like introversion interacts particularly

unfavourably with issues of classroom control, or whether psychoticism interacts unfavourably with issues of inter-personal relationships or whether neuroticism interacts unfavourably with a perceived need for perfectionism.” The present study intends to establish whether there is a relationship between work-related stress factors and personality factors, namely, neuroticism and extraversion - introversion.

2.5.3 THE RELATIONSHIP BETWEEN TEACHERS’ STRESS AND BIOGRAPHICAL CHARACTERISTICS

Researchers from countries like Australia, Britain, Malta, the West Indies and Nigeria have conducted studies with the aim of establishing the effects of various teachers’ biographical variables such as sex, teaching experience, qualification and rank, on their perception of work-related stress factors (Laughlin, 1984; Kyriacou, 1987; Borg & Riding, 1991; Payne & Furnham, 1987; Okebukola & Jegede, 1989). These studies are different from previous investigations which tended to compare groups of teachers, either on the basis of overall stress scores or by examining data item by item. Both these methods have led researchers either to dismiss completely the relevance of biographical variables or to conclude that their influence is confused and probably less important than that of psychological variables such as personality. A typical example of such studies in South Africa is the one recently conducted (Mwamwenda et al., 1997). The aim of their study was to examine the extent to which secondary school teachers in the former homeland of Transkei experience stress in their profession. By comparing groups of teachers according to sex, rank and qualification, on the basis of overall stress scores, as well as by examining data item by item, they

concluded that the three variables of sex, rank and qualification have no influence on teachers' reported levels of stress. If a specific group of teachers could be identified as most likely to be affected by a particular stress factor, then possible action to remedy the situation would be more readily facilitated (Laughlin, 1984 : 12; Payne & Furnham, 1987:148).

With regard to the main effects, female teachers tend to report greater stress due to pupil recalcitrance/student behaviour/pupil misbehaviour; school environment/time management/resource difficulties (Laughlin, 1984:12; Payne & Furnham, 1987:144; Borg Riding & Falzon, 1991:69; Okebukola & Jegede, 1989:26).

The possible reasons why more females than males report stress due to these factors are elusive. There is no reason to believe that as a group, female teachers in particular are less effective than males in controlling and managing a class. Indeed, it may well be that females are less autocratic than males, or perhaps they tend to be more conscientious such that what goes on in their classroom is more a source of concern to them. It is also possible that the findings that female teachers report more stress than males, is due, for example, to less willingness on the part of male teachers to admit that they worry about such aspects of their work. Alternatively, it may well be largely a reflection of classroom realities, that is, students may, in fact, give their female teachers more trouble (Payne & Furnham, 1987:148; Borg et. al., 1991:72-73).

In their study (Okebukola & Jegede, 1989:27) aimed at establishing the influence of teachers' biographical variables such as sex, teaching experience

and qualification (degree in education, degree without education, no degree) on their perception of the degree of stress they experience from work-related factors, they found that student characteristics (pupil recalcitrance/students behaviour/students misbehaviour and conditions of service /professional recognition needs) bring about the greatest degree of stress, particularly to those teachers who have degrees, but no teaching qualifications. This category of teachers, with degrees but without professional qualifications, was least stressed by administrative procedures, a factor which brings more stress on non-degree holders. With regard to students characteristics, this may imply that the graduate teacher without professional qualifications is unprepared for the job of teaching and would perceive a great deal of stress from students' improper behaviour. Regarding conditions of service, the finding may imply that promotions are likely to be awarded to those teachers who have both degrees and teaching qualifications. Concerning administrative procedures, the implications may be that a university degree provides a more flexible training experience and so predisposes teachers to adapt to administrative procedures.

With regard to sex and teaching experience, female and inexperienced teachers were mostly stressed by the school environment factor (Okebukola & Jegede, 1989:29), that is, lack of resources for teaching, having to teach mixed ability classes, having to teach large classes, noise and other disturbances from neighbouring classes, lack of classroom space for group work and a too fast pace of the school. One may conclude that inexperienced teachers are suddenly caught up in the world of reality, that is, different from the world of the training institution. This deduction is based on findings that teachers who have under five and between five and ten years of teaching

experience, reported more stress from professional recognition needs than those who have over ten years of teaching experience (Laughlin, 1984:15). This may imply that teachers with lesser experience are not enjoying promotions than those with greater experience. Okebukola and Jegede (1989:26) refer to this factor as “conditions of service” and it includes inter alia: lack of opportunities for professional development; lack of opportunities to experiment with new ideas; and delay in promotion.

In another study (Payne & Furnham, 1987) the influence of teachers’ biographical variables such as sex, qualifications and teaching experience on the amount and nature of self-reported occupational stress was investigated. The qualifications variable was categorized into teachers with neither a professional training nor a tertiary level of academic qualifications; a pre-degree teacher training certificate only; a degree but no professional training; both a degree and either pre-degree or post-graduate teacher training. Teaching experience was limited to five years or less and six to ten years. Their study revealed that female teachers reported more stress due to student behaviour and time management, than did male teachers. Stress due to time management was also more reported by teachers with greater teaching experience and higher qualifications (Payne & Furnham, 1987:144). This may imply that highly qualified and more experienced teachers carry an additional administrative responsibility.

When considering interaction effects, Payne and Furnham (1987:146) found that no significant interaction effects were apparent in their eight stress factors and teachers’ sex, qualification and teaching experience. Okebukola & Jegede (1989) found that when using total stress scores the main effects

due to qualification, experience, sex, teaching load and marital status were significant, and that all interaction effects among the variables also attained significance.

In a study conducted in Malta (Borg & Riding, 1991), one of the objectives was to investigate whether the amount and nature of stress due to the major stress factors was related to certain demographic variables, such as type of teaching post. The type of teaching post was categorised into two, namely, teaching post I and teaching post II. Teaching post I included those teachers who had teaching duties only, while teaching post II included teachers who had additional responsibilities apart from teaching duties, such as heads of departments. The deputy principals and principals were excluded. The results revealed that teachers who had additional duties, apart from teaching, reported more stress due to “poor working conditions” than did their colleagues who only carry out teaching duties. They were particularly more stressed than their colleagues by such aspects as “inadequate salary”, “covering lessons for absent teachers” and “too many periods of actual teaching”. It would therefore appear that the additional duties these teachers have to perform, make their job more stressful. It also seems they feel that the benefits they get in return, are not commensurate with responsibilities and the amount of work that these additional duties entail.

Those teachers who had teaching duties only, reported more stress from “pupil misbehaviour” than did neither colleagues who had additional responsibilities apart from teaching duties. These findings concur with those reported in other studies (Laughlin, 1984). It would appear that teachers who have additional duties are those in promotions positions, and it should also be

noted that promoted teachers, generally, have reduced face-to-face teaching loads.

The present study intends to determine whether there are any significant effects (interaction effects between the variables and main effects of the variables) between various stress factors and teachers' sex, teaching experience, qualification and rank. This is covered in the last aim of the present study, that is, aim number four.

2.6 CONCLUSION

It has transpired from the preceding review of literature that teacher occupational stress is an international concern. This is mainly due to the negative consequences it might have on the individual teacher, pupils, the teaching profession and education system. Empirical studies on teachers' stress and work-related factors; teachers' stress and personality factors, and the relationship between teachers' stress and biographical characteristics have been provided.

In the next chapter the research design and methodology of the study will be detailed.

CHAPTER THREE

3.0 RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

Literature reviewed in the previous chapter has revealed that the problem of occupational stress among teachers is an international concern. The major concerns stem from the evidence that prolonged teacher stress can lead to both mental and physical ill-health, job dissatisfaction, absenteeism, intention to leave teaching, impaired quality of teaching and working relationships with pupils. While this is the case there appears to be little consensus as to how occupational stress should be measured. This problem emerges from different models used to approach this phenomenon.

This study intends to work towards a model for determinants of occupational stress among teachers in KwaZulu-Natal. To this end, potential sources of stress related to teachers' work in the Republic of South Africa will be relevant. Teachers are expected to rate the potential sources of stress in terms of the extent to which they are stressful to them. Their individual differences in terms of personality and biographical characteristics are also taken into consideration. The approach of this study suits the interactive model which conceptualizes occupational stress as an interaction between the person and the environment, and emphasizes individual differences in the perception of potential stressors in the workplace. "If we want to alleviate the stress at the teacher level or at the level of the school, we need to understand both the aspects of the individual teacher, that have an effect on the response to

stress, and the aspects of the school that may exacerbate stress” (Travers & Cooper, 1996:36).

3.2 AIMS OF STUDY

On the basis of the aims of study, specific objectives can be formulated.

These are:

- 3.2.1 To ascertain the extent to which teachers in KwaZulu-Natal experience stress from work-related factors.
- 3.2.2 To determine whether there is any relationship between teachers’ personality factors, namely, Neuroticism (N) and Extraversion (E) and teachers’ stress levels on work-related factors.
- 3.2.3 To determine which personality factor (s) account (s) better for work-related stress factors.
- 3.2.4 To determine whether there will be any significant effects (interaction effects between variables and main effects of the variables) between sex, teaching experience, qualification, rank of teachers and perception of the nature of work-related stress factors.

3.3 FORMULATION OF HYPOTHESES

The following hypotheses are postulated to fulfil the aims of the investigation:

3.3.1 Teachers do not differ in the extent to which they experience stress from work-related factors.

3.3.2 No relationship exists between teachers' personality factors (N and E) and teachers' stress level on work-related factors.

3.3.3 No personality factor (s) account (s) better for work- related stress factors.

3.3.4 There will be no significant effects (interaction effects between variables and main effects of the variables) between sex, teaching experience, qualification, rank of teachers and perception of the nature of work-related stress factors.

3.4 THE RESEARCH INSTRUMENT

In this field, a questionnaire consisting of work-related items has been used in several studies (Kyriacou & Sutcliffe,1978b; Laughlin,1984; Payne & Furnham,1987; Okebukola & Jegede,1989; Borg & Ridding,1991,1993) as an instrument to measure occupational stress among teachers. To validate items, these studies use factor analysis so as to identify those items that cluster together. However, the researcher is not aware of any study conducted in South Africa where work-related items in a questionnaire have been

subjected to factor analysis.

In what is probably the first study to subject teachers' work-related stress items to factor analysis, Kyriacou and Sutcliffe (1978b) used a sample of 257 British comprehensive school teachers and 51 items. Teachers were asked to rate these 51 items in response to the question "As a teacher how great a source of stress are these factors to you?" A five-point scale labelled 'no stress', 'mild stress', 'moderate stress', 'much stress' and 'extreme stress' was used. The five-point response scale was scored 0 to 4. These authors identified four teachers' work-related stress factors. The four factors were labelled 'pupil misbehaviour', 'poor working conditions', 'time pressures' and 'school ethos'. This type of questionnaire was adopted by researchers in other countries.

In a study conducted in Malta as a step towards a model for determinants of occupational stress among school teachers, 545 secondary school teachers used a scale consisting of 35 items (Borg & Riding, 1991). Teachers were requested to rate 35 items in response to the same question asked in the study conducted by Kyriacou and Sutcliffe (1978b). The same five-point response scale and scoring of responses was maintained. Four factors were identified by Borg and Riding (1991) and three of them, namely, pupil misbehaviour, poor working conditions and time pressures resemble those of Kyriacou and Sutcliffe (1978b).

In Africa, Okebukola and Jegede (1989) conducted a study on determinants of occupational stress among teachers in Nigeria. In their study a sample of 1024 was studied. Using a scale which contains 31 items, these researchers

identified five factors. In Australia, Laughlin (1984) used 20 items on a sample of 493 teachers where four factors were derived. A questionnaire consisting of 36 items and a sample of 444 teachers was used in a study conducted in Barbados (Payne & Furnham, 1987). These researchers identified eight factors.

Although the factors identified by the researchers mentioned above are common, the items used in the instruments are not all identical. Therefore, measuring teacher stress is difficult because there is no widely accepted objective measure of stress. Such diversity used in the measurement of teacher stress makes comparisons of published studies difficult (Kyriacou, 1989:29; Pithers, 1995:389; Pithers & Fogarty 1995:6).

The self-report type questionnaires typically used in teacher stress research, therefore, suffer from problems of validity and reliability because they are not standardised. However, more problematic measurement is the use of an instrument standardised on non-teacher groups such as the Occupational Stress Inventory (OSI) (Osipow & Spokane, 1987; Pithers & Fogarty 1995). In these measures, some items relating to occupational stressors may not be relevant for teachers, and other items specifically relevant to teachers, such as student misbehaviour as a stressor are not included (Chan, 1995:382).

Literature review appraises the researcher about leaning on previous researchers' instruments in this field. "While instrument uniformity in the teacher stress research community has its desirability, investigators should always feel free to modify and improve instruments, and to develop new ones to access conditions and variables more relevant for the teaching profession,

especially when the instruments are applied to organisational or cultural contexts different from the ones for which the instruments were originally designed” (Chan, 1995:383). This assertion serves as a guiding star for the researcher in the present study.

The present study intends to work towards a model for determinants of occupational stress among teachers in KwaZulu-Natal. It would be ideal and convenient to adapt and modify an existing scale than to develop a new one for use in this study. Consequently, the researcher adapted and modified thirty items from the OSIT developed by Okebukola and Jegede (1989) for investigating the determinants of occupational stress among teachers in Nigeria. These items are adapted because they address experiences that are also encountered by teachers in the Republic of South Africa. Twenty, new items were developed by the researcher. These twenty items are numbered 31-50 (Appendix A).

3.4.1 SECTION A OF THE INSTRUMENT

The research instrument consists of two sections. The first section consists of personal particulars and personality (EPQ) scale. The second section consists of the OSIT scale. The first section consists of two parts. The first part, that is, A, concerns teachers’ particulars. The second part, that is, B, contains the Eysenck Personality Questionnaire (EPQ: Junior & Adult).

Teachers’ particulars included are sex, teaching experience, qualification and rank. Research evidence indicates that these variables influence teachers’ perception of stress factors related to their work (Laughlin, 1984; Payne &

Furnham, 1987; Okebukola & Jegede, 1989; Borg et. al., 1991). Teachers in KwaZulu-Natal Province is mixed. There are males and females, those with relatively less teaching experience and those with relatively more teaching experience. Some are underqualified while others are highly qualified. Teachers also differ in ranks. There are assistant teachers, heads of departments, deputy principals and principals. These differences may influence teacher's perception of stress factors related to their work in this study. Hence the variables of sex, teaching experience, qualification and rank are included. The respondent is asked to make a cross in the appropriate box or space provided to indicate his/her sex, teaching experience, qualification and rank.

Several writers remark that the response of a teacher to the demands made upon him/her will depend upon the interaction between the teacher's individual characteristics, such as personality traits, and the teacher's perception of these demands (Kyriacou, 1980; Fontana & Abouserie, 1993; Travers & Cooper, 1996). Therefore, there are considerable individual differences in terms of personality, and in susceptibility to stress. The researcher of the present study wants to establish whether there is a relationship between teachers' personality factors and their level of stress on work-related factors (aim two) and to determine whether there is a personality factor(s) which account(s) for work-related stress factors (aim three). To this end the EPQ scale is selected. This measure consists of four independent scales namely Neuroticism (N), Extraversion (E), Psychoticism (P) and Lie (L), all measuring different dimensions of personality. However, for the purpose of this study, the researcher concentrates only on the N and

E dimensions. This is due to the following reasons:

- (a) It is not possible to include all personality factors in this study.
- (b) Literature shows that these two factors, Neuroticism and Extraversion, are regarded as contributing more to a description of personality than any other set of factors (Eysenck & Eysenck, 1975:7; 1985:20).

The EPQ is a well established measure with extensive normative data for a variety of populations including teachers (Eysenck & Eysenck, 1975:24). It was standardized on 5574 subjects, that is, 2312 males and 3262 females (Eysenck & Eysenck, 1975:18).

The test-retest and consistency reliabilities of the EPQ have been established by the authors using 257 male and female dental students, polytechnic students, social workers, university students, 1000 normals and 1002 prisoners. Reliabilities established were mostly lying in the region of .80 to .90. The authors conclude that the EPQ is not inferior to any other published personality test (Eysenck & Eysenck, 1975:17).

Detailed comparisons of the personality patterns in many different countries where the EPQ has been used, reveal that the vast majority of indices show identity and similarity of factors. Thus, Eysenck and Eysenck (1985:08) conclude that they are strongly in support of the view that essentially, the same dimensions of personality emerge from factor analytical studies of identical questionnaires, in a large number of different countries embracing not only European cultural groups, but also many quite different types of

nations including those in Africa.

These cross cultural studies establish that EPQ dimensions are universal, in the sense of not being restricted to those cultures where they were first isolated, but becoming apparent in many different cultures.

It is the contention of the present researcher that the EPQ can be used with confidence. The use of the EPQ has been extended to the Republic of South Africa (Adendorff, 1997). This author established that internal consistency, as measured by Cronbach's alpha, was .80 for Neuroticism and .67 for extraversion in her sample (Adendorff, 1997:26). A score of either 1 or 0 is assigned to either 'yes' or 'no' to a given question as stipulated in the manual. Due to copyright, the EPQ scale is not included in the Appendix.

3.4.2 SECTION B OF THE INSTRUMENT

Section B of the research instrument consists of the Occupational Stress Inventory for Teachers (OSIT) (Okebukola & Jegede, 1989). This is a five-point scale in which the respondent is asked to indicate the degree of stress caused to him/her by each of the item statements listed. He/she is asked to use the rating scale given to write his/her rating number for each item statement in the box at the end of each item statement. The rating scale given below the instruction and on top of every page is as follows: extreme stress (4), much stress (3), moderate stress (2), mild stress (1), and no stress (0). As stated before, this style of questionnaire was developed by Kyriacou and Sutcliffe (1978b) and adopted by authors in other countries (Laughlin, 1984; Payne & Furnham, 1987; Okebukola & Jegede, 1989; Borg & Riding, 1991).

3.4.3 ITEM ANALYSIS

There is a way of ensuring that items in a scale are homogeneous. This way is factor analysis. Factor analysis yields validity and reliability quotients of the scale (Oppenheim, 1983:138; Allen & Yen, 1979:130; Sibaya, 1991:87). Literature on factor analytic methods is in abundance (Child, 1970; Rummel, 1970; Mulaik, 1972; Gorsuch, 1983; Tabachnik & Fidell, 1983, 1989; Rust & Golombok, 1989). Factor analysis has been used in various studies similar to the present investigation (Kyriacou & Sutcliffe, 1978b; Laughlin, 1984; Payne & Furnham, 1987; Okebukola & Jegede, 1989; Borg & Riding, 1991; Borg, Riding & Falzon, 1991). In this study factor analysis will be used because it is the reliable way of selecting items that are homogeneous.

Since the factor analysis will be used in selecting items to be included in the final scale of this study, the final scale could therefore be regarded as a valid and reliable instrument.

3.5 PLANNING FOR ANALYSIS OF DATA

The first aim of this study is to ascertain the extent to which teachers in KwaZulu-Natal generally experience stress from work-related factors. In an attempt to determine the extent to which teachers generally experience stress in teaching, several researchers have used a one-item measure of self-reported teacher stress. In this single-item measure, teachers were requested to rate their responses to the question "in general, how stressful do you find being a teacher?" A five point-scale labelled 'not at all stressful', 'midly stressful', 'moderately stressful', 'very stressful', and 'extremely stressful'

was used. Responses were scored from zero to four (Kyriakou & Sutcliffe, 1977a, 1978b, 1979a, 1979b; Laughlin, 1984; Borg & Riding, 1991).

Instead of using a single item for gross examination of perceived stress in teaching, the present researcher creates stress level categories based on a number of items, the reason being that several items are more likely to be reliable than a one-item measure. In a study conducted in South Africa, Mwamwenda, Monyooe and Glencross (1997), used a questionnaire consisting of 30 items to examine the extent to which secondary school teachers in the former homeland of Transkei experience stress in their teaching profession. A sample of 134 teachers who volunteered to take part in the study, were requested to respond to each statement on a five-point format scale. Responses were placed along a continuum from Strongly Disagree (scored 1) to strongly Agree (scored 5). The range distribution of total stress scores showed that the majority of teachers experience average stress. A good example of stress level categories are those reported in a study on 'stress levels, gender and personality factors in teachers' (Fontana & Abouserie, 1993). These authors used a scale consisting of forty five items covering many aspects of professional life. Their scale yields a total professional stress score subdivided into four equal intervals (stress level categories). These stress level categories are labelled 'low stress' (score 0-17), 'moderate stress' (score 18-34), 'serious stress' (score 35-51) and very serious stress' (score 52-68) (Fontana & Abouserie, 1993:263).

Four stress level categories will be devised in this study for the first aim. These categories, in their ascending order are labelled: Low stress level; moderate stress level; high stress level and very high stress level. They will

be devised by grouping the whole sample's total scale scores into four class intervals. An individual's stress level score is determined by one's total score in the whole scale, and it falls within any of the four devised stress level categories. The number of items included in the final study will determine an individual's total score. It will also determine the size of class-intervals for the four stress level categories (with zero as a possible lowest score for the low stress level category). In this way it is easy to count the number of teachers in each stress level category.

To this end, the chi-square one sample test will be used to ascertain the extent to which teachers generally experience stress from work-related factors. The chi-square test is the most frequently used non-parametric statistical test of significance. The chi-square test of significance is used when the investigation concerns category variables, that is, comparing how many members of a sample fall into each one of a number of descriptive categories.

The chi-square test is concerned with comparing differences in the actual (observed) frequencies (counts) with the expected frequencies. The chi-square test tells us the extent to which an observed set of frequencies differs from the frequencies that are expected (Orlich, 1978:145; Borg & Gall, 1983:559; Behr, 1988:79).

The second aim of this study is to determine whether there is any relationship between teachers' personality factors, namely Neuroticism (N) and Extraversion (E) and teachers' stress levels. For example, whether high scorers on neuroticism also score high on pupil misbehaviour. Since both the EPQ and the OSIT scales are expressed as two sets of continuous scores

(using total factor raw scores), calculation of the Pearson product moment correlation coefficient (r) between the EPQ (N and E dimensions) scores and the OSIT factors or subscales scores is possible. Factor or subscale scores are obtained through summation of individual item total scores comprising a factor or a subscale.

The Pearson product moment correlation coefficient (r) is used when both variables that are correlated are expressed as continuous scores. In the two sets of continuous scores, each individual has a score on each of the two sets (Borg & Gall, 1983:586; Bless & Kathura, 1993:284).

The third aim of this study is to determine which personality factor(s) account(s) better for work-related stress factors. In this study, personality factors act as independent variables, while each work-related stress factor or subscale acts as a dependent variable. Therefore, stepwise regression analysis would be suitable for determining predictive influences of personality factors on a particular work-related stress factor. The interest is on the percentage of variance contributed or accounted for by personality factors (N and E) to each work-related stress factor or subscale.

Stepwise (statistics) regression analysis is typically used to determine the independent variables that are useful in predicting the dependent variable. The computer program searches for the order in which the best predictor variables (independent variables) are to be entered into the regression analysis. Hence, in regression there are several variables on one side of the equation and one variable on the other side (Borg & Gall, 1983:599; Tabachnick & Fidell, 1989:145).

The fourth aim of this study is to determine whether any significant effects exist between the various work-related stress factors and sex, teaching experience, qualification and rank. To this end, Anova or F-test, which is the analysis of variance where more than two group means are compared will be used. Group means will be compared so as to see whether the means of groups across each work-related stress factor or subscale, are similar or different, and if there is any interaction between the groups. The purpose of the analysis of variance in Anova is to determine whether groups differ significantly among themselves, and whether there is any interaction between them (Borg & Gall, 1983:549-552).

3.6 SAMPLE DESIGN AND SAMPLING PROCEDURE

Previous studies on teacher stress have focused on either primary school teachers (Pratt,1978; Borg, Riding & Falzon,1991; Boyle, Borg, Falzon & Baglioni,1995; Chaplain,1995; Cockburn,1996) or on secondary school teachers (Payne & Furnham,1987; Borg & Riding,1991,1993). Others have included both primary and secondary schools (Laughlin,1984; Okebukola & Jegede,1989; Fontana & Abouserie,1993). In fact, most studies have investigated sources of occupational stress for teachers in primary and secondary schools, without distinguishing between the two contexts (Borg,1990:109). Therefore, the focus on the type of school (s) from which the sample of teachers is to be drawn is a researcher's choice. The subjects for this study will be drawn from state secondary school teachers. The reason is that the nature of some items in the questionnaire, designed by the researcher capture secondary school teachers' experiences.

Studies on teacher stress use simple random sampling procedures to select schools from which a sample of teachers is to be drawn (Kyriacou & Sutcliffe, 1978b; Laughlin, 1984; Okebukola & Jegede, 1989). In England, Kyriacou and Sutcliffe (1978b) used an Education Authorities Directory to randomly select 16 mixed comprehensive schools from which a sample of 257 teachers was drawn. In Australia, Laughlin (1984) used the New South Wales (NSW) Department of Education list to select a total of 57 schools from which a sample of 493 teachers was drawn.

The aim of the present study is to work towards a model for determinants of occupational stress among teachers in KwaZulu-Natal. KwaZulu-Natal province is about 92, 180 square kilometers big in size and consists of eight regions. These regions, in their alphabetical order, are: Empangeni; Ladysmith; North Durban; Pietermaritzburg ; Port Shepstone; South Durban; Ulundi and Vryheid. A list of schools in each region was obtained. In order to ensure that the results are not biased, each region was sampled. Stratified random sampling was used to select a proportional number of secondary schools from each of the eight regions. Therefore, there were 24 randomly selected schools. These twenty four selected schools were used for drawing a sample of teachers for the main study. Using 25 as an estimate average number of teachers per school, a total of about 600 teachers were included in the sample for the final study. The pilot study was conducted among teachers from secondary schools in the Empangeni region. These schools were not used in the final study sample for the main study.

3.7 PLANNING FOR ADMINISTRATION OF THE RESEARCH INSTRUMENT

This study was conducted in the form of a field study. The procedure which was followed is outlined below:

- (a) A letter requesting permission to conduct research in selected schools was forwarded to the Superintendent-General of the Department of Education and Culture in KwaZulu-Natal.
- (b) Copies of the letter of approval were made and they accompanied the questionnaires to teachers for the attention of the principals concerned. Arrangements were made with principals, either telephonically or in writing, to send envelopes, each containing a questionnaire, a covering letter and a stamped addressed envelope for distribution to teachers.
- (c) A pilot run of the research instrument was done before the final study. This helped in highlighting problem areas and to select relevant items for use in the final study.

CHAPTER FOUR

4.0 EMPIRICAL STUDY, PRESENTATION AND ANALYSIS OF DATA

4.1 INTRODUCTION

In chapter three, a detailed account of the research design and methodology was given. Chapter four, details field work procedures for both the pilot study and the final study; the analysis and interpretation of data. The hypotheses postulated in chapter three are also tested in this chapter. The purpose of conducting a pilot study was mainly to validate 50 OSIT items. For both the pilot and final studies the researcher administered the research instrument with the aid of research assistants.

4.2 THE PILOT STUDY SAMPLE

The pilot study, as already mentioned in the sampling design in chapter three, was conducted among secondary school teachers in Empangeni region. Teachers from the schools which were used for the pilot study were not included in the study sample for the main study.

4.3 ADMINISTRATION OF THE RESEARCH INSTRUMENT IN THE PILOT STUDY

TABLE 4.1 DISTRIBUTION OF SUBJECTS IN THE PILOT STUDY
(N=312)

Criteria	Levels			
Sex	Male		Female	
	136		176	
Teaching Experience in years:	0-4	5-9	10+	
	135	107	70	
Qualification	Degree with Teachers' Diploma/Certificate	Degree without Teachers' Diploma/Certificate	Teachers' Diploma/Certificate	Privately paid Teacher
	158	22	119	13

While supervising practice teaching, the researcher met with teachers. It was an opportune moment for administration of the instrument. In each school, the researcher was assisted in distributing and collecting questionnaire by students who were doing practice teaching. No time limit was given to complete the questionnaire. Teachers did not experience any problems regarding instructions which accompany the questionnaire.

4.4 RESULTS OF THE PILOT STUDY

Returned questionnaires were screened and inaccurately completed ones were discarded. Three hundred and twelve questionnaires were accurately filled in and therefore used in the analysis of data for the pilot study. Using guidelines for sample sizes, 312 is regarded as good. The ratio of 6.24 to 1 ($312 \div 50$)

complies with guidelines set out by authors (Tabachnick & Fidell, 1989:603). The SAS computer programme was used for analysing data.

4.4.1 FACTOR ANALYSIS FOR 50 OSIT ITEMS

Factor analysis is used in test construction to help determine whether a set of items is homogeneous and to select items that are homogeneous (Allen & Yen, 1979:130). In the questionnaire consisting of 50 items, the researcher intended to measure five factors. Hence factor analysis was used to identify items which belong to a particular factor and to label those factors.

TABLE 4.2 VARIMAX ROTATED FACTOR PATTERN: FACTOR
LOADINGS OF THE 50 ITEMS.

Item	Factor					Estimated	
	1	2	3	4	5	Communality	
1	.19	.13	.14	.16	.57	.42	
2	.17	.23	.15	.10	.57	.43	
3	.15	-.03	.02	.03	.58	.36	
4	.14	.30	.14	.14	.50	.40	
5	.09	.36	.08	.22	.44	.39	
6	.24	.42	.02	.11	.22	.30	
7	.13	.50	.12	.13	.22	.34	
8	.24	.57	.03	.10	.03	.39	
9	.15	.69	.05	.21	.07	.55	
10	.24	.51	.11	.04	.11	.34	
11	.35	.34	.15	-.16	.23	.33	
12	.53	.25	.17	.09	.20	.41	
13	.40	.53	.15	.15	.10	.49	
14	.36	.32	.14	.21	.20	.34	
15	.57	.19	.13	.01	.14	.40	
16	.61	.20	.17	.02	.12	.45	
17	.55	.16	.17	.13	.19	.41	
18	.49	.34	.25	.10	.05	.43	
19	.46	.26	.18	.17	.11	.35	
20	.51	.04	.11	.38	.03	.42	
21	.48	.23	.14	.33	.06	.42	
22	.35	.20	.04	.43	.25	.41	
23	.58	.09	.14	.19	.15	.43	
24	.43	.07	-.01	.50	.09	.45	

25	.30	.09	.08	.40	.16	.29
26	.46	-.02	.26	.22	.11	.34
27	.39	.00	.28	.36	.10	.37
28	.33	.18	.26	.49	.12	.47
29	.28	.17	.09	.24	.05	.17
30	.36	.11	.19	.15	.01	.20
31	.23	.38	.15	.46	.17	.46
32	.12	.22	.05	.72	.10	.59
33	.08	.23	.09	.65	.09	.50
34	.13	.28	.45	.11	.23	.36
35	.01	.37	.38	.28	.18	.39
36	.03	.42	.47	.11	.09	.41
37	.11	.48	.46	.11	.03	.47
38	.16	.11	.54	.18	-.05	.36
39	.11	.06	.54	.00	.21	.35
40	.18	.45	.30	.15	.13	.37
41	.27	.26	.30	.02	.08	.24
42	.11	.21	.39	.13	-.01	.23
43	.10	.11	.68	.04	.00	.48
44	.20	.04	.62	.00	.06	.43
45	.18	.04	.67	.01	.13	.50
46	.08	.27	.30	.07	.11	.18
47	.22	.00	.47	.06	.09	.28
48	.25	.33	.21	.16	.13	.26
49	.20	.23	.34	.20	-.02	.25
50	-.06	.39	.17	.27	-.01	.26

BOLD TYPE INDICATES ITEM HIGHEST LOADING ON A FACTOR.

Table 4.2 contains factor loadings expressed as correlation coefficients between factors and items. These coefficients represent factor loadings of the items on the factors, that is, the degree to which an item is associated with a certain factor. The first column contains item numbers. The second, third, fourth, fifth and sixth columns respectively contain loadings between factors 1,2,3,4 and 5 and each item in turn. The last column contains an estimated communality of an item.

Table 4.2 reveals that items 1, 2, 3, 4 and 5 have relatively the highest loadings on the fifth factor, and relatively lower loadings on the other four factors. Factor 5 which they measure is labelled “pupil misbehaviour”. Item numbers 6, 7, 8, 9, 10, 13, 37, 40, 48 and 50 have relatively the highest loadings on the second factor, and relatively lower loadings on the other four factors. Factor 2 to which they are associated is labelled “poor working conditions”. Items 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 23, 26, 27, 29 and 30 have relatively the highest loadings on the first factor, and relatively lower loadings on the other four factors. Factor 1 could be labelled “time pressures”. Item numbers 22, 24, 25, 28, 31, 32 and 33 have relatively the highest loadings on the fourth factor. Factor 4 could be labelled “administrative problems”. Items 34, 35, 36, 38, 39, 41, 42, 43, 44, 45, 46, 47 and 49 have relatively the highest loadings on the third factor. Factor 3 could be labelled “educational changes”. Self groupings of items into five factors through factor analysis demonstrates that there are sets of items which are homogeneous and thus cluster closely around one factor.

The factor loading presented by correlation coefficients needs to be interpreted. Tabachnick and Fidell (1983:411; 1989:640) give the following interpretations of the loadings:

- loadings in excess of .71 (50% overlapping variance) are considered excellent.
- loadings in excess of .63 (40% overlapping variance) are considered very good.
- loadings in excess of .55 (30% overlapping variance) are considered good.
- loadings in excess of .45 (20% overlapping variance) are considered fair.
- loadings in excess of .32 (10% overlapping variance) are considered poor.

In line with other studies (Laughlin, 1984; Payne & Furnham, 1987; Okebukola & Jegede, 1989; Borg & Riding, 1991) a cut-off point of .40 was chosen for this pilot study. In this case the factor loading of .40 is taken as a cut-off point indicating a 16% overlap in variance between the variable and a factor.

Using .40 as a cut-off point, item numbers 11, 14, 27, 29, 30, 35, 41, 42, 46, 48, 49 and 50 were discarded. Their highest factor loadings are .35, .36, .39, .28, .36, .38, .30, .39, .30, .33, .34 and .38 respectively.

Out of 50 items, 12 were discarded from the final scale. Therefore, the total number of the OSIT items in the questionnaire for the final study is 38 (see Appendix B).

4.4.2 DESCRIPTION OF THE FIVE FACTORS

These five factors namely time pressures, poor working conditions, educational changes, administrative problems and pupil misbehaviour are described below.

FACTOR 1 : TIME PRESSURES (Items 12, 15, 16, 17, 18, 19, 20, 21, 23 and 26)

Time pressures groups together items dealing with lack of time to perform certain school related tasks (completing the syllabus in the time available; completing lesson preparation during school hours and dealing with classroom work effectively, because of other delegated responsibilities). It also includes items like lack of classroom space for group work; lack of opportunity to express one's point of view in school decision-making; having to cover lessons for absent teachers; lack of opportunity to experiment with new ideas and the too fast pace of the school day. Time pressures also includes items dealing with lack of time for personal gain such as personal relaxation or leisure and time for dealing with private or family matters. The internal-consistency reliability estimate for this subscale, using Cronbach's coefficient alpha is .86.

FACTOR 2 : POOR WORKING CONDITIONS (Items 6,7,8,9,10,13,37 and 40)

Poor working conditions includes aspects of teachers' professional development (lack of opportunities for professional improvement and inadequate salary). It also includes lack of co-operation from the Ministry

(having to comply with ministry changes without sufficient consultation with teachers, time available to prepare for the new "Curriculum 2005") and lack of co-operation from parents. Poor working conditions also includes items concerning resource difficulties (lack of resources for teaching, poor pupil-teacher ratios and having to teach large classes). The Cronbach's alpha coefficient for this subscale is .81.

FACTOR 3: EDUCATIONAL CHANGES (Items 34, 36, 38, 39, 43, 44, 45 and 47)

Included in the educational changes are items having to do with changes taking place in education as a result of the new government. These items include: the constant changes taking place within the profession; introduction of a right-sizing policy; opening of severance packages for teachers; the integration of pupils with special educational needs; implementation of the new eight learning areas and Outcomes Based Education (OBE); introduction of a code of conduct for teachers; establishment of new governing bodies (PPTA) and pressure from teachers' unions. Cronbach's coefficient for this subscale is .81.

FACTOR 4 : ADMINISTRATIVE PROBLEMS (Items 22, 24, 25, 28, 31, 32 and 33).

Administrative problems bring together items dealing with administrative problems related to pupil violent behaviour (threats of physical violence from pupils, pupils unruly behaviour, pupils carrying firearms in the school, 'Pass one pass all' demands by pupils). It also includes items related to administrative difficulties due to administrative procedures (principal's

reluctance to reprimand or investigate reported cases of serious misbehaviour, principal's reluctance to deal with difficult parents, having to teach a subject for which you have not been trained). The Cronbach coefficient alpha for this subscale is .82.

FACTOR 5 : PUPIL MISBEHAVIOUR (Items 1,2, 3, 4 and 5).

Pupil misbehaviour includes aspects having to do with classroom management (having to deal with pupils who continually misbehave; poor attitudes of pupils towards work; difficulty in motivating pupils and dealing with pupils who do not come to class with necessary materials). Included also is the inadequate policy of the school. The cronbach's coefficient alpha for this subscale is .74.

4.5 THE FINAL STUDY SAMPLE

The sampling design was discussed in chapter three. In accordance with the procedure outlined in that chapter, the researcher selected twenty four secondary schools from the eight KwaZulu- Natal regions.

4.6 ADMINISTRATION OF THE RESEARCH INSTRUMENT IN THE FINAL STUDY

TABLE 4.3 DISTRIBUTION OF SCHOOLS IN THE SAMPLE (N=24)

Region	Number of Schools	Proportion of Schools in the Sample
Empangeni	195	4
Ladysmith	181	3
North Durban	187	3
Pietermaritzburg	135	2
Port Shepstone	164	3
South Durban	181	3
Ulundi	195	4
Vryheid	89	2

Table 4.3 illustrates the eight KwaZulu-Natal regions, the number of secondary schools found in each region and the proportional number of schools in the sample representing secondary schools in each region.

TABLE 4.4 DISTRIBUTION OF SUBJECTS IN THE FINAL STUDY
(n=444)

Criteria		Levels		
Sex		Male 186		Female 258
Teaching Experience in years:	0-4	5-9	10+	
	125	157	162	
Qualification	Degree with Teachers' Diploma/Certificate	Degree without Teachers' Diploma/Certificate	Teachers' Diploma/Certificate	Privately paid Teacher
	172	45	180	47
Rank	Assistant Teacher	Head of Department	Deputy Principal	Principal
	372	47	11	14

Table 4.4 illustrates the distribution of teachers in the final study sample. The questionnaire was administered to 444 teachers. The procedures for questionnaire administration and scoring were discussed in chapter three. The present chapter details the results of the final study.

4.7 RESULTS OF THE FINAL STUDY

In the analysis of data, hypotheses are tested and the results are presented in the tables.

4.7.1 ANALYSIS OF DATA

There are four hypotheses to be tested in this study. The presentation of data

(in the tables) is preceded by the reiteration of each hypothesis.

4.7.1.1 Testing of hypothesis number one:

Hypothesis number one is reiterated as follows:

Teachers do not differ in the extent to which they experience stress from work-related factors.

The appropriate statistical test chosen for testing this hypothesis is the chi-square one sample test. The chi-square one sample test is appropriate because testing hypothesis number one, is concerned with comparing how many respondents of the whole sample fall into each of the descriptive categories, namely, low stress level (LSL); moderate stress level (MSL); high stress level (HSL) and vey high stress level (VHSL). The chi-square one sample test is recommended for comparing differences in the observed frequencies with the expected frequencies in a single sample with various categories to determine whether the differences (except for sampling error) are typical of the population from which the sample was drawn (Behr, 1988:82). One of similar studies which have used the chi-square test one sample test is that of Kyriacou and Pratt (1985).

The hypothesis will be tested at the 5% level of significance (Table 4.5).

TABLE 4.5 GROUP AND STRESS LEVELS

	LSL (0-38)	MSL (39-76)	HSL (77-114)	VHSL (115-152)
Frequencies	11	135	239	59

A chi-square value of 267.243 at $df=3$ was obtained for table 4.5. It is significant at our chosen level of significance, which is, 0.05. Since $p < 0.05$, the decision is to reject the null hypothesis and conclude that teachers differ in the extent to which they experience stress from work-related factors.

4.7.1.2 Testing of hypothesis number two:

Hypothesis number two is reiterated as follows:

No relationship exists between teachers' personality factors (N and E) and teachers' stress levels on work-related factors.

The research question we attempt to answer here is on the existence of a relationship between each of two personality factors and each of the five work-related stress factors. The appropriate statistical test chosen for this purpose is the Pearson product moment correlation coefficient (r). The Pearson correlation (r) is appropriate because the scores for both personality and work-related stress factors in this study are expressed as continuous data. The Pearson correlation (r) is recommended where both variables that are correlated are expressed as continuous variables (Borg & Gall, 1983:589;

Bless & Kathura, 1993:284). The Pearson correlation (r) has been used in other similar studies (Fontana & Abouserie, 1993; Borg & Riding, 1993).

TABLE 4.6 CORRELATION COEFFICIENTS BETWEEN EXTRAVERSION AND WORK-RELATED STRESS FACTORS

Factor	r	Significance Level
1	-0.08	0.11
2	-0.02	0.68
3	-0.11	0.02*
4	-0.02	0.70
5	-0.06	0.25

* $p < 0.02$

Table 4.6 indicates a significant negative correlation between extraversion and factor 3. This indicates that as scores on extraversion increase, scores on factor 3 decrease, or vice versa. This implies that the more extraverted the teacher becomes, the less likely he/she experiences stress from work conditions related to educational changes.

TABLE 4.7 CORRELATION COEFFICIENTS BETWEEN NEUROTICISM AND WORK-RELATED STRESS FACTORS

Factor	r	Significance Level
1	0.28	0.00**
2	0.04	0.39
3	0.08	0.09
4	0.19	0.00**
5	0.26	0.00**

**p<0.00

Table 4.7 indicates a significant positive correlation between neuroticism and factors 1, 4 and 5. This indicates that neurotic (unstable) teachers appear to be more prone to stress related to time pressures, administration and pupil misbehaviour than those teachers who are not neurotic.

4.7.1.3 Testing of hypothesis number three:

Hypothesis number three is reiterated as follows:

No personality factor (s) account (s) better for work- related stress factors.

The research question we attempt to answer here is on the personality factor (s) which account (s) better for work-related stress factors. The appropriate

statistical test chosen for this purpose is the stepwise regression analysis. The stepwise regression analysis is appropriate if the only aim is to determine independent variables that are useful in predicting the dependent variable (Borg & Gall, 1983; Tabachnick & Fidell, 1983, 1989). In this study, personality factors act as independent variables. Regression analysis has been used in other similar studies (Fontana & Abouserie, 1993; Cooper & Kelly, 1993).

TABLE 4.8 PREDICTORS OF WORK-RELATED STRESS USING INDICES OF PERSONALITY DIMENSIONS AS INDEPENDENT VARIABLES

Dependent variable	Predictor	R ²	F	P
Stress due to Time pressures	Neuroticism (N)	0.08	36.35	0.00**
	Extraversion (E)	0.08	0.67	0.41
Stress due to Poor working conditions	Neuroticism (N)	0.00	0.73	0.39
	Extraversion (E)	0.00	0.09	0.76
Stress due to Educational changes	Neuroticism (N)	0.02	1.87	0.17
	Extraversion (E)	0.01	5.71	0.02*
Stress due to Administrative problems	Neuroticism (N)	0.03	15.76	0.00**
	Extraversion (E)	0.03	0.03	0.87
Stress due to Pupil misbehaviour	Neuroticism (N)	0.07	32.88	0.00**
	Extraversion (E)	0.07	0.17	0.68

**p<0.00

*P<0.02

Table 4.8 indicates that Neuroticism (N) emerged as a significant predictor of stress in situations involving time pressures, administrative problems and pupil misbehaviour whereas Extraversion (E) emerged as a significant predictor of stress in situations involving educational changes.

The Neuroticism (N) dimension of personality accounted for 8% of the variance in time pressures, 3% of the variance in administrative problems and 7% of the variance in pupil misbehaviour while the Extraversion (E) dimension accounted for 1% of the variance in educational changes. According to table 4.8 the only work-related stress factor not predicted by both dimensions was poor working conditions. These findings imply that the dimension of personality which can be useful in predicting stress experienced by teachers in relation to time pressures, administrative problems and pupil misbehaviour is neuroticism. Extraversion can only be useful in predicting stress experienced by teachers in relation to educational changes. Stress due to poor working conditions cannot be predicted either by neuroticism or extraversion dimensions of personality.

4.7.1.4 **Testing of hypothesis number four:**

For ease of reference, hypothesis number four is reproduced below:

There will be no significant effects (interaction effects between variables and main effects of the variables) between sex, teaching experience, qualification, rank of teachers and perception of the nature of work-related stress factors.

The appropriate statistical test chosen for testing hypothesis number four is

the analysis of variance (ANOVA) or F-test. ANOVA or F-test is an appropriate statistical test where more than two means are compared to determine whether groups differ significantly among themselves, and whether there are any interactions between them (Borg & Gall, 1983:549-552). The interaction model adopted in this study has been used in other similar studies (Laughlin, 1984; Payne & Furnham, 1987; Okebukola & Jegede, 1989; Borg & Riding, 1991; Mwamwenda et.al., 1997). The interaction model used in this investigation is an unbalanced design called 'all-cells-filled data' because the number of observations in the cells are not equal (see table 4.9). Therefore, the model and design of this study commensurate with those of the mentioned authors. All-cells-filled data can be analyzed using with-interaction models by means of weighted-squares-of-means analysis (Searle, 1987:8).

A 3-way ANOVA is used for determining whether any significant effects exist between factors 1 to 5 and sex, qualification and teaching experience. In the case of the rank variable, a one-way ANOVA is used. The reasons for analysing data for rank separately from sex, qualification and teaching experience are: In the population of this study, it is rare to find a female principal in a secondary school, hence there is none in this sample; the probability is almost zero to find an unqualified and inexperienced teacher holding a senior position like head of department, deputy principal and principal. Consequently, if the rank is analysed together with the other three variables, it will result in a 4-way analysis of variance which, with empty cells, leads to violation of ANOVA assumptions. In this study, rank is the only variable which was not included in the questionnaire for the pilot study (see table 4.1 and Appendix A).

TABLE 4.9 CELL-FREQUENCIES IN THE 3-WAY DESIGN

Experience	Qualifications	Sex	
		Male	Female
0-4	0	40	45
5-9		52	80
10+		47	88
0-4	>0	21	19
5-9		14	11
10+		12	15

Table 4.9 shows that the qualification category has been reduced from four levels (see table 4.4) to two levels. This was done to simplify the analysis and interpretation of a 3-way analysis of variance. The zero (0) level represents the unqualified group of teachers (degree without teachers' diploma or certificate and privately paid teacher). The >0 level represents the qualified group (degree with teachers' certificate or diploma and teachers' diploma or certificate).

Where two/three/-way factor interaction will be found significant, graphical representation of cell means will be done to show the trend of interactions.

TABLE 4.10 ANOVA FOR FACTOR 1 : TIME PRESSURES

Source	Sum of Squares	DF	Mean Square	F	Significance Level
Sex (S)	53.15666923	1	53.15666923	0.73	0.3933
Qualification (Q)	14.61446427	1	14.61446427	0.20	0.6445
Experience (E)	1089.16343679	2	544.58171840	7.71	0.0005*
SQ	486.44898628	3	162.14966209	2.25	0.0821
SE	1230.43551231	5	246.08710246	3.48	0.0043*
QE	1122.43319764	5	224.48663953	3.16	0.0081*
SQE	1749.53227906	11	159.04838901	2.25	0.0113*

*p<0.0113

Table 4.10 reveals that the three-factor interaction SQE is significant. The trend of the interaction can be illustrated by considering the following graphical representation of factor 1- cell means.

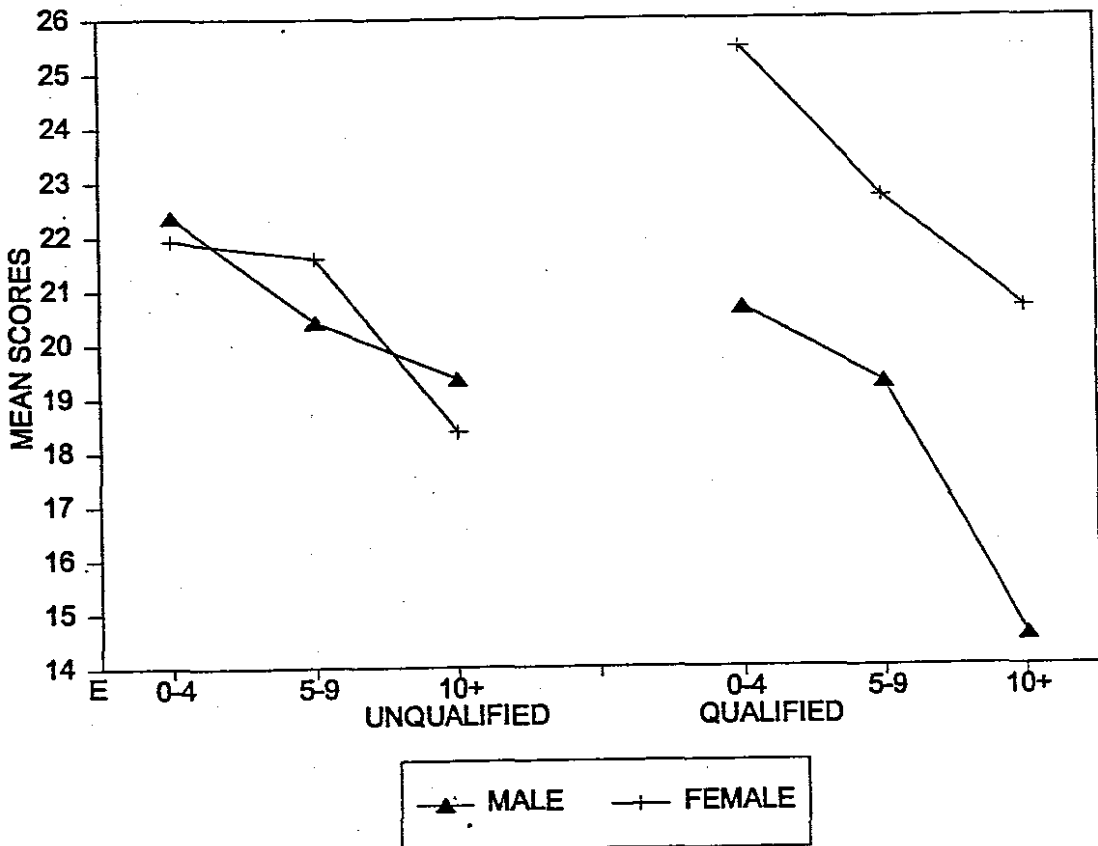


FIGURE 4.1 SQE INTERACTION: FACTOR 1- CELL MEANS

Figure 4.1 reveals the following:

- (i) The interaction between sex and experience differs for the different groups of teachers, namely, those who are unqualified and those who are qualified.
- (ii) The time pressure mean score decreases more sharply with an increase in teaching experience for the qualified females than for the unqualified ones.
- (iii) For the unqualified group, the time pressure mean score decreases steadily with an increase in experience for both males and females. For the qualified group, the time pressure mean score decreases steadily and then sharply for males with an increase in experience while for the females it decreases sharply.

The conclusion is that the SQE interaction has a significant influence on teachers' perceptions of time pressures. This interaction is significant below the 5% level (1.13%). This SQE interaction means that the inexperienced qualified female teachers, experience stress from time pressures, more than other groups.

TABLE 4.11 E ANOVA FOR FACTOR 2 P OOR WORKING CONDITIONS

Source	Sum of Squares	DF	Mean Square	F	Significance Level
Sex (S)	157.73241283	1	157.73241283	5.04	0.0252*
Qualification (Q)	37.86086000	1	37.86086000	1.20	0.2740
Experience (E)	14.10864050	2	7.05432025	0.22	0.8005
SQ	201.36799744	3	67.12266581	2.14	0.0942
SE	225.51056508	5	45.10211302	1.44	0.2101
QE	83.11743722	5	16.62348744	0.52	0.7584
SQE	333.00657649	11	30.27332514	0.96	0.4844

*p<0.0252

Table 4.11 reveals that the main effect, termed sex is significant at the 2.52% level of significance. Since the mean score for poor working conditions for females is 22.7403 and that for males is 21.5323, it means that female teachers in the sample experience more stress from poor working conditions than males.

TABLE 4.12 ANOVA FOR FACTOR 3 : EDUCATIONAL CHANGES

Source	Sum of Squares	DF	Mean Square	F	Significance Level
Sex (S)	394.84933564	1	394.84933564	7.85	0.0053*
Qualification (Q)	48.47238543	1	48.47238543	0.95	0.3305
Experience (E)	40.71566581	2	20.35783291	0.40	0.6722
SQ	522.34606019	3	174.11535340	3.47	0.0162*
SE	458.11302693	5	91.62260539	1.81	0.1094
QE	216.10810822	5	43.22162164	0.84	0.5183
SQE	792.28691256	11	72.02608296	1.43	0.1582

*p<0.0162

Table 4.12 reveals that the two-factor interaction SQ is significant. For interpreting this interaction, the graphical representation of the factor 3- cell means are presented in figure 4.2

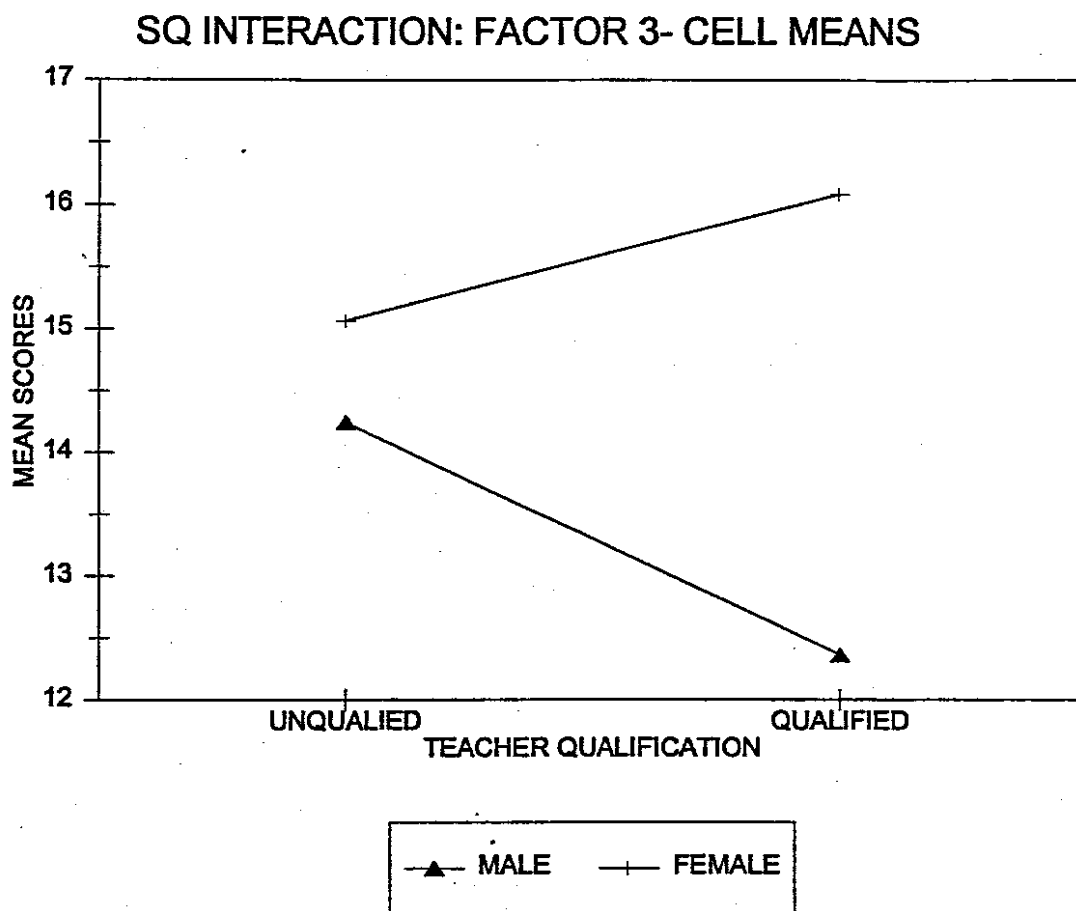


FIGURE 4.2

SQ INTERACTION : FACTOR 3- CELL MEANS

Figure 4.2 reveals the following:

- (i) The mean scores for educational changes differ for the male, female, qualified and unqualified groups of teachers.
- (ii) The difference is small for unqualified male and female teachers. The opposite is true for qualified teachers.
- (iii) The mean score for females increases with years of teaching experience whereas for males, the mean score decreases.

We conclude that the SQ interaction has a significant influence on teachers' perceptions of educational changes. This interaction is significant below the 5% level (1.62%). The SQ interaction reveals that stress involving educational changes is experienced mostly by qualified female teachers.

TABLE 4.13 ANOVA FOR FACTOR 4 : ADMINISTRATIVE PROBLEMS

Source	Sum of Squares	DF	Mean Square	F	Significance Level
Sex (S)	181.10035786	1	181.10035786	4.12	0.0430*
Qualification (Q)	0.39527472	1	0.39527472	0.01	0.9249
Experience (E)	348.97630390	2	174.48815195	3.99	0.0191*
SQ	202.16900820	3	67.38966940	1.53	0.2067
SE	605.19061353	5	121.03812271	2.79	0.0171*
QE	387.61350158	5	77.52270032	1.77	0.1186
SQE	748.53299546	1	68.04845413	1.56	0.1084

* $p < 0.0171$

Table 4.13 indicates that the two-factor interaction SE is significant. For interpreting this interaction, graphical representation of the factor 4 -cell means are presented in figure 4.3.

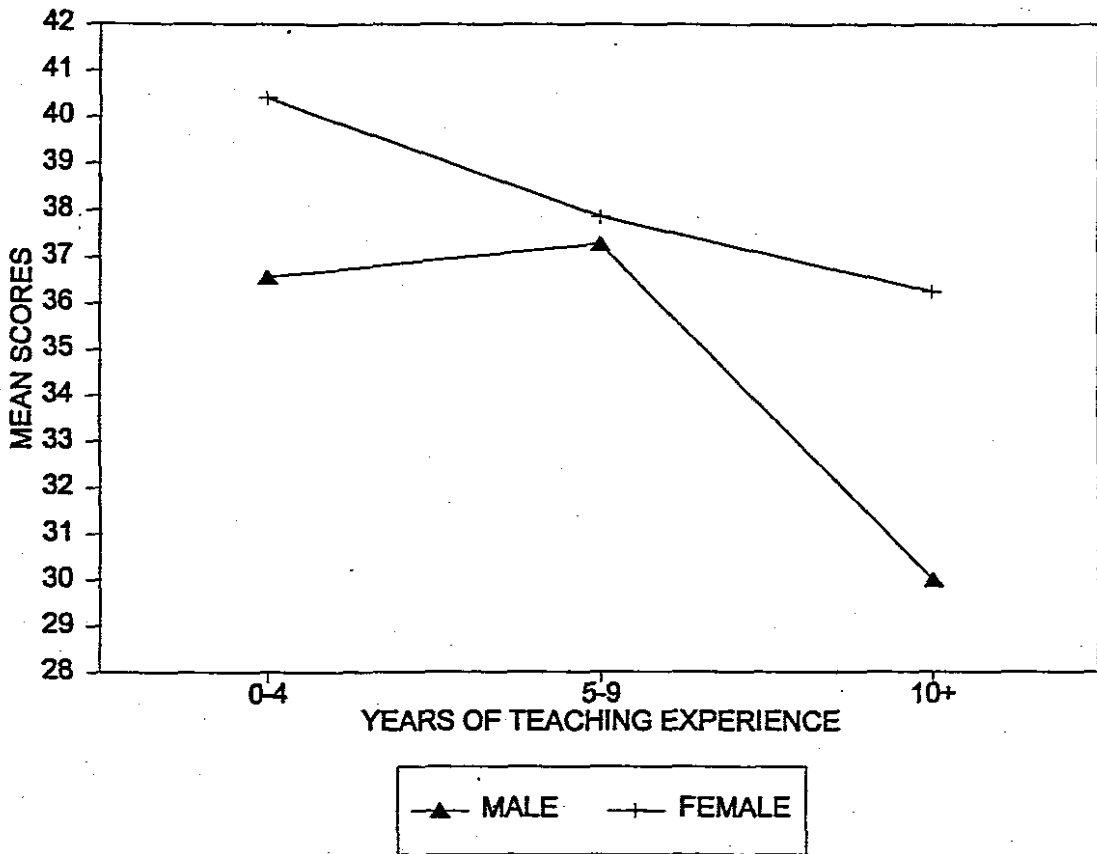


FIGURE 4.3 SE INTERACTION : FACTOR 4 -CELL MEANS

Figure 4.3 reveals the following:

- (i) Regardless of the number of years of teaching experience, the mean scores for females are relatively higher than those for males.
- (ii) With years of teaching experience, the mean scores on administrative procedures increase steadily and then decrease steadily for the male group, while for the female group the mean scores decrease steadily.
- (iii) Highly experienced male and female teachers have the lowest mean scores on stress due to administrative problems than the intermediate and inexperienced groups of teachers.

The conclusion is that SE interaction has a significant influence on teachers' perceptions of stress due to administrative problems. This interaction is significant below the 5% level (1.71%). It means that female teachers at all levels of teaching experience, experience more stress from administrative problems than male teachers. On the other hand, male teachers experience more stress from administrative problems when they are at the middle years of teaching experience (5-9 years).

TABLE 4.14 ANOVA FOR FACTOR 5 : PUPIL MISBEHAVIOUR

Source	Sum of Squares	DF	Mean Square	F	Significance Level
Sex (S)	2.08177044	1	2.08177044	0.12	0.7286
Qualification (Q)	54.41687253	1	54.41687253	3.17	0.0755
Experience (E)	213.60857718	2	106.80428859	6.35	0.0019*
SQ	85.13227320	3	28.37742440	1.65	0.1762
SE	299.41096608	5	59.88219322	3.58	0.0035*
QE	336.92420578	5	67.38484116	4.05	0.0013*
SQE	467.62551450	11	42.51141041	2.56	0.0037*

*p<0.0037

Table 4.14 reveals that the three-factor interaction SQE is significant. For this interaction, graphical representation of factor 5- cell means, is shown in figure 4.4.

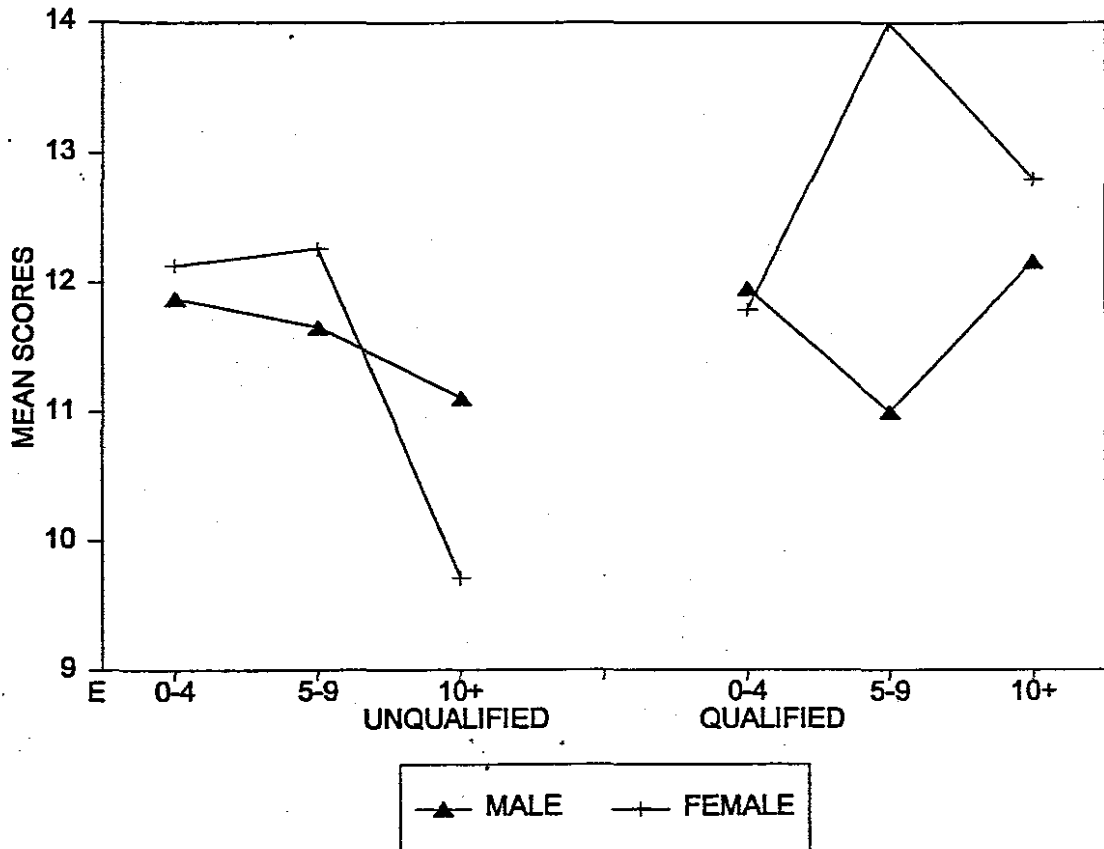


FIGURE 4.4 SQE INTERACTION : FACTOR 5 - CELL MEANS

Figure 4.4 reveals the following:

- (i) The interaction between sex and experience differs for the different groups of teachers, namely, those who are unqualified and those who are qualified.
- (ii) With years of teaching experience, the mean scores on pupil misbehaviour decrease steadily among the male teachers who are unqualified, while for those who are qualified it decreases and then increases.
- (iii) For the unqualified group, the mean scores for the females increase and then decrease sharply with years of teaching experience. For the qualified group, the mean scores for the females increase and then decrease with years of teaching experience.

We conclude that the SQE interaction has a significant influence on teachers' perceptions of stress due to pupil misbehaviour. This interaction is significant below the 5% level (0.37%). This means that qualified female teachers who are in the middle of their teaching career (5-9 years) experience more stress from pupil misbehaviour than any other groups.

TABLE 4.15 ONE-WAY ANOVA FOR RANK AND THE 5 FACTORS

Factor	Sum of Squares	DF	Mean Squares	F	Significance Level
1	37.60336902	3	12.53445634	0.17	0.9157
2	38.30179532	3	12.76726511	0.40	0.7511
3	0.54934297	3	0.18311432	0.00	0.9997
4	125.49049492	3	41.83016497	0.94	0.4191
5	16.85757739	3	5.61919246	0.32	0.8076

Table 4.15 reveals that the main effect regarding rank is not significant. This means that teachers' perception of the five factors is not dependant on their ranks.

4.8 CONCLUSION

Chapter 4 detailed the empirical investigation for both the pilot study and the final study, the analysis and the interpretation of data. In the pilot study, 50 OSIT items were validated using factor analysis.

The next chapter (chapter 5) details the discussion of the results.

CHAPTER FIVE

5.0 DISCUSSION OF THE RESULTS

5.1 INTRODUCTION

In chapter four, details on fieldwork procedures for both the pilot and the final study; the presentation and analysis of data, were given. In this chapter, the findings emanating from the data analysed in chapter four are discussed. In order to determine whether the objectives of this study have been achieved or not, the aims of the study will be examined in relation to the hypotheses and findings.

The purpose of this study was to find answers to the following questions:

- (i) To what extent do teachers in KwaZulu-Natal experience stress from work-related factors?
- (ii) Is there a relationship between teachers' personality characteristics and level of stress on work-related factors?
- (iii) Which personality factor (s) best predict (s) stress in different work situations?
- (iv) Will there be any significant effects between teachers' biographical characteristics and their perception of the nature of work-related stress factors?

5.2 FINDINGS WITH REGARD TO THE EXTENT TO WHICH TEACHERS IN KWAZULU-NATAL EXPERIENCE STRESS FROM WORK-RELATED FACTORS

The findings reveal that teachers in KwaZulu-Natal differ in the extent to which they experience stress from factors related to their work as teachers. This means that a very high percentage (67,1%) of teachers report above average level of stress. These findings are in accord with those which reported 63,7% - 84,2% among white teachers in South Africa (Buwalda & Kok, 1991:120; Marais, 1992:310). However, these findings are contrary to those reported in a similar study conducted among secondary school teachers in the former homeland of Transkei, in South Africa (Mwamwenda, Monyooe & Glencross, 1997:380) where the researchers reported that the majority (91,3%) of teachers experience average level of stress. The reason for this contradiction may be attributed to the fact that the sample of 134 teachers drawn by the latter authors, is relatively smaller than that of 444 teachers used in the present study. Another reason may be that the items used in the two studies are not the same. Hence dimensions of work-related factors to which teachers had to respond are different.

The findings of this study are interesting, given the high levels of occupational stress they report when compared to those of other countries. They reveal that the degree of stress experienced by secondary school teachers in KwaZulu-Natal is alarmingly high, when compared to the percentage (16,5% - 33.6%) reported in countries such as England, Australia, Malta and Wales (Kyriacou & Sutcliffe, 1977a:77, 1978b:163, 1979a:91-92, 1979b:228; Laughlin, 1984:10; Borg & Riding, 1991:361, 1993:278; Fontana & Abouserie, 1993:264). The implication may be that the environment under

which teachers work in this country is less conducive to teaching than that in first world countries. In the same vein, one cannot deny the likelihood that the discrepancy may be due to differences in research instruments used. Some use item battery whereas others rely on a single item.

Judging from the results of this study, the teaching profession in KwaZulu-Natal is in a serious danger. As evidence of this, the Department of Education in this province has already lost about 3000 teachers who took voluntary severance packages (Mercury, 1997:1). Other teachers have been reported to be going to the extent of pretending to be ill and seeking doctors' help to secure early retirement packages (Sunday Tribune, 1997:1). With or without a severance package system, a handful of teachers could have possibly left the teaching profession. This occurrence coupled with the shortage of qualified teachers, has a debilitating effect on schooling in KwaZulu-Natal.

Although it is difficult to dissociate teachers' expected financial gains from taking severance packages, these findings provide sufficient evidence for one to claim that teachers leave the teaching profession due to its stressfulness. The challenge facing the Education Department is how to deal with teachers who experience stress and burnout syndrome. One of the options available to officials of the Department of Education is that of intervening, with the aim of eliminating sources of stress facing these teachers. The question which is left unanswered concerns the extent to which other work-related factors, (not covered in the present study) such as staff relations and role ambiguity contribute or not to teachers' level of occupational stress. This will form part of the discussion on directions for further research.

5.3 FINDINGS WITH REGARD TO THE RELATIONSHIP BETWEEN TEACHERS' PERSONALITY CHARACTERISTICS AND LEVEL OF STRESS ON WORK-RELATED FACTORS

The second question this investigation attempted to answer is whether there is any relationship between teachers' personality dimensions and the levels of stress they reported. The findings reveal that introversion and educational changes are related. This means that introverted teachers are more prone to stress related to educational changes than those who are extraverted. This relationship can be explained in terms of the characteristics of the extravert-introvert dimension. The typical extravert is sociable, cheerful, talkative and outgoing. With sociability in particular, capturing the essence of the disposition, it may enable the extraverted teacher to respond to stress related to educational changes relatively effectively. The introverted person on the other hand is quieter, shy, more withdrawn and less sociable. Such a teacher could therefore be more readily affected by stress related to educational changes.

The educational changes to which introverted teachers experience more stress include items having to do with changes that are taking place in education. These changes include inter alia : right-sizing policy; voluntary severance packages for teachers; integration of pupils; Outcomes Based Education; code of conduct for teachers; governing bodies and pressure from teachers' unions. These are drastic changes which mark the turning point in the history of the teaching profession in South Africa after the 1994 elections. They affect the future of every teacher. Like changes in any organisation, they are threatening. Considering that teachers may vary in their ability to cope with

the demands of their job and in their perception of those abilities (Cox & Ferguson, 1991) it is not surprising that teachers who manage to cope with the demands of educational changes are those who are able to socialise with other people and talk about these changes. The finding that changes in education is a major factor among sources of stress for teachers in KwaZulu-Natal attests those reported in Britain (Cox, Boot, Cox & Harrison, 1988; Travers & Cooper, 1996). In accordance with what these researchers maintain, it is not that teachers object to the changes themselves, but to the manner in which they are implemented. Teachers lack information regarding the changes taking place in education. The changes in education are also a problem in terms of their pace of implementation and the fact that often, they are designed by people with little involvement in teaching. Teachers, as the 'end-users', are not involved in planning for these changes. Consequently, these educational changes cause stress to them.

Literature review in this study has shown that in times of trouble, extraverts seek help sooner than introverts (Armikhan, Risinger & Swickert, 1995:207). It has also shown that extraverts are generally more able to deal with stressful situations than introverts (Fontana & Abouserie, 1993:266) and introverts are most susceptible to stressful situations in the work environment (Sutherland & Cooper, 1990:73). This may explain why introverted teachers report greater stress due to educational changes than those who are extraverted. Through their socialising strength, extraverted teachers are able to talk about changes taking place in education and possibly seek assistance from their colleagues or friends where necessary. Introverted teachers on the other hand, due to their withdrawal nature, keep the problem related to educational changes to themselves, hence causing themselves stress. In short, the more extraverted the teacher is, the less stress he/she experiences from educational

changes. The opposite applies to introverted teachers.

Another important finding is that neuroticism is related to time pressures, administrative problems and pupil misbehaviour. This suggests that neurotic (unstable) teachers appear more prone to stress related to time pressures, administrative problems and pupils misbehaviour than those who are stable. The relationship between neuroticism and these factors can be explained in terms of the characteristics of emotional stability- emotional instability dimensions. A neurotic (emotional unstable) teacher is anxious, worrying, overly reactive and reacts in an irrational and rigid way in his/her responses. Consequently, a neurotic teacher could be more readily affected by stress related to time pressures, administrative problems and pupil misbehaviour. A stable teacher, on the other hand is calm, reacts in a rational and flexible way in his or her responses. These characteristics may enable a stable teacher to respond to stress due to time pressures, administrative problems and pupil misbehaviour more effectively than an unstable one. There is also evidence that teachers who report greater stress in the work environment tend to be neurotic (Sutherland & Cooper, 1990:73; Borg & Riding, 1993:271; Fontana & Abouserie, 1993:266). Therefore, the findings of the present study bear support to this assertion. Moreover, findings of the present study have also made it possible to understand how personality characteristics relate to specific work-related stress factors.

Judging from these findings, the KwaZulu-Natal Department of Education has a mammoth task of assisting practising teachers with counselling services in order to enable them cope with stress at work. Moreover, teachers should be helped to allay their fears and possible misconceptions about changes which have taken place in education since 1994. One way of doing this could be

through providing teachers with sufficient information about the changes and their implications for their future as teachers. The other one would be through involving teachers themselves. Although the present study has established the relationship between teachers' personality characteristics and various work-related stress factors, the question which remains unanswered pertains to the relationship between coping strategies, which teachers use for dealing with various work-related factors, and their personalities.

5.4 FINDINGS WITH REGARD TO PERSONALITY FACTOR (S) WHICH BEST PREDICT (S) STRESS IN DIFFERENT WORK SITUATIONS

The findings indicate that neuroticism is the best predictor of stress in situations involving time pressures, administrative problems and pupil misbehaviour, while extraversion is the best predictor of stress in situations involving educational changes. This implies that teachers at risk of stress resulting from time pressures, administrative problems and pupil misbehaviour, are those displaying neurotic tendencies. Conversely, teachers with extravert tendencies succumb to stress relating to educational changes. This situation can only be explained in terms of the relationship between neuroticism and time pressures, administrative problems as well as pupil misbehaviour on one hand, and on the association between extraversion and educational changes on the other (see section 5.3). No matter what explanation is given, it is amazing to find out that emotionally unstable teachers are vulnerable to so many important aspects of their work. Undoubtedly, these working conditions reduce teachers' happiness with their work and also their efficiency.

These findings provide new information on dimensions of personality that are accurate predictors of stress in different work situations. Previous studies did not furnish this information. The present study fills in this existing gap in knowledge. A discovery of this nature provides essential information for use in recruiting personnel in other professions. Knowing something about the personality of a person, provides a clue as to how he/she is likely to behave in a particular situation. What remains unclear is whether the predictive influence of the studied dimensions of personality would be the same or not, were other personality variables such as psychoticism included in the scale.

5.5 FINDINGS WITH REGARD TO SIGNIFICANT EFFECTS BETWEEN TEACHERS' BIOGRAPHICAL CHARACTERISTICS AND THEIR PERCEPTION OF THE NATURE OF WORK-RELATED STRESS FACTORS

The findings show that sex, qualification and experience interactions influence teachers' perception of time pressures. Inexperienced qualified female teachers experience stress from time pressures more than experienced qualified females, the inexperienced unqualified female group and the experienced unqualified female group. The stress they report is also greater than that for the male group, regardless of qualification and teaching experience. This implies that inexperienced qualified female teachers do not get enough time to complete the syllabus; lesson preparation; classwork and to deal with family matters. One reason which may explain this state of affairs is that the inexperienced qualified group of female teachers are fresh from teacher training institutions, and have more family responsibilities which interfere with their school work than unqualified females and male teachers. Inexperienced unqualified female teachers in particular, are likely to be young

and have less family commitments which interfere with their schoolwork than experienced qualified female teachers.

The findings also reveal that regardless of sex and qualification, the inexperienced group of teachers experiences stress from time pressures more than the the experienced one. This may imply that inexperienced teachers are suddenly caught up in the world of reality, a world that needs getting used to. The findings of the present study are in accord with those of other researchers (Laughlin, 1984:12; Payne & Furnham, 1987:144; Borg Riding & Falzon, 1991:69) in showing that females tend to report greater stress due to time pressures than males. These findings also concur with those of Okebukola and Jegede (1989:29) in showing that inexperienced teachers tend to report greater stress than experienced ones.

Another finding concerns the intervention of sex and qualification in relation to the variable of educational change. An observation is made that qualified female teachers experience greater stress from educational changes than unqualified females. Whether qualified or unqualified, men show less stress than qualified female teachers. This may imply that qualified female teachers feel more insecure in their jobs than males and unqualified females. Such feelings of insecurity can be attributed to the constant changes taking place in education, such as the introduction of a right-sizing policy; severance packages; integration; OBE; a chasing away of ghost teachers and new school governing bodies. These findings are consistent with those of Kyriacou and Sutcliffe (1979a: 93) who reported that qualified female teachers were more likely to leave teaching while qualified male teachers were less likely to leave teaching compared with their unqualified male and female counterparts. This could imply that qualified male teachers are more

committed to their work than unqualified males, qualified and unqualified female teachers. The mere fact that qualified female teachers are more likely to leave teaching may be an indication that they have no or less commitment to their work as teachers.

It has also been observed that sex and experience interaction influences teachers' perception of administrative problems. Female teachers, at all levels of experience, report greater stress due to administrative problems than male teachers. This suggests that female teachers generally find it difficult to deal with administrative problems, related to pupil violent behaviour and procedures related to dealing with difficult pupils and parents. This may imply that female teachers are undermined and not respected by these constituencies. This situation becomes absurd for female school principals. These findings support those of Okebukola and Jegede (1989:29) who reported that female teachers were most stressed by administrative procedures than were their male counterparts.

It has also been found that middle-age (5-9 years teaching experience) male teachers report greater stress due to administrative problems than those with 0-4 years and those with 10 years and above of teaching experience. The reason for this may be that they are given more administrative responsibilities after many years of teaching. Besides acting as heads of departments, a common practice is that male teachers who have accumulated reasonable years of teaching experience are promoted to senior positions. They are also given responsibility of disciplining pupils who show signs of violent behaviour. These findings are contrary to those of Payne and Furnham (1987) which revealed that sex and teaching experience had no influence on teachers' perception of administrative procedures. This is not surprising when

one considers that school administration procedures are likely to differ from country to country.

An interesting finding concerns the interaction of sex, qualification and experience in relation to pupils' behaviour. It shows that qualified female teachers who have 5-9 years of teaching experience report relatively greater stress due to pupil misbehaviour than unqualified female teachers with 0-4 years, and those with 10 years and above teaching experience. The stress they experience is also greater than that of male teachers, regardless of their teaching experience and qualification. These findings are similar to those of other studies (Payne & Furnham, 1987:144; Okebukola & Jegede, 1989:29) in reporting that females and qualified teachers report greater stress due to pupil misbehaviour than males and unqualified teachers respectively. The reason why qualified female teachers at middle-age particularly find it difficult to deal with issues related to pupil misbehaviour is not clear. Such issues include pupils who continually misbehave; negative attitudes of pupils towards work; difficulty in motivating pupils and dealing with pupils who do not come to class with necessary materials. These items relate to classroom management. Therefore, one reason to explain this state of affairs may be that, having the knowledge that pupils generally tend to undermine female teachers, hence disobeying their instructions, most principals appoint female teachers as class teachers after many years of teaching experience.

Given the role played by sex, teaching experience and qualification variables in influencing teachers' perception of work-related stress factors, there is a need for the Department of Education in KwaZulu-Natal to intervene. It should help in improving teachers' qualifications and give counselling services, especially to middle-age female teachers. The interaction between

other teachers' biographical variables such as age, marital status, type of school and class taught, and the established work-related factors, could not be covered in this study. It might be interesting to see further studies of this nature exploring that area.

5.6 CONCLUSION

Chapter five detailed the discussion of the results. In the discussion it became apparent that the findings of the present study were in accord with many other previous studies, in terms of the extent to which teachers experience occupational stress; the relationship between teachers' personality and work-related stress factors, as well as the interaction between teachers' biographical characteristics and various work-related stress factors.

The findings disclosed that a very high percentage of teachers in KwaZulu-Natal experience above average level of occupational stress. This is a cause for concern to all stakeholders and those with a keen interest in education in this province. Regarding aim number two, the findings show that teachers with introvert tendencies are more prone to stress related to educational changes than those who are extraverts. Secondly, findings show that teachers with neurotic tendencies are more prone to stress related to time pressures, educational changes and pupil misbehaviour. With regard to aim number three, findings indicate that teachers at risk of stress due to changes taking place in education are those displaying extraversion tendencies than those who are showing neurotic tendencies. Secondly, findings show that teachers at risk of stress related to time pressures, administrative problems and pupil misbehaviour are those displaying neurotic tendencies than those who are extraverts. The findings pertaining to aim number four, illustrate that it is

either the inexperienced or middle-age qualified female teachers who experience relatively high levels of occupational stress.

Finally, the findings reported in this research provide strong support for the elimination of sources of stress for teachers; rendering of counselling services to practising teachers on coping strategies they can use, and considering the use of personality tests when employing new teachers.

In the next chapter (Chapter six) the summary, conclusion and recommendations of the study are presented.

CHAPTER SIX

6.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 SUMMARY

6.1.1 THE PROBLEM

The study was designed to investigate determinants of occupational stress among teachers in KwaZulu-Natal. To this end, the problem was stated in the form of the following questions:

- (i) To what extent do teachers in KwaZulu-Natal experience stress from work-related factors?
- (ii) Is there a relationship between teachers' personality characteristics and levels of stress on work-related stress factors?
- (iii) Which personality factor (s) best predict (s) stress in different work situations?
- (iv) Will there be any significant effects (interaction effects between variables and main effects of the variables) between sex, teaching experience, qualification, rank of teachers and perception of the nature of work-related stress factors?

6.1.2 THE AIM OF THE STUDY

- (i) To ascertain the extent to which teachers in KwaZulu-Natal experience stress from work-related factors.
- (ii) To determine whether there is any relationship between teachers' personality factors, namely, Neuroticism (N) and Extraversion-Introversion (E) and teachers' stress levels on work-related stress factors.
- (iii) To determine which personality factor (s) best predict (s) stress in different work situations.
- (iv) To determine whether there will be any significant effects (interaction effects between variables and main effects of the variables) between sex, teaching experience, qualification, rank of teachers and perception of the nature of work-related stress factors.

6.1.3 HYPOTHESES POSTULATED

The following hypotheses were postulated:

- (i) Teachers do not differ in the extent to which they experience stress from work-related factors.
- (ii) No relationship exists between teachers' personality factors (N and E) and teachers' stress levels on work-related factors.

- (iii) No personality factor (s) best predict (s) stress in different work situations.
- (iv) There will be no significant effects (interaction effects between variables and main effects of the variables) between sex, teaching experience, qualification, rank of teachers and perception of the nature of work-related stress factors.

6.1.4 METHODOLOGY

Two research instruments were employed to meet the aims of investigation. A standardized scale called the Eysenck Personality Questionnaire (EPQ: Junior & Adult) was used to elicit teachers' personality characteristics (section A). Section B consisted of items validated by the researcher through the method called factor analysis. These two instruments were administered to a randomly selected sample of 444 teachers. Appropriate statistical tests, namely, the chi-square one sample test, the Pearson correlation coefficient, stepwise regression analysis and the analysis of variance (ANOVA) were used for testing hypotheses of the study. It is through these research instruments that the researcher was able to achieve the goals of study.

6.2 CONCLUSIONS

The results of the investigation led to the following conclusions:

- (i) Teachers differ in the extent to which they experience stress from work-related factors. The majority of teachers experience high to very high levels of stress.

- (ii) There is a negative relationship between extraversion and educational changes. There is also a positive relationship between neuroticism and time pressures; neuroticism and administrative problems and neuroticism and pupil misbehaviour. This means that introverted teachers are more prone to stress, related to educational changes than those who are extraverts; whereas emotionally unstable teachers are more prone to stress related to time pressures; administrative problems and pupil misbehaviour than those who are emotionally stable.
- (iii) Extraversion is the best predictor of stress in situations involving educational changes. Neuroticism is the best predictor of stress in situations involving time pressures; administrative problems and pupil misbehaviour.
- (iv) The study indicates that teachers' biographical characteristics (sex, qualification and experience) do influence their perception of work-related stress factors namely: time pressures, educational changes, administrative problems and pupils' behaviour.

Since this study adhered to the principles of scientific procedures, the forementioned findings can be generalised to the entire population of secondary school teachers in KwaZulu-Natal province.

6.3 RECOMMENDATIONS

6.3.1 TOWARDS A MODEL FOR DETERMINANTS OF TEACHER OCCUPATIONAL STRESS

The main purpose of this study was to develop a model for determinants of occupational stress among teachers in KwaZulu-Natal. Such a model would be based on the findings of this study. The significant findings show that there is a relationship between teachers' personality characteristics and levels of stress on work-related factors. These findings are generally significant because they give us a picture of teachers who are vulnerable to stress related to different aspects of their work. In the light of these findings, the researcher recommends a model for determinants of teacher occupational stress presented in figures 6.1.

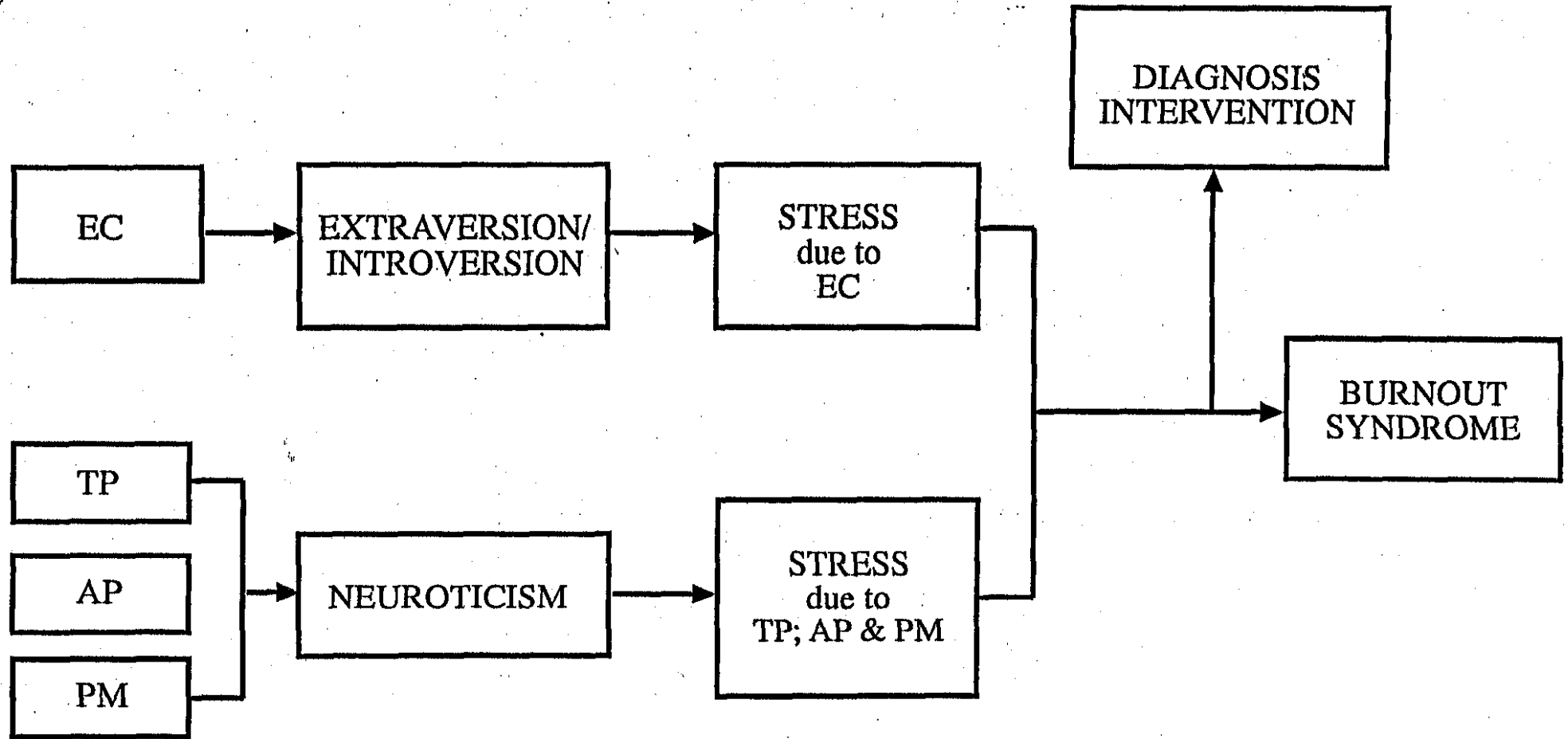


FIGURE 6.1 A MODEL FOR DETERMINANTS OF TEACHER OCCUPATIONAL STRESS

This model illustrates the interaction of personality variables and work-related factors to bring about stress. Extraversion/Introversion interacts with educational changes (EC) whereas neuroticism interacts with time pressures (TP); administrative problems (AP) and pupil misbehaviour (PM). Stress due to EC, results from the interaction between teacher's extraverted/introverted behaviour and teacher's perception of educational changes. On the other hand, stress due to TP; AP and PM, is the consequence of teacher's neurotic state and teacher's perception of time pressures; administrative problems and pupil misbehaviour. It is the researcher's contention that, if stress management programmes are to be successful in helping teachers to cope with stress at work, such programmes would have to take the interaction of these factors into account.

Prolonged stress can lead to the burnout syndrome, which is a chronic response to the cumulative long-term negative impact of job-related stress. It is important that stress be detected before it develops into a burnout syndrome. The position between stress and burnout syndrome, in the model, embraces curative strategies for stress management at the school level. Two main stages can be identified, namely, diagnosis and intervention. Diagnosis involves identifying the sources of stress in the school working environment, so that adequate interventions can be planned and directed as effectively as possible. This study has set a model of a teacher stress questionnaire that may be used as a diagnostic tool at school.

Once the sources of stress have been identified, planned intervention would need to take place. Counsellors would design interventions for dealing with teacher occupational stress and methods for evaluating the effectiveness of those interventions. They would also provide counselling services themselves.

Counselling services provided should be focusing on individuals, that is, interventions to help individual teachers to cope with stress. Secondly, it should focus on schools as organisations, that is, interventions designed to change the workplace to reduce job stress. In view of the fact that the number of professional educational psychologists is limited one educational psychologist per region of KwaZulu-Natal could lead the team of counsellors. Included in the team could be a guidance teacher for each school. Contact with teachers can be through management workshops or in-service training.

On the basis of this model, the researcher recommends that counselling be a compulsory feature in the education service, so that practising teachers could be counselled on how to cope with stress related to their work as teachers. Another suggestion is that the two dimensions of personality, namely, extraversion and neuroticism be used together with qualification, as criteria for selecting prospective teachers. Such a personality test would provide a preventative strategy with the aim of barring teachers with unstable personalities, and whose fragility would expose them to certain failures within education.

The model proposed in this study is the interactive model of stress which specifically provides understanding of the nature of interaction between teachers' personality characteristics and specific work-related factors. It generally provides the basis for a person fit approach to the understanding of stress at work. However, the researcher has discovered that a study on a model for determinants of occupational stress in teaching cannot simultaneously cover all aspects related to the concept of stress, hence this study has its own limitations.

6.3.2 AVENUES FOR FUTURE RESEARCH

The following are limitations of this study and are outlined for directing future studies. It is clear that more research is needed.

- (i) The sample of this study was drawn from teachers of KwaZulu-Natal province only, therefore, it is not representative of the entire population of teachers in this country. Further studies need to be conducted in the other provinces.
- (ii) Only public schools were the target population in this study. Further research, focusing on private schools is needed.
- (iii) The sample of this study was drawn from secondary school teachers only. There is a need for a study at primary school level.
- (iv) The sample of this study consisted of 444 teachers. More research, with a bigger sample, preferably a nationwide study, would be appreciated so that the results can be generalised nationally with great confidence.
- (v) In this study, some work-related stress items, piloted and subjected to factor analysis, and ultimately used in the final study were adapted from other studies, while others were based on the researcher's experience. There is a need for a study in which interviews are used in the pilot study to draw as many items as possible from teachers.

- (vi) Extraversion and Neuroticism are the only dimensions of personality included in the research instrument of this study. Further studies which would use other dimensions of personality, namely, Psychoticism and Lie scales, could be included to determine whether these dimensions are related to any of the work-related stress factors and whether any of them can emerge as the best predictor of stress in different work situations.

- (vii) Coping strategies used by teachers in response to specific work-related stress factors were not explored. More research on coping strategies which teachers use is essential. Such studies could also view coping strategies against teachers' personalities to determine whether there is any relationship between the two.

In spite of the limitations mentioned above, this study has achieved its objective of understanding occupational stress among teachers in KwaZulu-Natal. It has also provided recommendations for researchers who are interested in the same field of study.

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ANNEXURE A

The scale used in the pilot study

QUESTIONNAIRE

1. This is a questionnaire on stress as experienced by teachers from their work-related factors.
2. You are requested to rate each potential source of stress item in terms of the degree to which it is stressful to you. The instructions on how to rate each item accompany this questionnaire.
3. Please rate *every* item statement.
4. Included in this questionnaire is also a section on your personality type.
5. You are also requested to answer *all* questions on personality type in accordance with the instructions accompanying this questionnaire.
6. Your information will be confidential, therefore, do not write your name or the name of the school on this questionnaire.

Your co-operation will be highly appreciated.

Thank you

DP NGIDI (LECTURER)

FACULTY OF EDUCATION

UNIVERSITY OF ZULULAND

PRIVATE BAG X1001

KWADLANGEZWA

(3886)

PLEASE TURN TO THE NEXT PAGE.

SECTION A

A. Teachers' Particulars

Please make a cross (x) in the appropriate space or box provided.

1. Sex

1	2
Male	Female

2. Teaching experience: in years

1	2	3
0-4	5-9	10+

3. Qualification

1	2	3	4
Degree with Teachers' diploma/ certificate	Degree without Teachers' diploma/ certificate	Teachers' diploma/ certificate	Privately paid Teacher

SECTION B

Occupational Stress Inventory for Teachers (OSIT).

Please indicate the degree of stress caused to you by each of the item statements listed below. Use the rating scale given to write your rating number for each item statement in the box at the end of each item statement.

Extreme stress	Much stress	Moderate stress	Mild stress	No stress
4	3	2	1	0

ITEM

<u>No.</u>	<u>STATEMENT</u>	<u>RATING</u>
1.	Having to deal with pupils who continually misbehave	<input style="width: 50px; height: 25px;" type="text"/>
2.	Poor attitudes of pupils to work	<input style="width: 50px; height: 25px;" type="text"/>
3.	Difficulty of motivating pupils	<input style="width: 50px; height: 25px;" type="text"/>
4.	Many pupils do not come to class with necessary materials	<input style="width: 50px; height: 25px;" type="text"/>
5.	Inadequate disciplinary policy of the school	<input style="width: 50px; height: 25px;" type="text"/>
6.	Inadequate salary	<input style="width: 50px; height: 25px;" type="text"/>

SECTION B

Occupational Stress Inventory for Teachers (OSIT).

Please indicate the degree of stress caused to you by each of the item statements listed below. Use the rating scale given to write your rating number for each item statement in the box at the end of each item statement.

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<u>No.</u>	<u>STATEMENT</u>	<u>RATING</u>
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3.	Difficulty of motivating pupils	<input style="width: 50px; height: 25px;" type="text"/>
4.	Many pupils do not come to class with necessary materials	<input style="width: 50px; height: 25px;" type="text"/>
5.	Inadequate disciplinary policy of the school	<input style="width: 50px; height: 25px;" type="text"/>
6.	Inadequate salary	<input style="width: 50px; height: 25px;" type="text"/>

Extreme stress	Much stress	Moderate stress	Mild stress	No stress
4	3	2	1	0
7.	Having to comply with Ministry changes without sufficient consultation with teachers			<input type="checkbox"/>
8.	Lack of opportunities for professional improvement			<input type="checkbox"/>
9.	Lack of resources for teaching			<input type="checkbox"/>
10.	Having to teach large classes			<input type="checkbox"/>
11.	Having to teach mixed ability classes			<input type="checkbox"/>
12.	Difficulty in completing the syllabus in the time available			<input type="checkbox"/>
13.	Lack of co-operation on the part of parents			<input type="checkbox"/>
14.	Noise and other disturbances from neighbouring classes			<input type="checkbox"/>
15.	Lack of time for personal relaxation/leisure			<input type="checkbox"/>
16.	Difficulty in dealing with classroom work effectively because of other delegated responsibilities			<input type="checkbox"/>

Extreme stress	Much stress	Moderate stress	Mild stress	No stress
4	3	2	1	0
17.	Not enough time to complete lesson preparation during school hours			<input type="checkbox"/>
18.	Lack of classroom space for group work			<input type="checkbox"/>
19.	Lack of opportunity to express your point of view in school decision-making			<input type="checkbox"/>
20.	Having to cover lessons for absent teachers			<input type="checkbox"/>
21.	Lack of opportunity to experiment with new ideas			<input type="checkbox"/>
22.	Principal's reluctance to reprimand or investigate reported cases of serious misbehaviour			<input type="checkbox"/>
23.	Insufficient time to deal with private/family matters			<input type="checkbox"/>
24.	Threats of physical violence from pupils			<input type="checkbox"/>
25.	Having to teach a subject for which you have not been trained			<input type="checkbox"/>
26.	Pace of the school day is too fast			<input type="checkbox"/>

Extreme stress	Much stress	Moderate stress	Mild stress	No stress
4	3	2	1	0

27. Not being assigned to teach pupils in classes which you prefer

28. Principal's reluctance to deal with difficult parents

29. Transportation difficulties in getting to school

30. Delay in promotion.

31. Pupils' unruly behaviour

32. Pupils carrying firearms in the school.

33. "Pass one pass all" demand by pupils

34. The constant changes taking place within the profession

35. The lack of information as to how the changes are to be implemented

36. Introduction of right-sizing policy

37. Time available to prepare myself for the new "curriculum 2005"

Extreme stress	Much stress	Moderate stress	Mild stress	No stress
4	3	2	1	0

38. Opening of severance packages for teachers
39. The integration of pupils with special educational needs
40. Poor pupil-teacher ratios
41. Not enough time to complete marking during school hours
42. Government preference for science teachers rather than humanities teachers
43. Implementation of the new eight learning areas and Outcome Based Education(OBE) in 1998
44. Introduction of the code of conduct for teachers
45. Establishment of new school governing bodies (PPTA)
46. Abolition of corporal punishment
47. Pressure from teachers' unions
48. Lack of recognition for good teaching

Extreme stress	Much stress	Moderate stress	Mild stress	No stress
4	3	2	1	0

49. Inclusive education and likelihood of Indians/Whites taking over work for Blacks

50. Corruption in our education

ANNEXURE B

The scale used in the final study

QUESTIONNAIRE

1. This is a questionnaire on stress as experienced by teachers from their work-related factors.
2. You are requested to rate each potential source of stress item in terms of the degree to which it is stressful to you. The instructions on how to rate each item accompany this questionnaire.
3. Please rate *every* item statement.
4. Included in this questionnaire is also a section on your personality type.
5. You are also requested to answer *all* questions on personality type in accordance with the instructions accompanying this questionnaire.
6. Your information will be confidential, therefore, do not write your name or the name of the school on this questionnaire.

Your co-operation will be highly appreciated.

Thank you

DP NGIDI (LECTURER)

FACULTY OF EDUCATION

UNIVERSITY OF ZULULAND

PRIVATE BAG X1001

KWADLANGEZWA

(3886)

PLEASE TURN TO THE NEXT PAGE.

SECTION A**A. Teachers' Particulars**

Please make a cross (x) in the appropriate space or box provided.

1. Sex

1	2
Male	Female

2. Teaching experience: in years

1	2	3
0-4	5-9	10+

3. Qualification

1	2	3	4
Degree with Teachers' diploma/ certificate	Degree without Teachers' diploma/ certificate	Teachers' diploma/ certificate	Privately paid Teacher

4. Rank

1	2	3	4
Assistant Teacher	Head of Department	Deputy Principal	Principal

SECTION B

Occupational Stress Inventory for Teachers (OSIT).

Please indicate the degree of stress caused to you by each of the item statements listed below. Use the rating scale given to write your rating number for each item statement in the box at the end of each item statement.

Extreme stress	Much stress	Moderate stress	Mild stress	No stress
4	3	2	1	0

ITEM

<u>No.</u>	<u>STATEMENT</u>	<u>RATING</u>
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4.	Many pupils do not come to class with necessary materials	<input style="width: 50px; height: 25px;" type="text"/>
5.	Inadequate disciplinary policy of the school	<input style="width: 50px; height: 25px;" type="text"/>
6.	Inadequate salary	<input style="width: 50px; height: 25px;" type="text"/>

Extreme stress	Much stress	Moderate stress	Mild stress	No stress
4	3	2	1	0

7. Having to comply with Ministry changes without sufficient consultation with teachers
8. Lack of opportunities for professional improvement
9. Lack of resources for teaching
10. Having to teach large classes
11. Difficulty in completing the syllabus in the time available
12. Lack of co-operation on the part of parents
13. Lack of time for personal relaxation/leisure
14. Difficulty in dealing with classroom work effectively because of other delegated responsibilities
15. Not enough time to complete lesson preparation during school hours
16. Lack of classroom space for group work
17. Lack of opportunity to express your point of view in school decision-making

Extreme stress	Much stress	Moderate stress	Mild stress	No stress
4	3	2	1	0

18. Having to cover lessons for absent teachers
19. Lack of opportunity to experiment with new ideas
20. Principal's reluctance to reprimand or investigate reported cases of serious misbehaviour
21. Insufficient time to deal with private/family matters
22. Threats of physical violence from pupils
23. Having to teach a subject for which you have not been trained
24. Pace of the school day is too fast
25. Principal's reluctance to deal with difficult parents
26. Pupils' unruly behaviour
27. Pupils carrying firearms in the school.

Extreme stress	Much stress	Moderate stress	Mild stress	No stress
4	3	2	1	0

- | | | |
|-----|--|--------------------------|
| 28. | "Pass one pass all" demand by pupils | <input type="checkbox"/> |
| 29. | The constant changes taking place within the profession | <input type="checkbox"/> |
| 30. | Introduction of right-sizing policy | <input type="checkbox"/> |
| 31. | Time available to prepare myself for the new "curriculum 2005" | <input type="checkbox"/> |
| 32. | Opening of severance packages for teachers | <input type="checkbox"/> |
| 33. | The integration of pupils with special educational needs | <input type="checkbox"/> |
| 34. | Poor pupil-teacher ratios | <input type="checkbox"/> |
| 35. | Implementation of the new eight learning areas and Outcome Based Education (OBE) in 1998 | <input type="checkbox"/> |
| 36. | Introduction of the code of conduct for teachers | <input type="checkbox"/> |
| 37. | Establishment of new school governing bodies (PPTA) | <input type="checkbox"/> |
| 38. | Pressure from teachers' unions | <input type="checkbox"/> |

THE END- THANK YOU FOR YOUR PATIENCE

ANNEXURE C

A letter of request to conduct research

**University of
Zululand
Universiteit van
Zoeloeland**



Private Bag X1001
Privatezak
KWADLANGENZA 3886
South Africa
☎ (0351) 93911
Telegrams: "Unizul"
📠 SA 631311
Fax (0351) 93735
(0351) 93845 (Buying)
(0351) 93130 (Rectorial)
(0351) 93571 (Library)

Ref./Verw.

18 November 1997

The Superintendent - General
Department of Education and Culture (KZN)
Private Bag X 04
ULUNDI
3838

Dear Sir

**REQUEST FOR PERMISSION TO CONDUCT RESEARCH WITH TEACHERS AS
SUBJECTS**

I am registered for D.Ed degree in the Faculty of Education and a staff member at this University. I am writing this letter to request for permission to conduct research with teachers in randomly selected schools under the eight KwaZulu-Natal regions. My investigation is entitled "Towards a Model for Determinants of Occupational Stress among Teachers in KwaZulu-Natal".

The proposed research is intended to be a contribution to a model for and the understanding or knowledge of determinants of occupational stress among teachers. The study attempts to answer the following questions:

1. To what extent do teachers in KwaZulu-Natal experience stress from work-related factors?
2. Is there any relationship between teachers' personality characteristics and their levels of stress on work-related factors?
3. Are there any teachers' biographical characteristics which influence their perceptions of work-related stress factors?

A copy of a questionnaire is attached. I hope it meets your approval. The names of schools and teachers in this study will be treated as confidential, but the findings of the research can be forwarded to your office should you wish me to do so.

Your permission to conduct research in these districts will be highly appreciated.

Yours faithfully

**DAVID PHATHABANTU NGIDI
LECTURER : FACULTY OF EDUCATION**

ANNEXURE D

A letter of permission to conduct research

PROVINCE OF
KWAZULU - NATAL

ISIFUNDAZWE
SAKWAZULU - NATAL

PROVINSIE
KWAZULU - NATAL

DEPARTMENT OF EDUCATION & CULTURE
UMNYANGO WEMFUNDO NAMASIKO
DEPARTEMENT VAN ONDERWYS & KULTUUR

<i>Ikheli Loringo</i>	:		<i>Isikhwama Seposi</i>	:	X04
<i>Telegraphic Address</i>	:	INKANYISO	<i>Private Bag</i>	:	Ulundā
<i>Telegrafiese Adres</i>	:		<i>Privaatsak</i>	:	3838

<i>Fax No.</i>	:		<i>Imibuzo</i>	:	
<i>Ucingo</i>	:	0358-8743428	<i>Ngqongqo</i>	:	MR J. Z. SIBISI
<i>Telephone</i>	:	0358-8743593	<i>Navrae</i>	:	

<i>Usuku</i>	:		<i>Inkomba</i>	:	
<i>Date</i>	:	20 JANUARY 1998	<i>Reference</i>	:	
<i>Datum</i>	:		<i>Verwysing</i>	:	

Mr D.P. Ngidi
Private Bag X1001
KWADLANGEZWA
3886

**REQUEST FOR PERMISSION TO CONDUCT RESEARCH WITH TEACHERS
AS SUBJECTS.**

1. Your request as stated above is hereby granted.
2. Please contact those concerned and if necessary you may show them this letter to indicate that the Department of Education and Culture KwaZulu-Natal Province has no objection in you conducting the above research with teachers in our schools.


SUPERINTENDENT-GENERAL