

**SOURCES OF OCCUPATIONAL STRESS FOR TEACHERS, WITH
SPECIFIC REFERENCE TO THE INCLUSIVE EDUCATION MODEL IN
THE WESTERN CAPE**

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**A Mini-thesis submitted in partial fulfilment of the requirements for the degree
of Master Atium in the Department of Industrial Psychology, Faculty of
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**SOURCES OF OCCUPATIONAL STRESS FOR TEACHERS, WITH SPECIFIC
REFERENCE TO THE INCLUSIVE EDUCATION MODEL IN THE WESTERN
CAPE**

Janine Paulse

KEYWORDS

Occupational Stress

Teacher attrition

Inclusive education

Behavioural problems

Cognitive disability

Teacher burnout

Teacher-pupil ratio

Role confusion

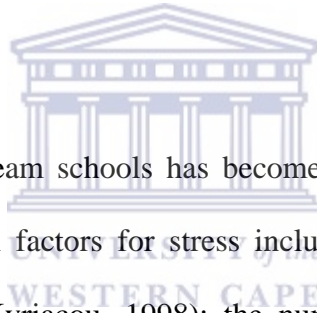
Absenteeism

Systemic overload



Abstract

Stress is an occurrence that must be recognised and addressed in various professions- the teaching profession is no exception (Oliver & Venter, 2003). In recent years, inclusive education has risen to prominence, which changed the traditional roles of teachers, from using a “talk and chalk” method, to being more pupil-centred. Within the South African context, learners traditionally seen as having special needs are accommodated within the inclusive education environment (National Department of Education, 2001). Research highlights that teacher’s experience with respect to inclusive education is very limited, and that they do not have the skill and disposition to handle diversity (Engelbrecht & Eloff, 2001).

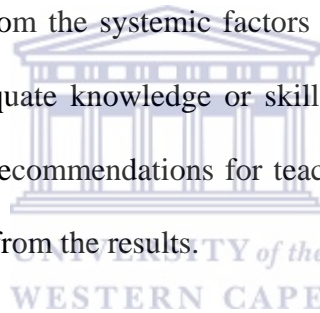


The role of teachers in mainstream schools has become more varied and challenging. Research has shown that casual factors for stress include role overload, poor learner behaviour, lack of resources (Kyriacou, 1998); the number of individuals for whom teachers are responsible, diversity in individuals with whom they have to work, resistance and lack of motivation of co-workers (Smylie, 1999).

The aim of this paper was to identify the sources of stress for teachers involved with inclusive education as well as whether there is a statistically significant difference in stress experienced by teachers based on their biographical details. A stratified random sample of 115 teachers was selected from a population of 300 teachers, teaching at the various schools, located in the Cape Town area of the Western Cape. The measuring

instrument used was the Teacher Stress Questionnaire- a reliable and valid stress questionnaire that has been standardised for South African conditions. Permission to conduct research at the selected schools was obtained from the Western Cape Education Department. Informed consent was obtained from the various participants and anonymity of participation was ensured.

The results from this study and other studies (Engelbrecht & Eloff, 2001), highlight that since its inception, inclusive education has made additional demands on teachers. The three most stress areas identified from this study related to the behaviours of pupils, the classroom and support. Apart from the systemic factors that are a significant source of stress for teachers, lack of adequate knowledge or skills to address diversity amongst learners was also highlighted. Recommendations for teachers to manage their stress are based on the conclusions drawn from the results.



DECLARATION

I declare that *Sources of occupational stress for teachers, with specific reference to the inclusive education model in the Western Cape* is my own work, that it has not been submitted for any degree or examination in any other university, and that all the resources I have used or quoted have been indicated and acknowledged by complete references.

JANINE PAULSE



NOVEMBER 2005

Signed.....

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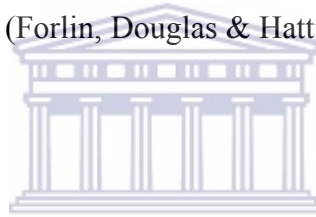
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CHAPTER 1

INTRODUCTION

1.1 Introduction

In recent years, inclusive education has risen to prominence, becoming a dominant issue within education across a range of national contexts. Within the South African context, inequalities resulting from apartheid and economic deprivation have had a significant impact on the provision of education for learners traditionally seen as having special education needs (Forlin, Douglas & Hattie, 1996; National Department of Education, 2001).

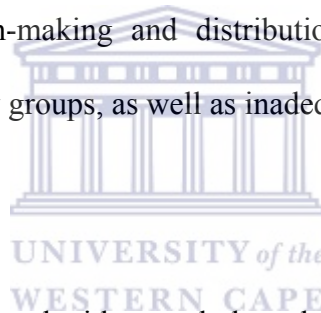


Despite the achievements of Australia (Forlin et al., 1996) and Great Britain (Wearmouth, Edwards & Richmond, 2000), research (Engelbrecht et al., 2001) indicates that teachers' experience in South Africa with respect to inclusive education is very limited. They conclude that the separate general and special education programmes in teacher education have not provided teachers with the necessary training and experience to develop the necessary skills and dispositions to handle diversity.

The widespread concern regarding teacher stress has led many researchers to focus on this area. Furthermore, there has been an increasing recognition of the link between

mental and physical health and occupational stress, and indeed concern to improve the working lives of teachers (Williams & Gersch, 2004).

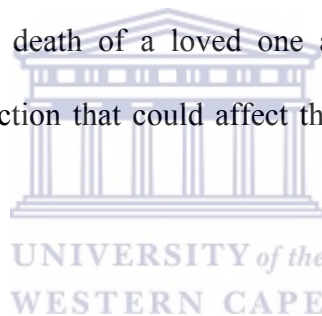
According to van Zyl and Pietersen (1999), South African education is undergoing fundamental changes because of political changes in the country, and teachers have to adapt to the new reality. They probably experience even more stress due to the changes in the basic occupational structure of teaching (Hayward, 1994). Research (Marais, 1992) shows that teachers are exposed to a wide variety of multi-dimensional stressors within the work situation (inadequate working conditions, role conflict and ambiguity, pupil problems, time pressures, the threat of redundancy, work pressure, little participation in decision-making and distribution of tasks, stereotypes and discrimination against minority groups, as well as inadequate salaries.



Teachers in South Africa are faced with a workplace that is inundated by a myriad of factors that impinge on their effectiveness within the classroom. The reality of the education system has led to the attrition of teachers due to resignations and premature retirement due to stress (Sinclair & Ryan, 1987, cited in Howard & Johnson, n.d). For instance, teachers have to contend with taking responsibility for the high drop out rate in high schools, high work load, poor status and poor salaries (Travers & Cooper, 1997), role overload (Pithers & Soden, 1998), maintaining discipline (Lewis, 1999), lack of resources, lack of time, excessive meetings, large class sizes, lack of assistance, lack of support, and hostile parents (Krause, in Carter, 1994), inadequate teachers' training and resource allocation, lack of career development, lack of

recognition, dissatisfaction with work policies or job insecurities, health issues, in particular high blood pressure, diabetes, alcoholism and HIV.

Rapid changes in the world and technology have exacerbated teacher's perceived professional incompetence (Fimian & Santoro, 1983); teachers experience stress due to the lack of occupational confidence as a result of the difficulty that they experience to keep up to date in their areas of expertise (Fimian & Santoro, 1983; Terry, 1997). In addition, it has been found that job satisfaction and teacher stress are strongly correlated, as the amount of stress and degree of satisfaction experienced by teachers influences the quality of life of teachers (Pelsma & Richard, 1988). Events such as marriage, divorce, pregnancy, death of a loved one and change of residence are related to teachers' life satisfaction that could affect their stress and performance at work (Hittner, 1981).



According to Smylie (1999), work involving responsibility for other people creates potential stress as it may heighten expectations for job performance and emotional availability. Gallen, Karlenzig and Tamney (1995) explored the complexity and diversity of teachers' work, clearly linking workload and stress not only to the quantity of hours worked, but also to the diverse nature and demands placed on teachers.

The cognitive factors affecting individual susceptibility to stress amongst teachers were investigated by Chorney (1998), and it was revealed that teachers' responses to being a "good teacher" were couched in absolute terms, such as "must" and "need".

The endorsement of these beliefs was widespread and the implications were that teachers suffered from stress and burnout due to their own internal attributions. This suggested that teachers who blame themselves for difficulties are more vulnerable to stress (Bibou-Nakou, Stogiannidou & Kiosseoglou, 1999).

Moreover to the systemic stresses, teachers are also exposed to traumatic stress, which include primary stress and secondary stress. Examples of primary stress include assault, threats of violence and intimidation and secondary stress includes news of violent and distressing events and witnessing how others are subjected to trauma (Fisher, 2001).

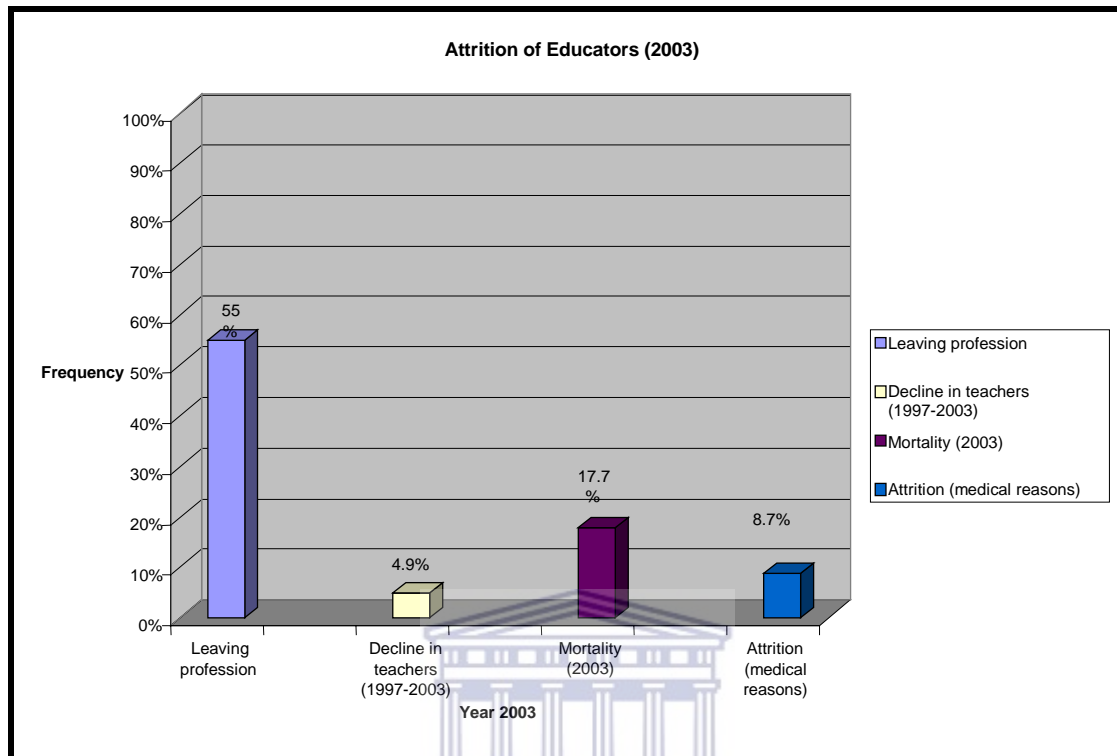
1.2 Motivation for the study



Internal and external factors have shaped the teaching environment in South Africa and have contributed to increased stress for teachers in recent years.

A survey involving 21358 educators in more than 1714 randomly selected schools, aimed at finding out why teachers are leaving the profession, was commissioned by the Education Labour Relations Council. The following graphical illustrations, Figure 1.1, Figure 1.2 and Figure 1.3, highlight the findings of the survey:

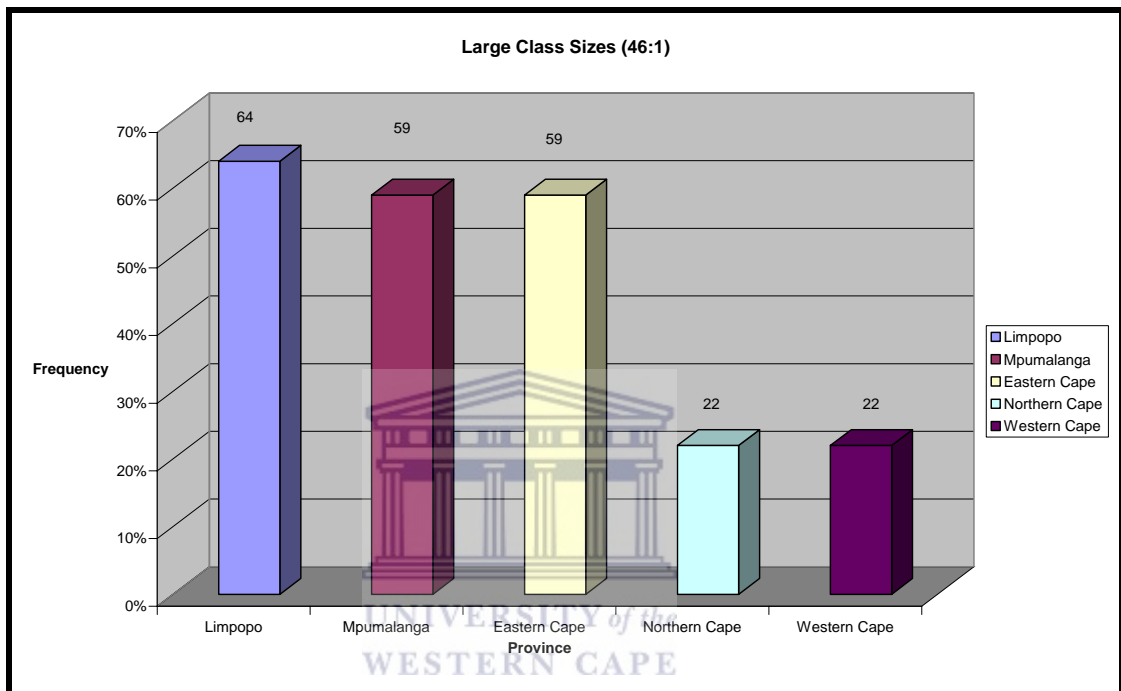
Figure.1.1 gives an overview of the percentage attrition (total loss) of educators.



As highlighted in Figure 1.1, fifty-five percent (55%) of educators have considered leaving the profession due to inadequate remuneration; increased workload, lack of career development, lack of professional recognition; dissatisfaction with work policies or job insecurities. The average number of educators in the system has declined over the last 7 years from 386 735 to 368 548 in 2003/2004. Attrition (total loss) in the educator workforce fluctuated, declining from 9.3% in 1997/1998 to 5.5% in 2000/2001, before rising again to 5.9% in 2002/2003. The proportion of attrition due to mortality (all causes) increased 7.0% in 1997/1998 to 17.7% in 2003/2004. The proportion of attrition

due to medical reasons grew from 4.6% to 8.7% over the same period (National Department of Education, 2001).

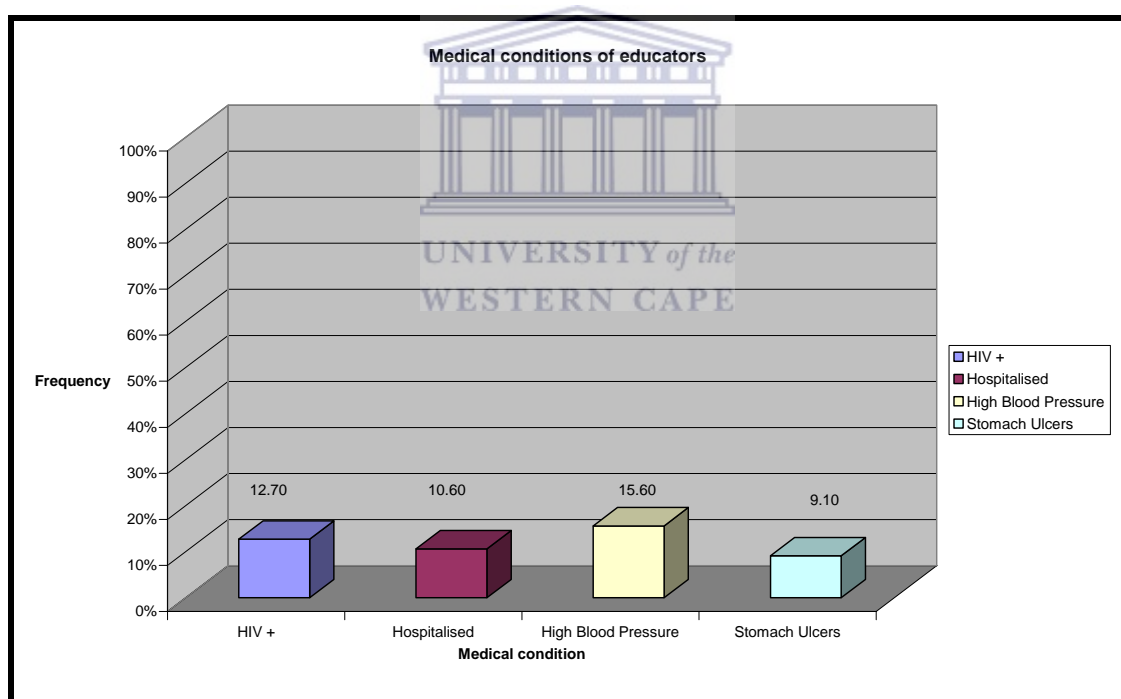
Figure 1.2 –Distribution of teacher –pupil ratios



- Large class sizes of about 46 are reported in Limpopo (64%), Mpumalanga and the Eastern Cape (59%), in contrast to the Northern Cape (22%) and the Western Cape (22%)
- School fees also affect the teaching and learning environment. The wealthier provinces of the Western Cape, Gauteng and Northern Cape, have higher annual school fees averaging R800, in stark contrast to poorer provinces such as the Eastern Cape, KwaZulu-Natal and Mpumalanga, which average R150.

- Based on a national representative sample of 17 088 educators who agreed to HIV testing (Response rate: 83% of educators), 12, 7% were shown to be HIV positive. If sex and age are taken into account, there is no significant difference from that of the general population.
- More than a third of teachers suffer from high blood pressure, an ulcer or diabetes, all of which are stress-related (National Department of Education, 2001).

Figure 1.3: Overview of Medical conditions of teachers



- The proportion of educators absent from work for longer than 10 days was highest amongst those diagnosed with TB in the last five years, high-risk

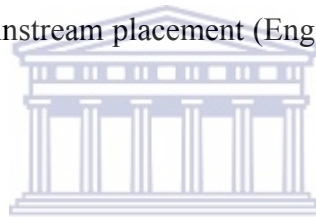
drinkers, and those with heart and lung diseases or breathing problems, diabetes, cancer and anaemia.

- The burden of absenteeism on the education work force was mainly due to high blood pressure, followed by smoking, being HIV positive, arthritis and rheumatism and high-risk drinking.
- Low morale at the educational institutions and intentions to quit teaching, low job satisfaction, and high job stress are strongly associated with a high number of self-rated absenteeism and/or being unproductive and /or unwell at work.
- The health status of educators is apparently poorer than the general population, considering that 10.6% had been hospitalised in the 12 months prior to the survey. This is higher than the 7% observed in the general population. The most frequently reported diagnoses in the last study were stress-related illnesses such as high blood pressure (15.6%) and stomach ulcers (9.1%)
- The study revealed that two-thirds of educators who were considering leaving the education profession were in scarce fields, such as technology, natural sciences, economic and management sciences, quoted low job satisfaction, job stress and violence in schools as major contributing factors to stress levels (National Department of Education, 2001).

To compound this, inclusive education has become a key priority of the national government. In conjunction with the dynamic nature of the education arena, Engelbrecht, et al. (2001) and Pettipher and Oswald, (2001), maintain that inclusive education is a complex concept. It is viewed in most literature as being synonymous with reform or restructure of the school as a whole and hence it cannot be narrowly

defined as placing children with disabilities in mainstream schools or providing special educational support. It involves the access and active participation of learners in a range of educational and social opportunities to achieve the highest possible quality of life (Mittler, 2000; Sands, Kozleski & French, 2000).

Inclusive education is therefore viewed as the creation of a learning environment that promotes the full personal, academic and professional development of all learners, irrespective of race, gender, disability, religion, culture, sexual preference, learning styles and language (Department of Education, 2001). An inclusive school's focal point consequently, is on valuing diversity and caring for all its members and not merely on assimilation and mainstream placement (Engelbrecht et al., 2001; Pettipher & Oswald, 2001).



The rationale for the implementation of an inclusive system is based on the premise that when education is pupil-centred, as in the Outcomes Based Education approach, the needs of all learners are addressed (Boschee & Baron, 1993).

Outcomes Based Education (OBE) creates a supportive, learning environment where students are encouraged to develop a positive self-image. The strategy for OBE implies the following:

- What students are to learn are clearly defined.
- Each student's progress is based on demonstrated achievement.
- Each student's needs are accommodated through multiple instructional strategies and assessment tools

- Each student is provided with time and assistance to realise his or her full potential (Boschee & Baron, 1993).

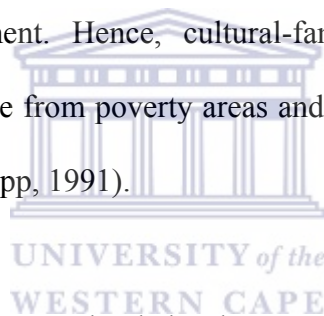
According to research, approximately 15% of the total number of learners that are experiencing barriers to learning are catered for in special schools, and the rest are in mainstream classes, and it is in this context that a movement towards an inclusive paradigm has occurred in the South African Education system (Boschee & Baron, 1993).

Inclusive education implies flexibility in teaching styles to meet the needs of all learners, and educators are faced with the challenge of accommodating diversity in learning styles (Kochhar, West & Taymans, 2000). Central to the success of the inclusion policy are teachers' ability to adapt to the changes, but also the implementation of support structure in terms of government, governing bodies, parents and departmental officials (Kochhar et al., 2000). As mentioned above, inclusion involves valuing diversity, which involves various issues ranging from race to learning styles. For the purpose of this research, the focus will be on intellectual disability.

According to Sigelman and Shaffer (1995), individuals with intellectual disability have limitations in adaptive behaviour, have an Intelligence Quotient of below 70 and have difficulties in meeting age-appropriate expectations in everyday functioning. The Oxford Dictionary of Psychology (2001) indicates that the Intelligence Quotient (IQ) is an index of intelligence. It is defined in terms of mental age (level of age graded

problems an individual is able to solve) divided by the actual chronological age and multiplied by a 100. According to Sigelman and Shaffer (1995), an IQ of a 100 indicates average intelligence; between 50 and 70 indicates mild retardation; 35-50 indicates moderate retardation and 20-35 indicates severe retardation.

The most severe forms of retardation, according to Westling (1986) are associated with an identifiable biological cause, such as disease, hereditary factors or injuries. However, it is the cultural-familial retardation that is the most common amongst children and it is not usually identified until the child performs poorly on an IQ test in school. It is further stated that it appears to be related to a combination of low genetic potential and poor environment. Hence, cultural-familial retarded children are generally mildly retarded; come from poverty areas and have a parent or sibling who is also retarded (Zigler & Hodapp, 1991).



The role of teachers in mainstream schools has become more varied and challenging. The growing number of learners needing special educational services is forcing schools to hire more educators. Teachers of learners with emotional and behavioural disorders may be more likely to leave their jobs because of high stress levels and job dissatisfaction (Abelson, 1986; Banks & Necco, 1990; Lawrenson & McKinnon, 1982; Singh & Billingsley, 1996 as cited in Nelson, 2001.) The high teacher attrition rate affects the quality of education received by pupils with emotional and behavioural disorders, whose behaviour demands more skilled and reliable support. In this context, it is of interest to identify the factors that may influence stress levels of teachers.

There is a paucity of South African research done on inclusive education (Engelbrecht & Forlin, 1997), where the boundary between the two categories of pupil-population, mainstream pupils and those with special educational needs, have become vague and obscured, thereby rendering it a scarcely explored research topic.

1.3 Aims and Objectives

The research aims to answer the following questions:

- What are the sources of stress for teachers involved with inclusive education?
- Is there a relationship between the dimensions of stress and the total stress experienced by teachers involved in inclusive education?
- Is there a relationship between biographical characteristics and stress?
- Do the dimensions of stress explain the variance in stress experienced by teachers involved with inclusive education?
- Are there differences in stress based on the biographical characteristics of the respondents?
- Does training in dealing with learners with special needs and access to developmental support contribute to stress experienced by teachers involved with inclusive education?

1.4 Hypotheses

The following hypotheses can be drawn from the above:

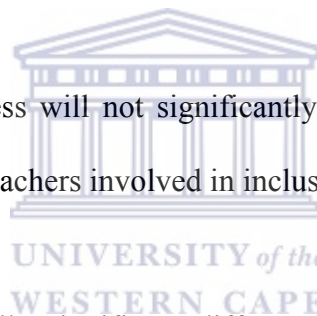
Ho: There is no relationship between the dimensions of stress and total stress experienced by teachers involved in inclusive education.

Ho: There is no relationship between the biographical characteristics of respondents and stress experienced by teachers involved in inclusive education.

Ho: The dimensions of stress will not significantly explain the variance in total stress experienced by teachers involved in inclusive education.

Ho: There are no statistically significant differences in total stress experienced based on the biographical characteristics of teachers involved in inclusive education.

Ho: There is no relationship between dealing with learners with special needs and access to developmental support and stress experienced by teachers involved with inclusive education.

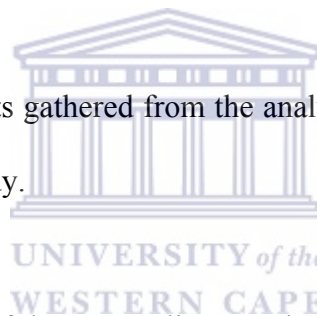


1.5 Overview of Study

Chapter 2 provides an overview of the theoretical background that provides the premise of the study. The concept of stress is introduced and discussed and the research findings on the topic are presented. Models of stress are discussed and the model of stress in the study is delineated.

Chapter 3 provides perspective on the research design used to investigate the research problem with specific reference to the design for the sample selection and size, data collection methods and procedures followed and the statistical techniques employed.

Chapter 4 focuses on the results gathered from the analyses and findings that became apparent from the research study.



Chapter 5 provides a scrutiny of the most salient results and a discussion thereof. The chapter concludes by elaborating on the limitations of the study and provides recommendations for future research.

1.6 Summary of the Chapter

In this chapter, the study has been contextualised with specific reference being made to the current dilemma faced by teachers and how stress factors impact on their optimal functioning.

The main aims of the study were delineated, including identifying the different stressors found in the teaching environment. The study also aims to establish the major sources of stress in the teaching environment with the implementation of the Inclusive Education Model as well whether there is a statistically significant difference in stress experienced by teachers based on their biographical characteristics.

The next chapter proceeds with an overview of pertinent literature in relation to the research problem under investigation.

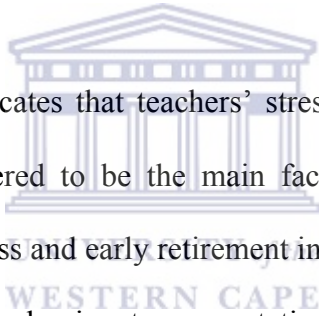


CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This section examines and explores the theoretical premise of study. It examines stressors and their source and probes stressors prevalent within the teaching environment. The concept of coping with stress is explored and how it impacts on the individual and the organisation.

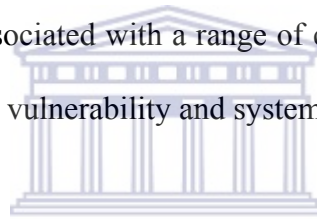


Research done worldwide indicates that teachers' stress is becoming endemic (van Wyk, 1998). Stress is considered to be the main factor contributing towards job dissatisfaction, job-related illness and early retirement in England (Van Dick, Phillips, Marburg & Wagner, 2001). The dominant representation of teaching has become that of a highly stressful occupation (Jarvis, 2002). The increasing recognition received by teachers' stress over recent years (Boyle, Borg, Falzon & Baglioni, 1995; Byrne, 1994; Tavers & Cooper, 1996) constitutes an indication of the difficulties encountered by teachers.

Research by Maxwell in Kyriacou (1980) reveals that stress has become widespread amongst teachers, and studies carried out in Victoria, Australia, over the last twenty years provide insight into the extent of the problem:

- ◆ During the 1980's, it was found that each year 160 teachers, between the ages of 44-45, were superannuated on the grounds of ill-health. One half to two thirds were retired early due to psychological ill-health, whilst a further one –tenth retired due to stress related cardiovascular disorders (Otto, 1986).
- ◆ Louden (1987) found that in a study of 2138 respondents, 10-20% were experiencing psychological distress, and a further 9% were suffering severe psychological distress.

In both categories, the proportions found were much greater than for the general population. South African research has highlighted similar issues and the high levels of stress have been reliably associated with a range of casual factors, including those intrinsic to teaching, individual vulnerability and systemic influences (Jarvis, 2000).



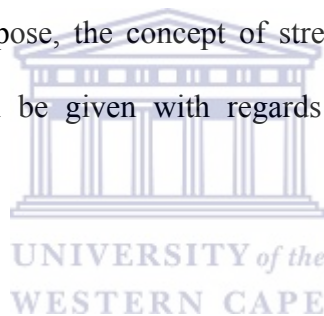
The above mentioned research findings do not highlight the difficulties encountered by teachers with regards to the recent changes in the education environment that fundamentally changes the roles of teachers. To improve on their service delivery to their constituencies, teachers have had to adapt to changes in their work environment by adapting to new policies and legislation (van Zyl & Pietersen, 1999).

The South African educational system is in a transitional stage. The lack of discipline in schools, abolishment of corporal punishment, unmotivated learners, redeployment, retrenchments and retirement packages for teachers, large pupil-teacher ratios and a new curriculum approach all contribute to raising the stress levels of teachers (Saptoe, 2000). Furthermore, the new education approach of outcomes based education, the

management style of principals, new governing bodies for schools, the high crime rate in the country, coping with current political change and corruption in state departments are causing stress to teachers (Marais, 1992).

The introduction of certain policies, specifically that of inclusion makes additional demands on teachers (Forlin et al., 1996; Mastropieri & Scruggs, 2000; Soto & Goetz, 1998), and many mainstream teachers feel unprepared and fearful of work with learners with disabilities in mainstream classes (Woods, 1999).

It is the aim of this chapter to highlight teacher stressors, specifically in an inclusive environment, and for this purpose, the concept of stress will first be explored and thereafter an explanation will be given with regards to stressors encountered in inclusive education.



2. Definitions of Stress

When stress was first studied in the 1950s, the term was used to denote both the causes and the experienced effects of pressures. More recently, however, the word stressor has been used for the stimulus that provokes a stress response. Currently, the disagreement among researchers concerns the definition of stress in humans and their argument is based on the following question: Is stress primarily an external response that can be measured by changes in glandular secretions, skin reactions, and other

physical functions, or is it an internal interpretation of, or reaction to, a stressor; or is it both (O' Driscoll & Beehr, 2000)?

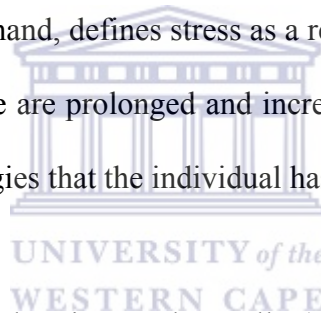
According to Van Wyk (in Olivier & Venter, 2003), stress is derived from the Latin word "strictus" that translates into taut, meaning stiffly strung. Oliver and Venter (2003) rely on the definition of Dr. Hans Seyle, who defined stress in physiological terms, as a non-specific or generalized bodily response. This response results when any demand is made on the body, whether it is an environmental condition to survive or a demand that we make on ourselves in order to accomplish a personal goal.

Stress is defined as "a state of tension that arises from an actual or perceived demand that calls for an adjustment or adaptive behaviour" (Olson, McCubbin, Barnes, Muxen, Larsen & Wilson, 1989, p. 119). Teacher stress has been viewed as an interactive process which occurs between teachers and their teaching environment which leads to excessive demands being placed on them and resulting in physiological and psychological distress (Forlin & Hattie, 1996).

Stress has been variously defined but it generally is recognized as an unpleasant emotional state (Kyriacou, 1989), which is said to occur when there have been prolonged, increasing or new pressures that are significantly greater than the coping resources (Dunham, 1992). The consequences of stress include health problems and reduction in work performance effectiveness (Quick & Quick, 1984). Stress is also a factor in staff attrition, absenteeism and low morale (Billingsley & Cross, 1992).

Kruger (1992, p. 92) maintains that “stress is a phenomenon that manifests in the individual person as a result of various stressors that arise from the self and the environment and affect the individual person in accordance with the way in which he or she attributes meaning to the events, stimuli or demands affecting him or her, and in accordance with the way in which he or she experiences and enters into or handles such events, stimuli or demands.” Whether potential stressors invoke negative stressful emotions depends upon a person’s cognitive appraisal of a given situation (Dewe, 1993), and this varies according to their beliefs and whether they perceive it as personally relevant.

Kyriacou (1978), on the other hand, defines stress as a response syndrome of negative effect that develops when there are prolonged and increased pressures that cannot be controlled by the coping strategies that the individual has.



According to Fisher (1994) and Keiper and Buselle (1996) positive or good stress, referred to as eustress can act as a motivating agent for achievement. Moderate levels of stress may induce improved effort to work, improved diligence and stimulate creativity (Schermerhorn, Hunt & Osborn, 2000).

Distress, on the other hand, is negative or destructive stress, as it causes serious ailments or discomforts (Keiper & Buselle, 1996). It impacts negatively on the organisation and the individual’s physical and mental system. This could result in reduced performance, absenteeism, errors, job losses, accidents, unethical behaviour, dissatisfaction and illness (Schermerhorn et al., 2000).

Taking the above into account, stress can be viewed as an “adaptive response, mediated by individual characteristics and/or psychological processes, that is the consequence of any external action, situation or event that places special physical and/psychological demands upon a person” (Ivancevich & Matteson, 1980, pp. 8-9).

The above definition highlights three important concepts, namely that (a) situational demands cause individuals to adapt; (b) individuals tend to react and adapt in different ways to stressors, and (c) that some form of response will occur, be it physical and or psychological (Alley, 1980; Eskridge & Coker, 1985; Fimian, 1982; Kreitner, 1989).

Furthermore, it can also be deduced that there are two distinct types of stressors; those which are found within the individual, which include personal values, attitudes and self-concepts, and those that originate outside of the individual, which include environmental and work-related stressors (Goodall & Brown, 1980).

In terms of adapting to stressors, Sigelman and Shaffer (1995) postulate that there are two schools of thought regarding the hypothesis that younger adults have more effective coping strategies than older adults. Pheiffer (1977) argues that coping capacity peaks in early age and deteriorates with age, referred to as the regression hypothesis. Contrary to this view, Vaillant (1977) proposes a growth hypothesis, arguing that coping capacities improve with age. Research has highlighted that neither of the two theories is well supported, as individuals at different ages are far more similar than different in their coping styles (Rook, Dooley, & Catalano, 1991).

Costa, Zonderman and McCrae (1991) further state that both younger and older adults may cope with stress in ways that are appropriate to the stressful event.

For the purpose of this research, Seyle's definition is focused on, as it encompasses the notion that stress is caused by physiological, psychological and environmental demands. Seyle (1974) indicated that when confronted with stressors, the body creates extra energy and it is when all the energy available is not utilised, that stress is a consequence.

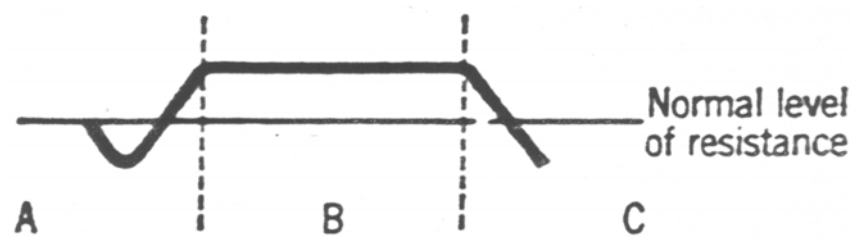
This reaction to stress was first described in 1936 and was coined the General Adaptive Syndrome (GAS), which includes three distinct stages (Seyle, 1974; 1980):

1. Alarm reaction,
2. Stage of resistance, and
3. Stage of exhaustion.



Response to stress is therefore deemed to be invariant to the nature of the stressor and followed a universal pattern- three stages, i.e. an alarm stage, a resistance stage and an exhaustion stage. Figure 2.1 provides an overview of this process.

FIGURE 2.1 SELYE'S GENERAL ADAPTATION SYNDROME



Source: Brown & Blakeman (1983, p. 25).

2.1 Alarm Phase

The alarm reaction is the immediate psycho-physiological response and at this time of the initial shock, resistance to stress is lowered. This process includes the secretion of hormones from the endocrine glands, causing for example, increased heart rate and blood pressure, muscle tension and a decrease in maintenance functions, e.g. digestion and sexual responsiveness. In cases where the stressor is continuous, the resistance phase starts where the body triggers the needed bodily system to deal with the stressor (Steenkamp, 2003). The body is alerted and activated and stress levels are at its highest during this stage (Hubert, 1984).

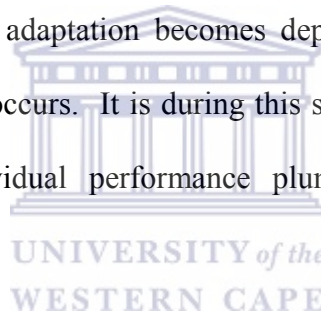
2.2 Resistance Phase

According to Goldberger and Breznitz (1982, cited in Steenkamp, 2003) the resistance stage is characterised by an adaptation response of the body that is

manifested with “fight or flight” responses. The body endeavours to remedy the shock caused by the stress and to return the homeostasis of the body. If the stressors continue, the body will persevere in defending itself, thereby impeding any possibility of rest and repair.

2.3 Exhaustion Phase

In the exhaustion phase, there is a resistance to a continued stressor, and where the adaptation response and /or return to equilibrium replace the alarm reaction. If the alarm reaction is elicited too intensely or too frequently over an extended period of time, the energy required for adaptation becomes depleted, and the final stage of exhaustion, collapse or death occurs. It is during this stage that physical and mental breakdown occurs, the individual performance plummets and illness develops (Hubert, 1984).



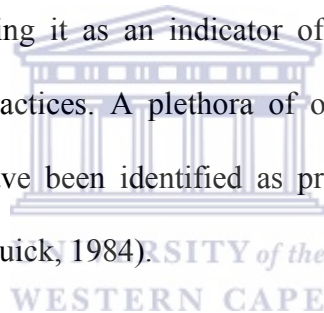
2.4 Sources of Stress

Over the last decade there has been a substantial increase in stress-related illness in industry (Cooper, 1981). The sources of stress are many, varied, complex and different for every individual, vary over time and therefore are almost impossible to analyse. Many studies of stress at work have shown that there are a variety of organisational factors that are instrumental in causing stress, such as factors intrinsic to the job, organisational structure and climate, relationships within the organisation,

the role of the individual in the organisation and career development (Sutherland & Cooper, 1988).

McGrath (in Tung & Koch, 1980) revealed that there are six possible classes of stressors in an organisational setting, i.e. Task-based stress; role based stress, stress intrinsic to behaviour, stress arising from the physical environment, stress arising from the social environment, and stress within the person system.

Pontage and Evans (in Thompson, Murphy & Stradling, 1994) argue that a shift needs to occur in seeing stress from a traditional point of view- as a personal problem located in individuals- to seeing it as an indicator of the ineffectiveness of work environments, systems and practices. A plethora of organisational, individual and extra-organisational factors have been identified as predisposing, precipitating and perpetuating stress (Quick & Quick, 1984).



2.4.1 Organisational Factors

2.4.1.1 Organisational structure, climate and leadership

According to Cartwright and Cooper (1997), psychological strain is often due to the culture and management style adopted within an organisation. They highlight that factors relating to organisational structure and climate that are stressors include hierarchical, bureaucratic structures that allow employees little participation in decisions affecting their work; lack of adequate communication between managerial

and non-managerial levels; cynicism regarding leadership and attempts by employees to further their own interest at the expense of others.

Kahn and Cooper (1993) also indicate that limited opportunities for advancement, insufficient performance feedback, performance assessment measures being inadequate and biased control systems and culture within the organisation, may be perceived as potential stressors.

2.4.1.2 Stressors and Work

Warshaw (1982, cited in Steenkamp, 2003) maintains that work stressors can only be fully comprehended if the importance of work to the employee is understood; be it for meeting the basic needs for employees, including maintenance, activity, social needs, self-esteem and self-actualisation. The perceived threat or failure to satisfy these basic needs represents a source of stress in the work place.

Research has highlighted that there are six major sources of work place stress which include: factors intrinsic to the job, the role of the employee, relationships at the workplace, organisational climate and structure, the lack of potential for career advancement, as well as factors external to the work environment (Cooper, Cooper & Eakes, 1988, as cited in Cartwright & Cooper, 1997). Figure 2.2 provides an overview of the dynamics of stress, highlighting the sources of stress, symptoms and disease manifestation.

learners, redeployment, retrenchment, and retirement packages for teachers, large teacher-pupil ratios and a new curriculum approach all contribute to the increase in stress levels of teachers.

In addition, the management style of principals, new governing bodies for schools, the high crime rate, coping with current political change and corruption in state departments are also cited as factors contributing to the stress experienced by teachers (Marais, 1992, cited, in Olivier & Venter, 2003).

Several international studies have highlighted that teachers perceive the implementation of the inclusive model as having insufficient support resources, the policies were confused and that inclusion had been imposed from the top, without adequate consultation (Bender, Vail & Scott, 1995; Forlin et al., 1996; Giangreco, 1997; Mitchell, Buist, Easter, Allen, Timutimu, MacFarlane, Moltzen & Quinn, 1999).

2.4.1.3 Leadership

Research indicates that principals play a vital role in the care for the personal welfare and emotional support of teachers. Isherwood (1973) found that principals that demonstrated excellent human relations skills heightened teachers' loyalty and improved teacher satisfaction, whilst the lack in participatory management, lack of sensitivity to school and teacher-related problems and lack of support was reliably associated with teacher stress and burnout (Jackson, Schwab & Schuler, 1986).

Abbey and Esposito (1985) report that teachers who perceive greater social support from their principals report less stress than those who do not receive any social support. Setting up shared decision-making processes in schools, such as governance councils, allows teachers to participate in school processes rather than feel subordinate to their principals and coerced into participating in school and teacher responsibilities (Nagel & Brown, 2003).

2.4.1.4 Lack of influence

Cheek and Miller (1983, cited in Steenkamp, 2003) surmise that not being involved in decision making has been established across all occupational groups to be the most salient source of stress that correlates with low self esteem. Several studies have also highlighted that teachers feel that they have a lack of control and decision-making powers due to the hierarchical nature of bureaucratic structures at school which concentrates power in the hands of a few (Dinham, 1993; Kyriacou, 2001; Louden, 1987; Pithers & Soden, 1999; Punch & Tuetteman, 1996).

In the post –election period in 1995, in developing new education legislation, the Western Cape Education department gave a great deal of attention to democratisation, and an emphasis was placed on creating a system which enabled “the nation to become part of the school system” in the creation of School Governing Bodies (SGBs). Providing a historical perspective on the challenges faced by the education system, Education Minister, Naledi Pandor, states that the emphasis on SGBs rather

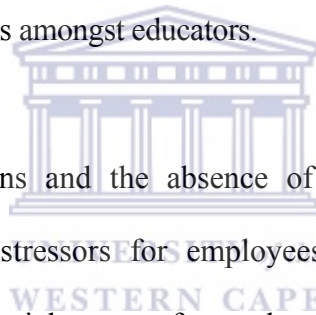
than the school leadership is to blame for the continuing difficulties. Pandor further states that the SGBs have become too powerful, rendering principals powerless. Hence the challenge forward would be to revise policies and practices, and to introduce legislation giving principals more power and authority. At the various schools, the input of the SGBs has been exceptionally well received, however, the problem faced is that most of their focus has been on their respective institutions and not on the community at large (Mail & Guardian, 2005).

There are numerous problems that face teachers as a consequence of recent government policies involving rightsizing or downsizing of teachers, the banning of corporal punishment, redeployment of teachers, voluntary severance packages, early retirement and retrenchment. Radical changes in the education system are apt to take their toll on the well-being of the teacher corps as changes in social life and school practice bring about serious psychological adjustment problems (Ngidi & Sibaya, 2002).

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

2.4.1.5 Colleagues

According to Sutherland and Cooper (1990, p. 46), poor work relations are defined as “having low trust, low levels of supportiveness and low interest in problem solving within the organisation.” Supervisors, peers and subordinates can dramatically influence employees just by their interactions. Problems of instability may occur in situations where the relationship between a supervisor and subordinate is psychologically unhealthy. Competition amongst colleagues and differences in personality clashes amongst fellow workers can give rise to stress (Cartwright & Cooper, 1997). Jarvis (2002) found that factors such as social support amongst colleagues and leadership style have an impact on levels of stress amongst educators.



Negative interpersonal relations and the absence of support from colleagues or superiors can be significant stressors for employees (Driscoll & Beehr, 2000). Conversely, having access to social support from other people in the organisation can reduce psychological strain (Beehr & McGrath, 1992) and alleviate emotional exhaustion (Greenglass, Burke & Konarski, 1998).

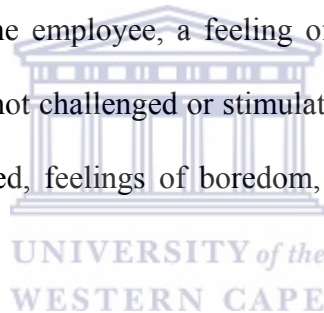
According to Sutherland and Cooper (1990), the quality of interpersonal relationships at work is important in that supportive relationships are less likely to create pressures associated with rivalry, bickering and gossip mongering. In addition, the superior-subordinate relationship can be potentially stressful when the leadership style is authoritarian, lacks understanding that feedback about performance and recognition and praise for effort are beneficial for boss-subordinate relationship. In conjunction

with this, Cartwright and Cooper (1997) indicate that in situations where the relationship between supervisor and subordinate is psychologically unhealthy, problems of emotional instability may occur.

2.4.2 Task Demands

2.4.2.1 Work Conditions - Quantitative Overload

According to Hans Seyle (cited in Sutherland & Cooper, 2000), a certain level of arousal is needed for optimal performance, but when the arousal exceeds our ability to meet the demand placed on the employee, a feeling of burnout is experienced. In contrast, when employees are not challenged or stimulated by a job, or do not believe that their contribution is valued, feelings of boredom, apathy and poor morale are experienced.



Having too much work to do, which is referred to as quantitative overload, often results in employees working extended hours, and this is often associated with an increased cigarette smoking, increased alcohol consumption, and other stress symptoms (French & Caplan, cited in Cartwright & Cooper, 1997).

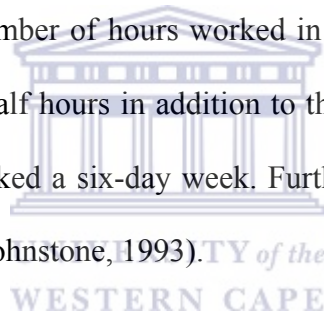
2.4.2.2 Understaffing

Classroom discipline is a significant source of stress (Jarvis, 2000), and this situation is exacerbated when teachers are faced with having to deal with pupil- teacher ratios

of 60:1. At certain schools there are 15 teachers to 1050 pupils, and this relates to unacceptable working conditions (Mail & Guardian, 2005).

2.4.2.3 Overtime

Various researchers have indicated that administrative work done outside the scope of the classroom as a result of preparation or planning is a source of stress to teachers (Dinham, 1993; Kyriacou, 2001; Louden, 1987; Pithers & Soden, 1999; Punch & Tuetteman, 1996). In a survey by the Scottish Council for Research in Education, it was revealed that formal hours established for teaching amounted to 35 hours per week. However, the mean number of hours worked in a seven day period surveyed was 42.5 hours; seven and a half hours in addition to the 35 hours worked, which in effect meant that teachers worked a six-day week. Furthermore, work expanded into evenings and into weekends (Johnstone, 1993).



2.4.2.4 Qualitative Overload/ underload

Qualitative overload, as a source of stress, is linked to low levels of self-esteem, as individuals lack the necessary skill to do a new job. In contrast, qualitative underload is damaging, as the individual is not given the opportunity to use acquired skills and abilities, resulting in feelings of powerlessness to demonstrate talents (Sutherland & Cooper, 2000).

According to Udris (as cited in Sutherland & Cooper, 2000), qualitative overload is associated with job dissatisfaction, tension and low self-esteem, whereas qualitative underload is linked to dissatisfaction, depression, irritation and psychosomatic complaints. Hall (cited in Chaka, 1998) concludes that a high labour turnover could result from under stimulation. In addition, Chaka (1998) indicates that a person's physical and mental wellness could be adversely affected by work that is monotonous, dull and repetitive.

2.4.2.5 Role of Administration

Various studies have highlighted that time pressure with regards to administrative demands and excessive paper work are major sources of stress for teachers, as there is inadequate time for preparation; unrealistic deadlines imposed and issues concerning the workload of teachers (Dinham, 1993; Kyriacou, 2001; Louden, 1987; Pithers & Soden, 1999; Punch & Tuetteman, 1996).

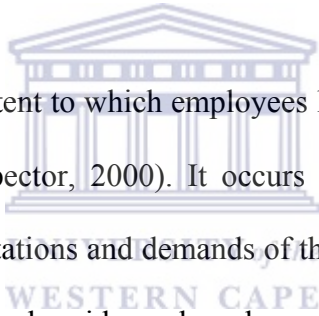
2.4.3 Stress Sources relating to Role in Organisation

According to Sutherland and Cooper (2000), organisations are continually reinventing themselves and as a consequence, changes to job roles are common. The impact of changes in the workplace can alter the nature of job roles, causing role ambiguity or role conflict, or additional demands, resulting in role overload. Role ambiguity, role conflict and level of responsibility for others are often regarded as the major sources of stress relating to a person's role in the organisation (Cartwright & Cooper, 1997).

2.4.3.1 Role Overload and Responsibility

Role overload, referring to the number of different roles an individual has to fulfil, can lead to excessive demands on the individual's time and may create uncertainty about the ability to perform these roles adequately (Driscoll & Cooper, 2002). French and Caplan (cited in Sutherland & Cooper, 2000) posit the view that being responsible for the work and performance of others, demands more interaction with others, and is thus more stressful than being responsible for equipment, budgets and other issues.

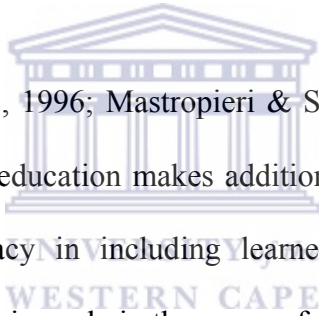
2.4.3.2 Role Ambiguity



Role ambiguity refers to the extent to which employees lack clarity about their role or the task demands at work (Spector, 2000). It occurs when an employee does not understand or realise the expectations and demands of the job, or the scope of the role (Kahn & Cooper, 1993). Research evidence has shown that role ambiguity has been associated with tension and fatigue, intention to quit or actually leaving the job, and high levels of anxiety, physical and psychological strain, and absenteeism. The stress arising from unclear objectives or goals can lead to job dissatisfaction, a lack of self confidence, a lowered sense of self esteem, depression and low work motivation, increased blood pressure and pulse rate, and intentions to leave a job (French & Caplan, 1970; Kahn, 1965; Margolis, 1974). According to Driscoll and Beehr (2000), and Zohar (1997), research has demonstrated a consistent link between role ambiguity in a job and high levels of psychological strain and burnout.

Role ambiguity involves a lack of clear and consistent information about duties, tasks, responsibilities and rights (Smylie, 1999). The roles and responsibilities of teachers are changing as schools are attempting to create inclusive school communities (Sands, Kozleski & French, 2000).

Educators are faced with learners with disabilities within their classes, and many teachers feel unprepared and fearful of working with learners with disabilities (Kokhar et al., 2000), as they are not confident in their ability to fulfil the tasks that are needed to support inclusive education (Buell, Hallam & Gamel-McCormick, 1999).



Previous research (Forlin et al., 1996; Mastropieri & Scruggs, 2000; Soto & Goetz, 1998), indicates that inclusive education makes additional demands on teachers, and that teachers' sense of efficacy in including learners with disabilities in their mainstream classes, play a defining role in the successful implementation of inclusive education. Inclusive education, as indicated by Kyriacou (1998), changes the fundamental responsibilities of teachers in mainstream classes, and the need to cope with the change is listed as a major source of stress for teachers.

2.4.3.3 Role Conflict

According to King and King (1990), role conflict arises when an employee experiences incompatible demands or incompatible goals surrounding tasks connected with their job which can induce negative emotional reaction due to perceived inability

to be effective on the job. Furthermore, having to do tasks that are not perceived to be part of one's job role can potentially lead to stress associated with role conflict (Cooper & Sutherland, 2000). Cartwright and Cooper (1997) maintain that people who have a more flexible orientation to life, suffer less from role conflict than people with high anxiety levels.

2.4.4 Individual factors and Extra-Organisational Stress

According to Driscoll and Cooper (2002), individual differences may play a major role in the relationship between work-related stressors and psychological strain. Internal characteristics are found to be one of the most important sources of stress, as it not only contributes to teacher's susceptibility to stress, but might also dictate how teachers handle the stress that they encounter and what they are able to tolerate (Kaiser & Polczynski, 1982). The many different personality variables that could impact on work stress include:

2.4.4.1 Type A Behavioural style

This behavioural style according to Cooper and Bramwell (1992) is characterised as aggressive, ambitious, hard-driving, impatient, seeking to control and expressing time urgency. It may lead to both positive (high performance), and negative (high strain and burnout) outcomes. Type A characteristics are more likely to create strain for themselves by increasing their workload, and often appraise events to be more stressful than do the Type B counterparts.

Patel (1991) argues that individuals are unique, and given a stressful situation, no two teachers will respond to stress in the same way. The response will largely depend on the personality type of the individual; one teacher may experience a situation as extremely stressful, while the next teacher might experience it as challenging and exciting (Fisher, 1994).

2.4.4.2 Negative Affectivity

Negative affectivity reflects a stable tendency to experience low self-esteem and negative emotional states; individuals have a gloomy view of the world, and may be more sensitive to stressful conditions (O'Driscoll & Cooper, 2002).

2.4.4.3 Self-efficacy



Brockner (1988) indicates that individuals with low self-efficacy tend to react more to external events because they experience more uncertainty about the correctness of their perceptions and emotional reactions. These individuals often seek social approval by conformity with others' expectation, and tend to allow negative feedback on one area of their behaviour to generalise to other dimensions of their self-concept.

2.4.4.4 Locus of control

Situational control refers to the extent to which individuals believe they can exert control over a specific aspect of their job, such as the pace of work or the procedures

for task completion, scheduling of tasks and decision latitude (O'Driscoll & Cooper, 2002).

Locus of control and self-esteem have been linked to teacher stress (Byrne, 1992; Farber, 1991; Fielding & Gall, 1982). For example, Byrne (1992) found that teachers who have low self-esteem tend to be more susceptible to stress and that teachers with high self-esteem tend to handle stressors in a more productive manner. Similarly, teachers who have an external locus of control has been found to experience greater stress than teachers with an internal locus of control (Byrne, 1992; Farber, 1991; Kyriacou & Sutcliff, 1979).

2.4.4.5 Social support



There is consistent evidence that employees with more support from others experience lower strain and burnout (Lee & Ashforth, 1996), and where an employee is faced with potentially stressful demands, conflicts and problems in the work place, having support from others may reduce the impact of the pressures on the individual's well-being (O'Driscoll & Cooper, 2002).

Although research (Ganster, Fusilier & Mayes, 1986) found no evidence of buffering or found reverse buffering; where the presence of social support exacerbated the amount of stress experienced, Greenglass, Fiksenbaum and Burke (1996) indicate that support from colleagues and supervisors had a significant buffering influence on teacher burnout, and feelings of isolation exacerbated the stress experienced.

Isolation and stress were assessed in 1110 Canadian teachers, and it was found that a strong positive correlation exists (Dussault, Deaudelin, Royer & Loiselle, 1997). Van Dick (1999) highlighted in the assessment of 424 teachers in Germany, that social support had both a positive effect on health and also a buffering effect in respect of work stress.

2.5 Sources of stress within an Inclusive environment

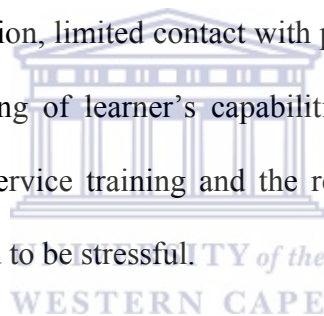
Despite an increase in the number of learners with special educational needs included into mainstream classes in South Africa, teachers' experience of inclusive education remains very limited (Engelbrecht et al., 2001).

Although the number of pupils needing special education has increased, schools have not been successful in retaining teachers, specifically where teachers are faced with learners with emotional and behavioural disorders (Akin, 1988; George, George, Gersten & Grosenick, 1995).

Research (George et al., 1995; Lawrenson & McKinnon, 1982; McManus & Kauffman, 1991) reveals that excessive administration and lack of support; isolation from colleagues and dissatisfaction with parental support, are consistently cited as sources of stress amongst educators in inclusive environments. In addition, students with emotional and behavioural disorders failing to make expected progress (Zabel, Boomer & King, 1984) as well as physical and verbal attacks (Johnson, Gold & Vickers, 1982) often create stress and dissatisfaction in teachers.

Similar findings were reported regarding the inclusion of learners with Down's syndrome (Engelbrecht et al., 2001). Research has highlighted that high stress levels are associated with adapting the curriculum to meet the learners' needs and sustaining an effective learning environment for learners with Down's syndrome. This is attributed to the lack of effective in-service or pre-service training associated with the implementation of inclusion and special needs (Engelbrecht et al., 2001).

In their investigation, Eloff et al. (2000) revealed that overall the most stressful issues for teachers regarding the implementation of inclusive education related to teachers' perceived professional self-competence, administrative issues and those related to the behaviour of learners. In addition, limited contact with parents as well as the parents' perceived lack of understanding of learner's capabilities and long-term prognosis, inadequate pre-service or in-service training and the reduced ability to teach other learners effectively also proved to be stressful.

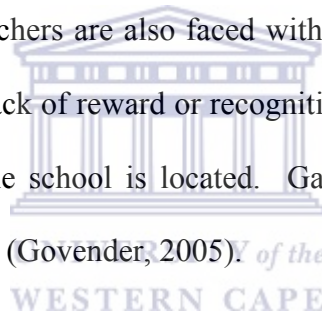


Administrative issues, involving taking full responsibility and accountability for educational outcomes of learners as well as adapting the curriculum and adjusting the unit plans to support the learners' needs in an inclusive environment, were also contributing factors to the high levels of stress experienced by teachers (Eloff et al., 2002). However, it appears from a survey conducted in both the Gauteng Province and the Western Cape, that teachers regarded the inclusion of physically disabled students in their mainstream classes as relatively easy, and were experiencing no stress in many instances (Eloff et al., 2002).

2.6 Environmental Factors

Environmental factors causing stress are those systemic factors that are not intrinsic to teaching, but depend on the climate of the educational institution or wider context of education including the political domain. Teachers often cite the lack of government support, lack of information regarding changes, constant change and the demands of the National Curriculum as amongst their greatest source of stress (Travers & Cooper, 1997). These “trickle down” systemic factors act in addition to and feed the dynamics of the individual organisation (Jennings & Kennedy, 1996).

In addition to the changes, teachers are also faced with having to deal with negative publicity, poor or low status, lack of reward or recognition and the social problems of pupils in the area in which the school is located. Gangsterism has been the most widely publicised by the media (Govender, 2005).



2.6.1 Violence and Danger caused by pupils

A survey conducted in 1998, by the Institute of Criminology, revealed that crime and violence is endemic to both primary and secondary schools. The following findings were tabulated:

- The major problems in all schools were the theft of property and the possessions of weapons.
- Fighting/ physical violence and vandalism were reported in 95 % of schools

- Drug abuse was a serious concern in 90% of the schools
- Bullying and intimidation were reported in over 75% of schools, assault in 60% of the schools, gangsterism in 50% and rape in seven of the twelve secondary schools (National Department of Education, 2001).

2.6.2 Lack of Reward/Recognition

Smith and Bourke (in Overland, n.d.) indicate that one of the major contributing factors to teacher stress are those arising from lack of rewards and recognition. Teacher dissatisfaction regarding the education department's reward system has been an on-going battle for educators in South Africa. In 2004, South Africa witnessed its biggest strike in a single sector in history; in which the majority of the 800 000 (Cape Town-50 000; Durban-45 000 and Pretoria-90 000) unionised government employees took mass action to protest against the derisory 6% wage offer increase. In addition, the deterioration of conditions of service as well as the decline in infrastructure and the quality of service delivery in health and education have resulted in an exodus of teachers, to work overseas (The Star, 2004).

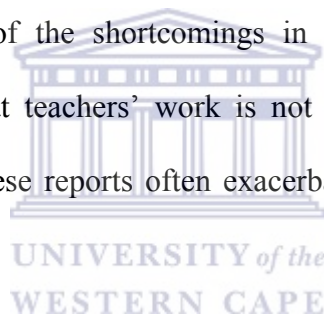
In their research, Olivier and Venter (2003) found that respondents indicated that salaries cause a great deal of stress, especially taking into account the after-hours input their jobs demand from them and how negatively their salaries compare with those of people in the private sector and other government departments (Olivier & Venter, 2003). That is perhaps the reason why some teachers embark on second jobs, mostly to the detriment of the school and the learners. Others search for other

propositions and change to completely new jobs for the sake of better incomes (Olivier & Venter, 2003).

2.6.3 Negative publicity

Ongoing public criticism, the lack of respect for teachers as professionals by pupils, parents and society and the on-going public scrutiny, underscore teacher burnout and stress as one of the most common and serious afflictions amongst educators (Cox & Wood, 1980; Dunham, 1992; Timpane, 1982).

The media is often critical of the shortcomings in the education system. The commentaries often imply that teachers' work is not complex, and that educators could expend more effort. These reports often exacerbate the stress experienced by teachers (Naylor, 2001).



A recent report on teacher misconduct, involving 269 teachers dismissed for rape and sexual abuse, fraud and financial mismanagement, administering corporal punishment and assault, highlights that findings are often generalised to include all teachers in the misconduct of colleagues. The general secretary of the South African Democratic Union (SADTU), emphasised that although between 90% and 98% of the cases were found in favour of the employer, the union rejected any generalisations made to the rest of the teaching profession (Sunday Times, 2005).

2.7 Consequences of Stress

According to Kyriacou (2001), symptoms of stress in teachers are manifested in anxiety and frustration, impaired performance, and ruptured interpersonal relationships at work and at home. Statistics reveal that teachers hand in more medical insurance claims than persons in other professions, have a four year shorter life expectancy than the national average and often blame stress as a reason for sick leave from school (Van Wyk, 1998).

From an organisational point of view, the consequence of stress results in a significant loss of skilled and experienced teachers through resignation and /or premature retirement from all levels of the teaching workforce. The stressed teachers who remain within the profession, on the other hand, are likely to be less effective in key areas such as lesson organisation, student behaviour management, responsiveness to students and self confidence relationships with parents. In individual human terms, the cost of teacher stress can be huge and include impaired health, reduced self-confidence and self esteem and damaged personal relationships. If early retirement or resignation is taken, often the consequence is dramatically reduced economic status (Warren & Toll, 1993).

Researchers generally agree that a certain degree of stress is a normal part of life, but prolonged stressors could lead to symptoms that are physical, psychological or behavioural (O'Driscoll & Beehr, 2002). Figure 2.3 provides an overview of the response to stress.

Figure. 2.3: A Response- based model of stress

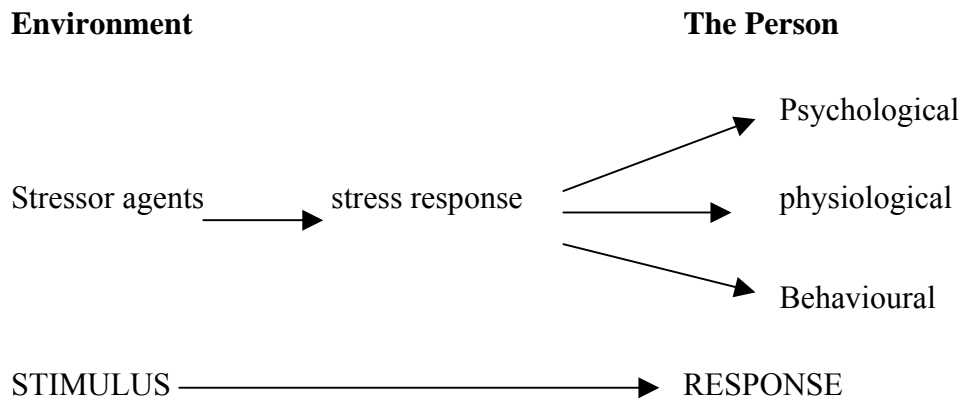
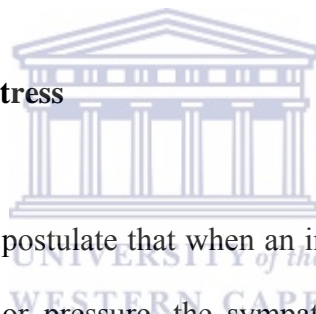


Figure 2.3. Source: Sutherland & Cooper (2000, p. 47).

2.7.1 Physiological effects of stress



Cartwright and Cooper (1997) postulate that when an individual is confronted with a challenging situation, tension or pressure, the sympathetic nervous system can be triggered to activate a wide variety of hormonal secretions. The hypothalamus, when it identifies danger, triggers the pituitary gland to release hormones that causes the adrenal glands to increase its secretion of several hormones, including cortisol which provides more energy to the body; epinephrine which increases both the rate and strength of the heart's contractions and raises blood pressure; and norepinephrine, which similar to the body's sympathetic nervous system, acts as the body's fight or flight system when faced with emergencies (Rice, 1992).

According to Tucker-Ladd (1996), the hormonal responses determine the severity of the individual's anxiety reactions, mind-set, energy level, level of depression, and physical state of health after experiencing a stressful event. Dollard (2002) however maintains that when the challenge is short term the body's first reaction is adaptive, enabling the person to set in action energy resources to combat the stressor, however when these challenges are continuous, severe or repetitive the "normal physiological reaction may turn pathological" (Dollard, 2002, p. 6).

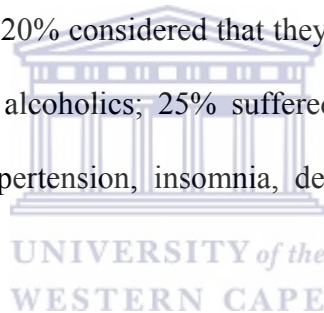
Researchers have linked many diseases to job stress. Some ailments are minor whilst others are deadly. Landsmann (1977) highlighted that a survey conducted by the Chicago Teachers' Union revealed that 56.6% of the participating teachers had suffered physical or mental illness related to their teaching occupations, and symptoms included migraine and sinus headaches; allergies; colds; post nasal drip; hypertension; bladder disorders; kidney disorders, bowel disorders; colitis; nervous stomach; acne and weight problems.

2.7.2 Psychological Problems and Behavioural problems

Stress has a marked impact on an individual's psychological well-being. The most often reported symptoms are anxiety, frustration, passivity, aggression and depression, which often combine in a potent form to reduce productivity and performance. The UK Times Educational Supplement reported that a number of teacher suicides, specifically in England and Wales, are directly related to anxiety over workloads and school inspection (Bunting, 2000).

During 1996, a study by the Independent Education Union (IEU) in Victoria Australia found that teachers reported experiences of stress due to workload pressure, difficulties with management and poor staff-student relationships. The stress manifested in terms of irritability at home (59%) and in class (55%), anxiety (64%) and feelings of powerlessness (45%). Eighteen percent (18%) of the respondents reported psychosomatic complaints such as headaches, chronic fatigue, shingles and heart palpitations (Howard & Johnson, n.d).

In a survey of head teachers by the National Association of Head Teachers (NAHT) in May 2000, 40% of respondents reported having visited their doctor with stress-related problems in the previous year; 20% considered that they drank too much alcohol, and 15% believed that they were alcoholics; 25% suffered from serious stress related health problems including hypertension, insomnia, depression and gastrointestinal disorders (Jarvis, 2002).



2.8 Signs of Stress

According to Seifert (n.d., p. 2) “stressors that exceed the individuals’ resources, if unresolved will tax a person’s well-being”. Tucker-Ladd (1996, p. 27.) highlights the following signs of stress:

Psycho physiological responses (Somatoform disorders)	Behavioural-emotional signs (Anxiety reactions)	Tiredness and lack of energy	Anxiety intruding on consciousness or cognition
Sweating	Hyperactivity	General lack of interest	Excessive preoccupation with the threatening person or situation.
Strong startle response	Outbursts of emotions	Excessive sleeping	Unstoppable pangs of emotion (e.g. anger, jealousy, etc.)
Haemorrhoids	Preoccupation with a certain situation	Insomnia	Repeatedly obsessing about the upsetting event
Inflammation of the colon (Colitis)	Obsessive thoughts	Sighing	Excessive vigilance and startle reactions.
Frequent urination	Holding a grudge	Moving slowly	Insomnia and bad dreams.
Diarrhoea	Excessive worrying	Falling asleep while watching television.	Aches, pains and unwanted sensations.
Rashes	Irritability	Feeling bored	Striving desperately to understand behaviour of person.
Ulcers	Changing habits	Lack of humour	Feeling Nervous
Headaches	Compulsive actions	Difficulty to start	Feeling Uptight
Heart disease	Poor memory		Apprehensive
Having a stiff posture	Crying		Feeling scared
High blood pressure	Irritation with delays		
Itch or skin problems	Bad dreams		
Frequent colds	Getting tongue-tangled		
Stomach that's upset	Stumbling over words		

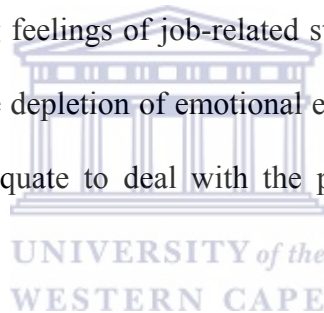
Source's adapted from Tucker-Ladd (1996, p. 27).

If the stressors that are experienced are prolonged, it will eventually lead to burn out.

2.9 Burnout

According to Spector (2000), burnout is a distressed psychological state; a person suffering from burnout is emotionally exhausted, has low work motivation, it involves being depressed about work and having little energy and enthusiasm for the job.

Burnout contains three job related dimensions: emotional exhaustion, depersonalisation and reduced personal accomplishments. Emotional exhaustion is often most measured; covering feelings of job-related strain, being used up; fatigued and working too hard. It is the depletion of emotional energy and a feeling that one's emotional resources are inadequate to deal with the pressures encountered (Warr, 2002).



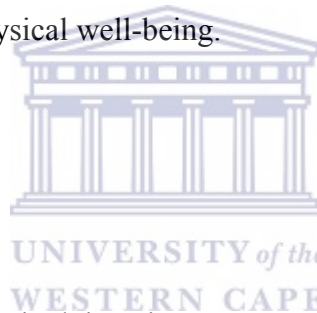
Depersonalisation is the development of a cynical and callous feeling towards others (Spector, 2000). It is an excessive detachment from people with whom one works, treating individuals in the work setting (eg. Clients or patients) as objects rather than people (O' Driscoll & Cooper, 2002).

Reduced personal accomplishment is the feeling that the employee is not accomplishing anything worthwhile at work (Spector, 2000); by evaluating one's performance negatively, it leads to feelings of incompetence and inability to achieve goals (O' Driscoll & Cooper, 2002).

High levels of burnout have been associated with low levels of perceived control and job satisfaction and high levels of role conflict, health symptoms, and intentions of quitting the job (Shirom, 1989), and work overload (Sutherland & Cooper, 2000). Hendrickson (in Carter, 1994) defines teacher burnout as physical, emotional and attitudinal fatigue that begins with a feeling of discomfort that increases, and at the same time, the joy of teaching begins to gradually slip away.

Kyriacou and Sutcliffe (1978) further propose that stress and burnout results from the teachers' perception in the following: (a) demands are being forced on them; (b) they are unable to deliver or have difficulty in meeting these demands; (c) failure to do so threaten their mental and/or physical well-being.

2.10 Coping Strategies



Folkman and Lazarus (1980, cited in Rice, 1992, p. 269), define coping “as all cognitive and behavioural efforts to master, reduce, or tolerate demands.” Adding to this definition, Matheny (1986, p. 509), defined coping as “any effort, healthy or unhealthy, conscious or unconscious, to prevent, eliminate, or weaken stressors, or to tolerate their effects in the least hurtful manner.”

2.10.1 Work Focused coping strategies

2.10.1.1 Role Analysis

This method is aimed at clarifying an individual's work role to reduce distress, confusion and conflict. A role profile is developed based on the expectations of superiors, peers, subordinates and key people with whom the individual must work. This expected role is clarified by eliminating conflicts and confusion in expectations. It is also integrated with an enacted role, resulting in reduced role stress for the individual (French & Bell, 1978, cited in Quick & Quick, 1984).

2.10.1.2 Team Building /Cooperative strategies



The aim of this method is to confront and resolve interpersonal conflicts that naturally evolve in work groups. The process of resolution is thought to be better than repression for the management of these interpersonal stressors (French & Bell, 1978, cited in Quick & Quick, 1984).

2.10.1.3 Emotion Focused coping strategies

Stress inoculation training combines training in physical relaxation and in cognitive strategies, including rehearsal in imagination of future stress situations, recognition and monitoring of the person's usual anxiety-provoking thoughts in a situation of stress and rehearsal of a more realistic and control self-statement, or self reward for

coping successfully with the stressor. Transfer and durability of training are facilitated, because the anticipation of stress comes to trigger off the coping techniques practiced during therapy (Meichenbaum, 1993).

Other coping strategies include, reduced perfectionism, where individuals are taught to have more realistic expectations and social support, providing the necessary emotional, informational, appraisal and instrumental support that the individual needs (House, 1981 cited in Quick & Quick, 1984).

2.10.2 Organisational Stress Prevention

By understanding the stressors that prevail in the work place, the appropriate steps can be undertaken to assist in the reduction of stress levels. An organisation could consider the provision of skilled support, by employing a full-time counsellor that could provide the needed counselling services or use employee assistance programmes (EAPs). Counselling involves a set of techniques, skills and attitudes to help people manage their own problems using their own resources (Cooper & Bramwell, 1992). Other methods of stress prevention include: training individuals in stress management techniques, managing morale and utilising teamwork (Sutherland & Cooper, 2002)).

2.11 Summary of the Chapter

This chapter has provided a review of literature regarding the sources of stress, signs and manifestations of stress teachers are exposed to within their organisation and the effects that it has on their health. In addition it was highlighted that inclusive education adds to the pressure teachers are currently facing. The concept of stress was introduced and explained in terms of stress and health, processes of stress development, sources of stress, signs of stress and burnout. Various internal and external stressors have an impact on employee wellness. From the literature review it is clear that stress is of importance to teachers and pupils alike, as the impact of stress affects the effectiveness of teachers within their classroom.



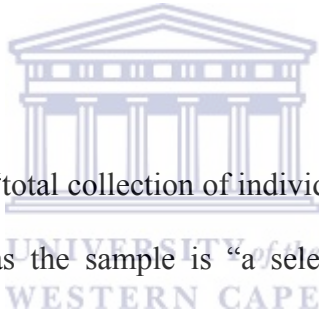
CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter focuses on the method in which the research question was investigated. It provides insight into the research design, sampling method employed, the data gathering instruments used and the statistical techniques applied.

3.1.1. Population and Sample



A population is defined as the “total collection of individuals or objects that forms the focus of the research” whereas the sample is “a selected part or a subset of the population (Pretorius, 1995, p. 73). According to Pretorius (1995), research is generally conducted to make inferences about the population based on the information available about the sample, in order to make inferences from the sample to the population.

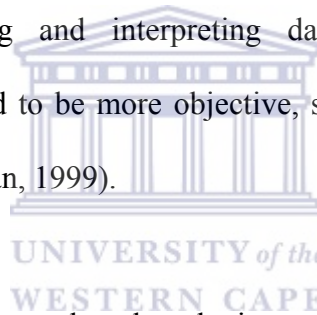
The population in this study consisted of 300 teachers from various schools in Cape Town and included both high schools and primary schools. Sekaran (2003) maintains that the ideal sample size should constitute approximately 115 respondents. For the purpose of this research 450 questionnaires were administered of which 115 questionnaires were returned. A response rate of thirty percent (30%) is considered

acceptable for most research purposes (Sekaran, 2003, p. 204). The response rate was approximately sixty five percent (65%). The sample group (N=115) consists of male (40%) and female (60%) teachers.

3.2 Research Design

3.2.1 Methodology

A quantitative empirical investigation was preferred above a qualitative design as the aim was not to describe, emphasise meaning or experiences, but rather to solve the stated problem by analysing and interpreting data statistically. Quantitative approaches are also considered to be more objective, structured and have both high validity and reliability (Coolican, 1999).



Stratified random sampling was employed to obtain a representative sample and information was collected by means of a questionnaire, The Teacher Stress Questionnaire-Revised.

3.2.2 Stratified Random Sampling

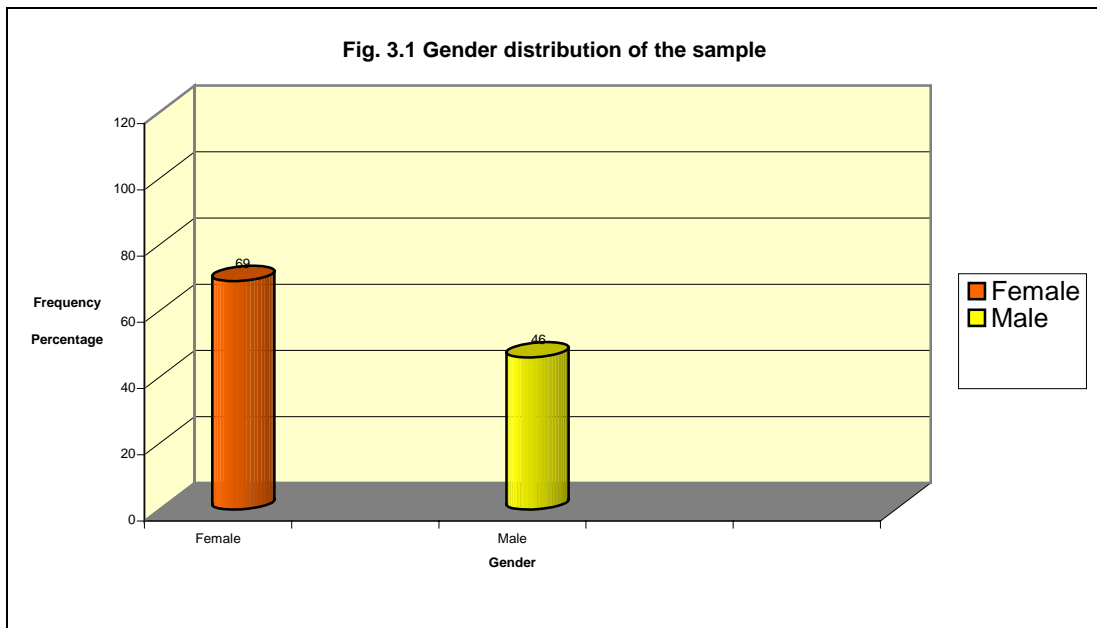
Probability sampling is considered to be the best technique as all elements have equal chance to be included in the sample and hence it yields greater validity and reliability. (Anastasi, 1990; Huysamen, 1983; Murphy & Davidshofer, 1988; Shaughnessy & Zechmeister, 1997). A stratified random sample was therefore selected, as it allows the

population to be divided into subsets or strata which are then randomly sampled, and in this manner increases representativeness of the sample, and minimises sampling error (Lehman, 1991). The researcher can therefore from the outset define or categorise the population in terms of supplementary information e.g. age, occupation, income and gender to be correlated with the variables being studied (Shaughnessy & Zechmeister, 1997).

3.2.3. Sample Characteristics

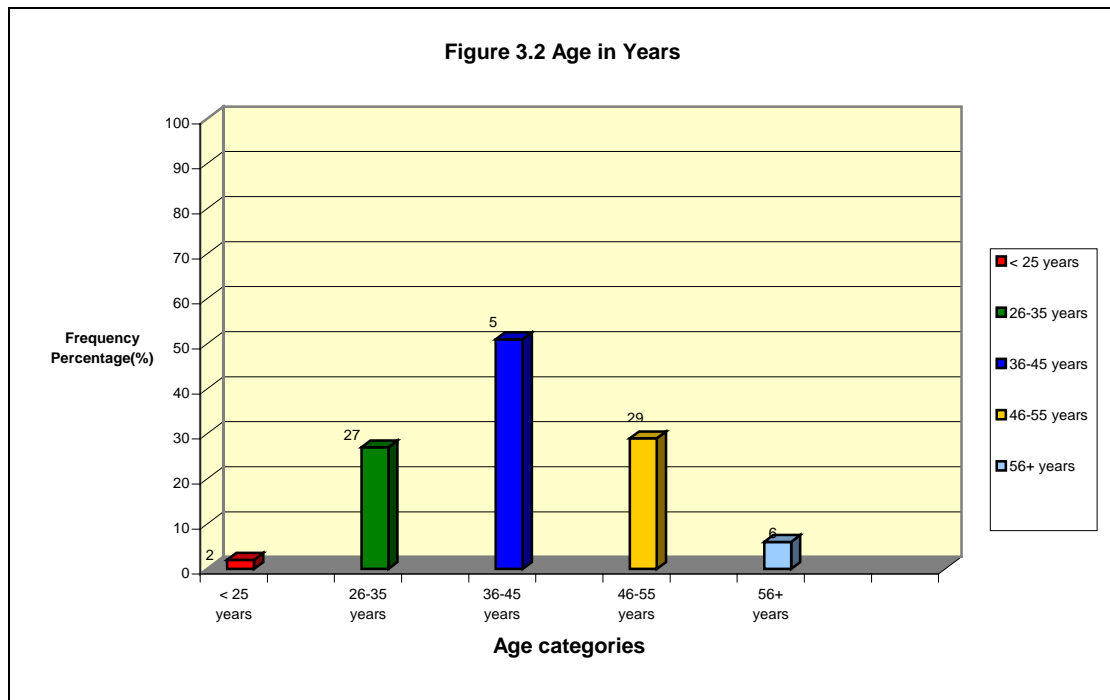
The biographical information of 115 teachers who participated in the study is presented in graphical format and explained.





As highlighted by Figure.3.1, the majority of the respondents in the sample are females, with 60% (N=69) of the respondents being female and 40% (N=46) of the respondents being male.





As illustrated by Figure 3.2, the majority of the respondents (44, 3%; N=51) fall into the age group 36-45 years. Twenty-nine (29) respondents (25, 2%) fall into the age group 46-55 years and 27 respondents (23, 5%) fall into the age group 26-35 years. Six (6) respondents (5, 2%) fell into the age older than 56 years. The fewest respondents (1, 7%; N=2) fall into the age group younger than 25 years.

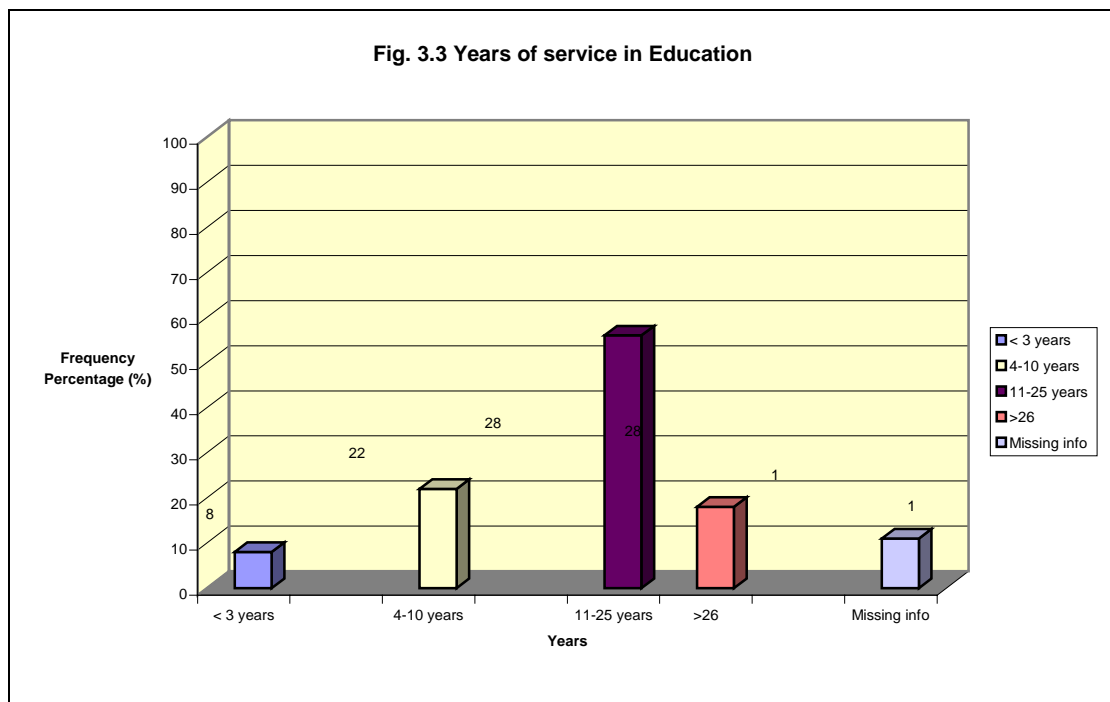


Figure 3.3 depicts that the majority of the respondents namely, (N=56 or 48, 7%) fall in the 11-25 years service group and 22 respondents (19, 1%) fall in the 4-10 years service group. Eight (8) respondents (7, 0%) fall in the less than 3 years service group. While eighteen (18) respondents (15, 7%) fall in the more than 26 years service group, 11 respondents (9.6%) did not indicate their years of service in education.

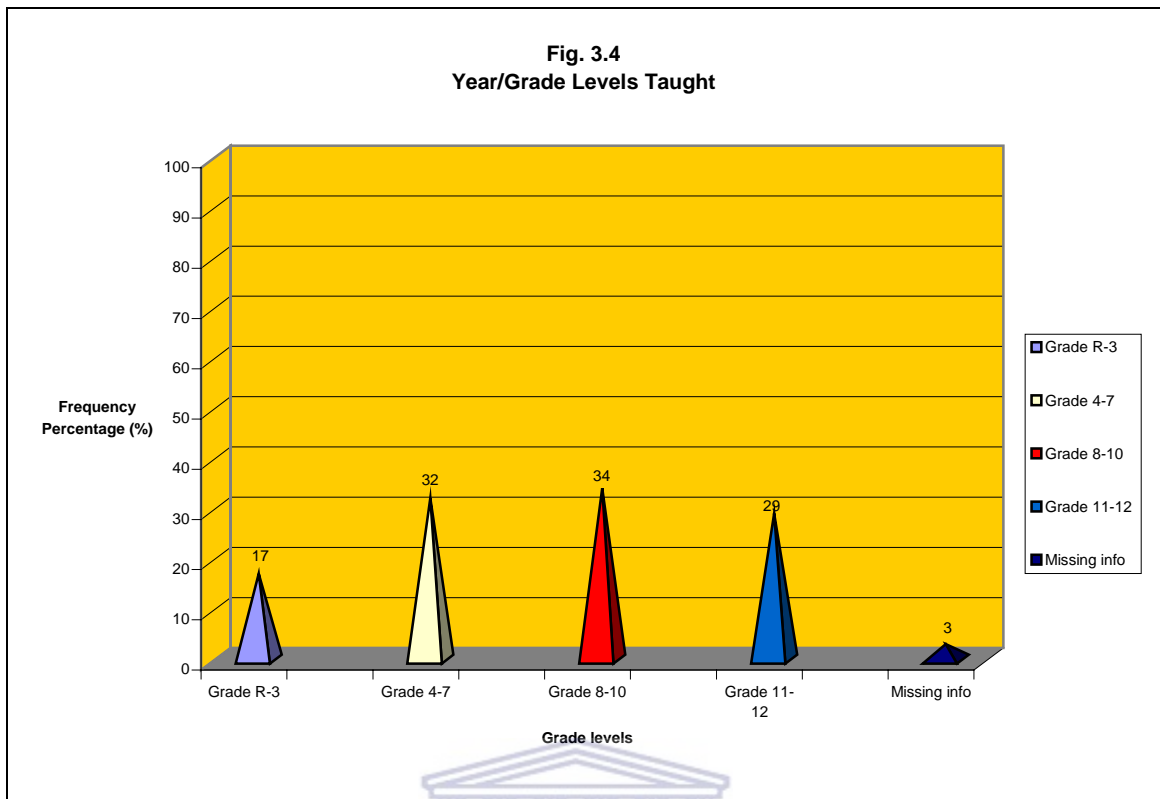
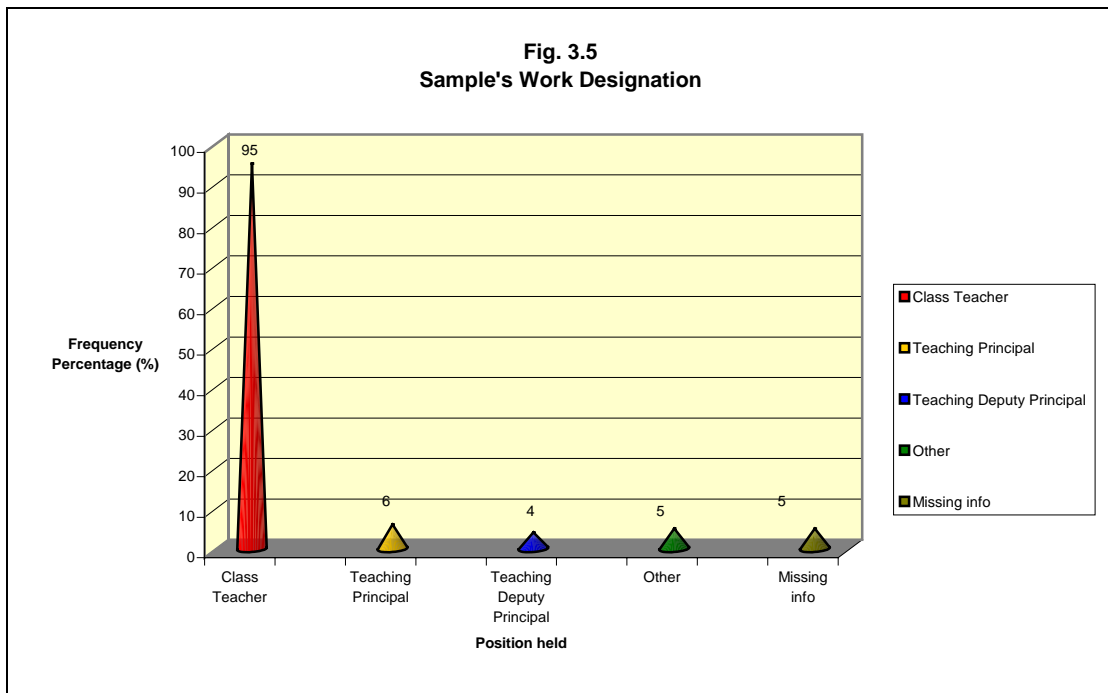


Figure 3.4 highlights that the grade levels taught by the sample ranges from Grade R to Grade 12. The majority of respondents (N=34 or 29, 6%) teach Grades 8-10. Thirty-two (32) respondents or 27, 8%, teach Grades 4-7 and 29 respondents (25, 2%) teach Grade 11-12. Seventeen (17) respondents (14, 8%) teach Grade R- Grade 3 category, and only 3 respondents (2, 6%) did not indicate their grade level taught.



In Figure 3.5 the sample's position at their institutions are depicted. It can be noted that the majority of the respondents (N=95, 82,6%) are class teachers; 5,2% (N=6) are teaching principals and 3,5% (N= 4) are teaching deputy principals, that are required to fulfil the management functions at schools and teach as well. Five (5) respondents (4,3%) indicated their position at school to be that of remedial teacher (N=1); student teacher (N=2) and education specialist (N=2). A further 5 respondents (4.3%) did not indicate the nature of their work.

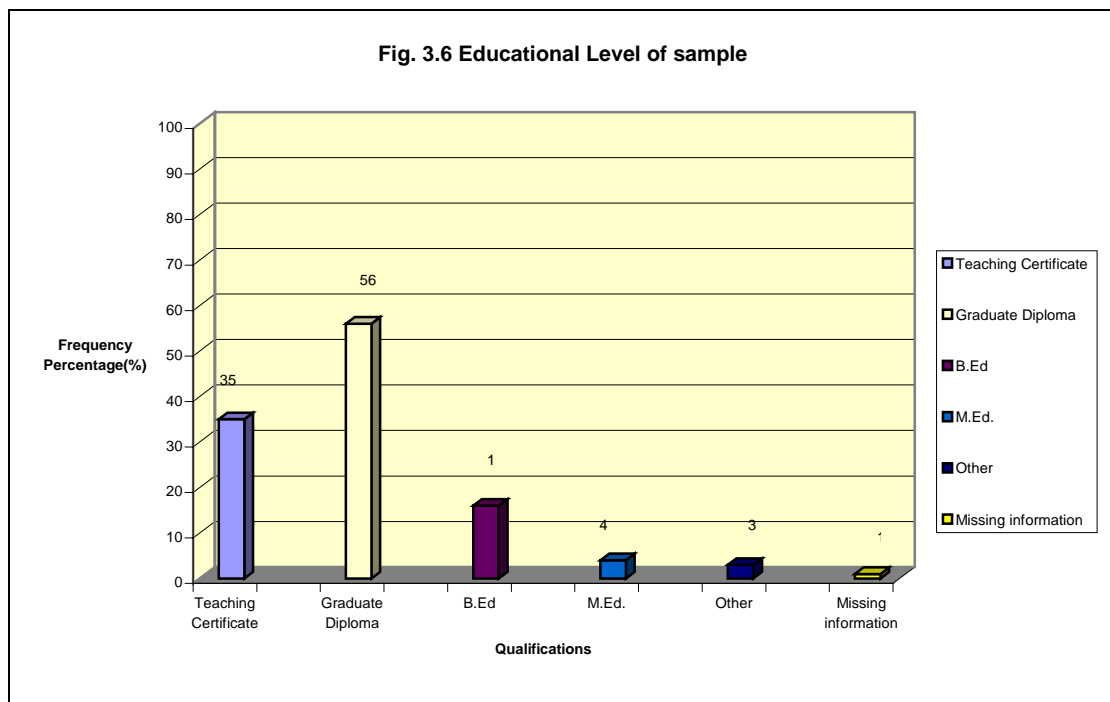


Figure 3.6 highlights the educational level of the sample. It can be noted that 56 of the respondents (48, 7%) have graduate diplomas and a total of 35 respondents (30, 4%) have teaching certificates. A total of 20 respondents have post graduate degrees; (13, 9%; N=16) have B.Ed degrees and (3, 5%; N=4) have M.Ed degrees. A total of two respondents have TPD and 1 respondent indicated ACE. A minimum of 1 respondent (0, 9%) did not indicate their educational qualification.

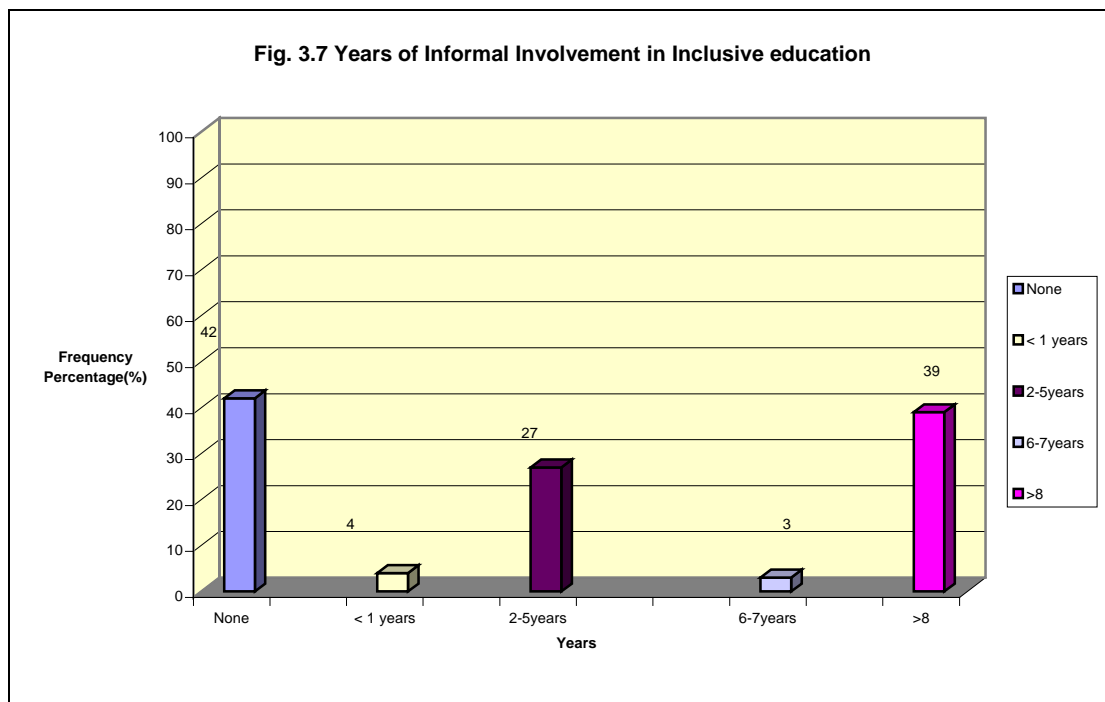


Figure 3.7 illustrates that the majority of teachers (36,5%; N=42) indicated non-involvement in inclusive education. A total of 39 respondents (33,9%) indicated that they were informally involved in inclusive education for more than 8 years. Twenty-seven (27) respondents or 23, 5% indicated informal involvement for 2-5 years and 4 respondents (3,5%) indicate informal involvement for a year. A minimum of 3 respondents (2,6%) indicated informal involvement for 6-7 years.

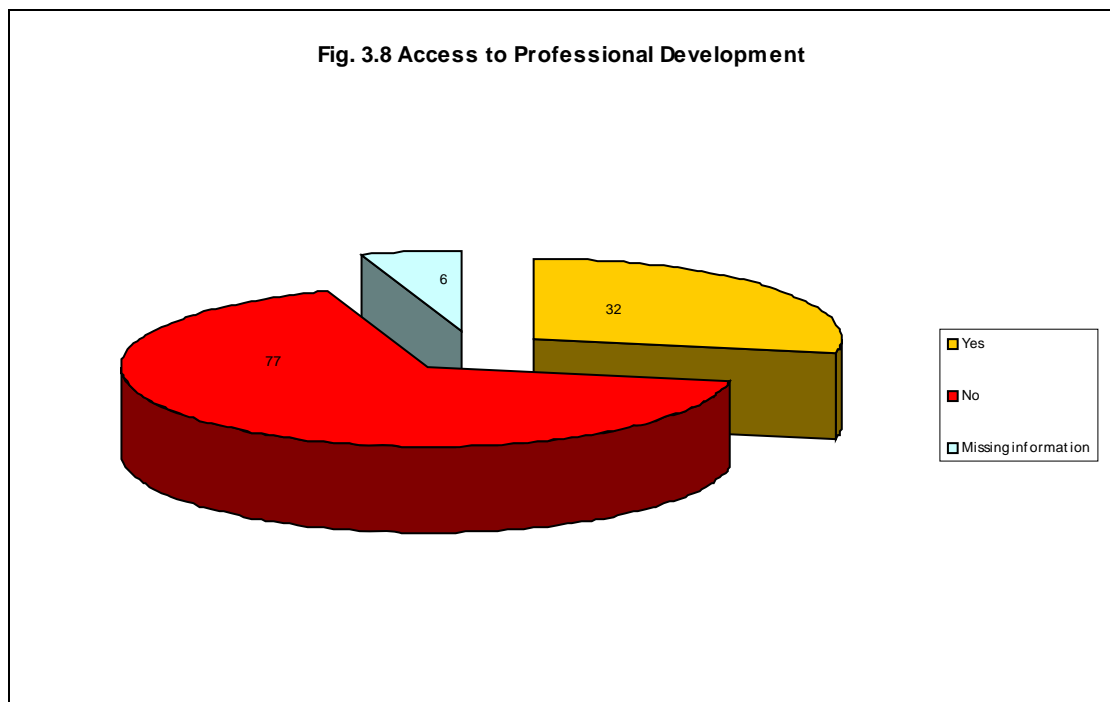


Figure 3.8 illustrates that 77 of the respondents (67%) indicated that they have not accessed any professional development with regards to inclusive education, whereas 32 respondents (27,8%) have accessed professional development. Only 6 respondents (5,2%) did not indicate whether they have accessed professional development.

3.2.4. Data Collection Method

The data collection instruments used included a biographical questionnaire and a self-administered questionnaire, namely The Teacher Stress Inventory-Revised. A questionnaire was employed as it allows the researcher to gather structured information from a large number of individuals (Lehman, 1991), it allows for anonymity and it is economical to use (Rosnow & Rosenthal, 1996).

Moreover, Weiers (1988) indicates that the analysis of questionnaires is easy due to the structured information in the questionnaire with few open-ended questions. Linde, Rothmann and Sieberhagen (1999, cited in van Zyl, 2002) espouse the view that questionnaires, requiring self-evaluation can present an objective measurement of stress since the person is evaluating himself/herself and the interpretation of data is not dependent on the subjective judgement of another person, for instance an interviewer. As self-evaluation questionnaires are quantified, it is easier to compare the scores of different individuals.

The main problems experienced by using questionnaires involve questionnaires being limited to respondents that are literate (Weiers, 1986); poor levels of response and the disadvantage of being unable to assess the given responses for accuracy (Kerlinger, 1986). Van Zyl (2002) adds that by using self-evaluation questionnaires the danger exist that respondents might deny their symptoms or they might decide to respond to questions posed favourably or unfavourably.

The validity of self-evaluation questionnaires may vary from situation to situation as various items are ambiguous and could be viewed as having two possible answers (van Zyl & van der Walt, 1994; Smith, 1981, cited in van Zyl, 2002).

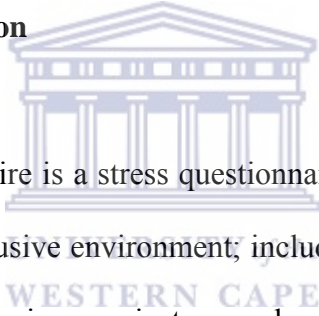
3.2.4.1. Procedure

Permission was obtained from the Western Cape Education Department to distribute and administer a total of three hundred (300) Teacher Stress Inventory questionnaires

to teachers at the randomly selected primary and secondary schools in the Cape Town area that participated in the research study. The researcher personally delivered the questionnaires to the respondents, at which instance an agreed upon collection date was determined; in most cases it was a week after the distribution of the questionnaire. A cover letter explaining the purpose of the research and assuring respondents of the anonymity and confidentiality of the research accompanied each questionnaire.

3.3. The Teacher Stress Questionnaire (TSQ)

3.3.1 Nature and Composition



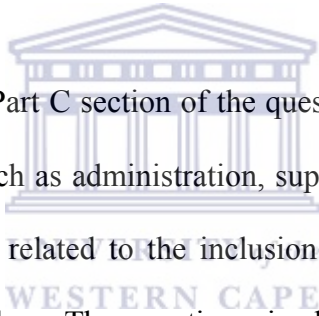
The Teacher Stress Questionnaire is a stress questionnaire that focuses on the effects of potential stressors in an inclusive environment, including learners with a cognitive disability or physical disability in a mainstream classroom (Eloff, 2000). It was developed by Forlin, and was adapted for the South African context on the basis of the pilot study (Engelbrecht, Swart, Eloff & Newmark, 2000).

The questionnaire consists of three parts, namely:

Part A requests demographic information: This section requires the respondents to provide personal information such as age, gender, teaching experience, levels taught, and involvement with inclusion of students with disabilities in mainstream classes, qualification and training of teachers.

Part B aims to elicit information about the school: Respondents are required to list information such as the number of learners at the school where they are currently teaching, ethnic backgrounds of learners, school's location and number of learners' formally identified/assessed for disabilities.

Part C is mainly focused on obtaining information regarding the severity of stress for mainstream class teachers who are involved in including learners with disabilities in their mainstream classes and contains seven sections that relate to different issues associated with inclusive educational practices (Engelbrecht et al., 2000; Forlin, 1988).



The seven sections within the Part C section of the questionnaire consist of 72 items, and deal mainly with issues such as administration, support, student's behaviour, the classroom setting and parents, related to the inclusion of students with intellectual disability in the mainstream class. The questionnaire has recently been revised, to include a Part D, which focuses on the coping mechanism employed by teachers, and to separate the two categories of disability- intellectual disability and physical disability. For the purpose of this study, only Part A and Part C would be utilised.

The Teacher Stress Questionnaire is utilised to establish the respondent's level of stress, and responses are recorded on a four-point Likert scale- ranging from not stressful, somewhat stressful, quite stressful to extremely stressful. A separate scale, "does not apply" is included to allow for instances where the stress factor does not apply (Forlin, 1988; Engelbrecht et al., 2000).

3.3.1.1 Reliability

Kerlinger (1986) indicates that reliability refers to the accuracy or precision of a measuring instrument. Peers (1996) similarly indicates that reliability of measurement refers to the measuring instruments ability to yield the same results, when a subject is measured under similar conditions. There are various methods in measuring the reliability of a measuring instrument, namely, Test-retest Method, Split-half reliability, Cronbach's alpha (Aron & Aron, 1999), Alternate form and Kuder-Richardson Theory (Van Zyl & van der Walt, 1994).

Table 3.1 gives an indication of the reliability levels of the different factors of the Teacher stress Inventory. The reliability of these factors was measured using Cronbach's alpha coefficient.

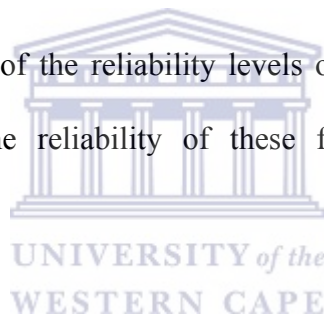


Table 3.1 Cronbach's alpha Coefficients

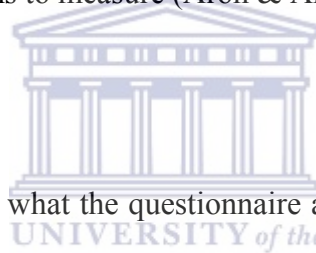
Factors	M	SD	Reliability
1. Parents	2.01	1.05	.93
2. Professional competency	2.00	.92	.94
3. Administrative Factor	1.96	.75	.84
4. Behaviour of learner	1.84	.80	.91
5. The classroom	1.77	.87	.89
6. Personal competency	1.76	.76	.81
7. Support	1.74	.79	.76

The reliability coefficients for these factors ranged from .81 to .94 and thus the reliability of the Teacher Stress Questionnaire is regarded as high (Forlin, 1988; Engelbrecht et al., 2000).

3.3.2.2 Validity

3.3.2.2.1 Content Validity

According to Aron and Aron (1999, p. 561) “the validity of a measure refers to whether it actually measures what it claims to measure.” According to Van Zyl and van der Walt (1994), face validity and logical validity are indicators of content validity, which results when the content of the measurement appears to encompass the full range of what the test claims to measure (Aron & Aron 1999).



Face validity, does not refer to what the questionnaire actually measure, but refers to whether the measurement appears to measure what it is supposed to measure. It is further highlighted that test takers and test administrators will not have confidence in the results of a test, if the test or its items do not appear valid (Aamodt, 1994). Logical validity, according to Smith (1981 cited in Van Zyl & van der Walt, 1994), requires a careful definition in behavioural terms of the trait or aspect dealt with in the questionnaire; analysis of the behavioural aspects in the parts it represents and finally, an evaluation of the question whether the items have adequate discrimination value.

The Teacher Stress questionnaire has recently been revised and thus has no published validity indicators, as yet. However, based on its extensive use and evaluation by a panel of experts, the questionnaire is assumed to have face validity and logical validity, and thus content validity (Engelbrecht et al., 2000).

3.3.2.3 Rationale for inclusion

The Teacher Stress Questionnaire has been standardised for usage in the South African context and it has high reliability (Forlin, 1988).

3.4 Statistical Techniques



Descriptive and Inferential Statistics, which included the Pearson Product-Moment Correlation, Analysis of variance, Scheffe's Multiple Comparison, Multiple Regression and chi-square values has been computed with the aid of the Statistical Package for the Social Sciences (SPSS), version 12.

3.4.1 Analysis of Variance (ANOVA)

Coolican (1999, p. 389) maintains that “Analysis of variance procedures are powerful parametric methods for testing the significance of differences between sample means where more than two conditions are used, or even when several independent variables are involved.” ANOVA makes it feasible to appraise the separate or combined influences of several independent variables on the experimental criterion (Mouton & Marais, 1990). ANOVA was therefore used to establish if a statistical significant difference exist between the levels of stress based on the biographical variables.



3.4.2 Scheffe' Multiple Comparison Procedure

According to Hinkle, Wiersma and Jurs (1982, p. 266), “When a statistically significant F ratio is obtained in an ANOVA, and the null hypothesis is rejected, we conclude that at least one population mean is different from the others.” In addition since it is possible that all the population means could differ or that any combination could differ it is essential to do follow-up analysis like the Scheffe Multiple Comparison Procedure, in order to ascertain which pairs of means differ. This procedure involves computing an F value for each of combination of two means. This statistical method will therefore be used to see where differences between groups lie.

3.4.3 Multiple Regression Analysis

Multiple regression analyses the common and separate influences of two or more variables on a dependent variable (Kerlinger, 1986), and it is used to establish the extent to which various differing variables add to predict another variable (Guyatt, Walter, Shannon, Cook Jaeschke & Heddle, 1995). Multiple regression was therefore used to determine if the selected sources of stress statistically significantly explain the variance in total stress experienced by teachers.

3.4.4 Chi-Square



According to Aron and Aron (1999) chi-square tests are used for hypothesis tests involving nominal variables and the chi-square statistic measures the amount of mismatch between unexpected and observed frequencies over several categories or levels. Pretorius (1995, p. 15) indicates that chi-square is used to determine whether a relationship exists between two categorical variables. He further highlights that “each variable (e.g. sex) consists of different categories (male and female) and the observations in each category are in the form of counts (i. e. how many males and females).”

3.4.4 Pearson Product moment

According to Rosnow and Rosenthal (1996, p. 232) “correlation procedures are used to measure the strength of association between two variable (referred to as X and Y)”. Hinkle, et al. (1982) purport that correlation coefficients serve as an index of the linear relationship between two variables and that it can be used in inferential tests of hypotheses. This technique was selected to determine whether there is a significant relationship between the dimensions of the questionnaire and the biographical characteristics of the sample of teachers.

3.5 Summary of Chapter



This chapter has provided an overview of the research design used in the research. A description of the research sample, sample characteristics as well as the procedure that was followed in the execution of the research was presented together with descriptions of the research instruments used. The advantages and disadvantages of the chosen research instrument were pointed out and the reliability and validity of the Teacher Stress Questionnaire was discussed. A stratified random sample of 115 teachers from the various schools in Cape Town participated in the study. Statistical analyses employed involved both descriptive and inferential, and techniques employed were the ANOVA, Scheffe’ multiple comparison procedure and Multiple

Regression analysis, Pearson Product Moment and the Ch-square. The techniques were introduced and the relevance in testing the hypotheses explained.

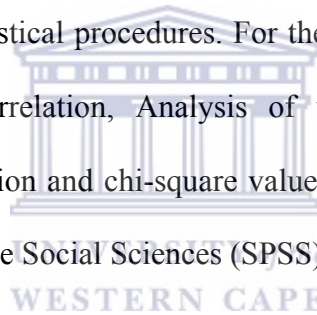


CHAPTER 4

PRESENTATION OF RESULTS

4.1 Introduction

This chapter presents the most salient findings based on the empirical analyses and provides an overview of the research findings obtained based on the descriptive statistics for the measuring instruments which were utilized. Thereafter, the analyses of occupational stress amongst teachers based on the inclusive model and presented with the aid of inferential statistical procedures. For the purpose of this research, the Pearson Product-Moment Correlation, Analysis of variance, Scheffe's Multiple Comparison, Multiple Regression and chi-square values were computed with the aid of the Statistical Package for the Social Sciences (SPSS), version 12.



4.2. Results

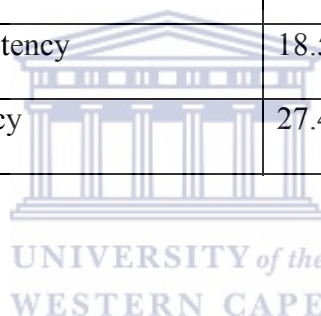
4.2.1 Descriptive statistics

The descriptive statistics calculated for the sample are provided in the sections that follow. In this manner, the properties of the observed data clearly emerge and a feel for the data can be established (Sekaran, 2003).

4.2.2. Inferential Statistics

Table 4.1 Sources of Stress

Sources of stress	Mean	S
Administration	17.73	4.38
Support	31.28	6.34
Student behaviour	33.26	5.26
The classroom	26.32	3.63
Parents	29.84	4.35
Professional competency	18.58	5.92
Personal competency	27.42	5.78



The results for the various facets of the questionnaire to determine whether the teachers experience significant stress when a learner with an intellectual disability is included in a mainstream class are outlined in Table 4.1. Results indicate that student behaviour (mean = 33.26, s = 5.26) was regarded as the most stressful for teachers. This was followed by support (Mean = 31.28, s = 6.34), the parents (Mean = 29.84, s = 4.35), personal competency (Mean = 27.42, s = 5.78), the classroom (Mean = 26.32, s = 3.63), professional competency (Mean = 18.58, s = 5.92), whilst administration (Mean = 17.73, s = 4.38) yielded the lowest level of stress amongst teachers involved with students with an intellectual disability.

4.2.3 Pearson Correlation Coefficient

In order to ascertain whether there is a significant relationship between the dimensions of the questionnaire (measuring stress) and the biographical characteristics of the sample of teachers, the Pearson product moment correlation coefficient was computed. The results depicted in Table 4.2 clearly indicate that the total stress levels for educators correlate significantly with the biographical variables.

Table 4.2 : Correlation between Stress and biographical variables

	Total stress
Age	0.54**
Gender	0.65**
Years' teaching	0.48**
Levels taught	0.45**
Position	0.56**
Highest qualification	0.33*
Number of years involved with students who need support for an intellectual disability	0.68**

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

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

According to Table 4.2, there is a statistically significant relationship between the gender of respondents and stress ($r = 0.65, p < 0.01$), supporting the hypothesis that there is a significant relationship between gender and stress. There is also a significant relationship between age and stress in the sample of teachers ($r = 0.54, p < 0.01$). Hence, this supports the hypothesis that there is a statistically significant relationship between age and stress. Significant correlations also exist between the number of years' teaching and stress ($r = 0.48, p < 0.01$), supporting the hypothesis that there is a significant relationship between the number of years' teaching and stress levels experienced.

Moreover, results in Table 4.2 indicate that there was a significant relationship between the number of years involved with students who need support for an intellectual disability and stress ($r = 0.68, p < 0.01$). There was a significant relationship between position occupied and stress ($r = 0.56, p < 0.01$), supporting the hypothesis that the position of teachers is associated with stress. The results further indicate that there is a statistically significant relationship between the levels taught and stress amongst teachers ($r = 0.45, p < 0.01$). There was also a significant relationship between the teachers' highest qualification and stress ($r = 0.33, p < 0.05$). Accordingly, the null hypothesis is rejected.

Table 4.3: Correlation between Stress and Dimensions of the Mainstream teachers questionnaire

	Total stress
Administration	0.26*
Support	-0.52**
Student behaviour	-0.68**
The classroom	0.54**
Parents	-0.46**
Professional competency	0.34*
Personal competency	0.36*

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

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

According to Table 4.3, there is a statistically significant relationship between the stress experienced by teachers and administration ($r = 0.26$, $p < 0.05$), supporting the hypothesis that there is a significant relationship between administration aspects and stress. There is also a significant, inverse relationship between support and stress in the sample of teachers ($r = -0.52$, $p < 0.01$). Hence, this supports the hypothesis that

there is a statistically significant relationship between support received and stress. Significant correlations also exist between student behaviour and stress ($r = -0.68$, $p < 0.01$), supporting the hypothesis that there is a significant, inverse relationship between the behaviour of students and stress levels experienced by teachers.

There was a significant relationship between the classroom and stress ($r = 0.54$, $p < 0.01$). Hence the hypothesis that there is a relationship between the classroom and stress is supported. Moreover, there was a significant, inverse relationship between the parents and stress ($r = -0.46$, $p < 0.01$), supporting the hypothesis that the parents are associated with stress in teachers involved with the inclusion of students with an intellectual disability in mainstream classes. There was a significant relationship between personal competency and stress ($r = 0.36$, $p < 0.05$). The results further indicate that there is a statistically significant relationship between professional competency and stress amongst teachers ($r = 0.34$, $p < 0.05$). Accordingly, the null hypothesis is rejected.

4.2.4 Multiple Regression Analysis

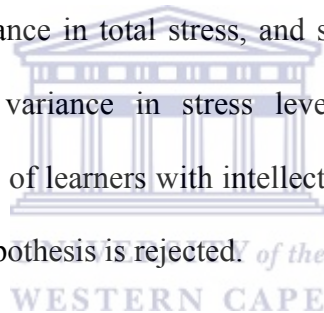
Table 4.4 Stepwise regression: Dependent variable (Total stress)

Multiple Regression	0.983			
R squared (R^2)	0.966			
R squared (Adjusted R^2)	0.961			
Standard error	0.721			
			F = 216.301	Significant F = 0.00**
Variables in the equation	B	Standard Error for B	T	P
Administration	-.50	1.23	-3.26	0.017*
Support	0.021	.038	5.22	0.000**
Student behaviour	.103	.042	3.54	0.000**
The classroom	.002	.050	1.83	0.006**
Parents	-.010	.046664	-1.63	0.003**
Professional competency	.008	.050	-1.42	0.04*
Personal competency	.122	.029	.588	0.03*

* Significant at the 0.05 level (2-tailed)

** Significant at the 0.01 level (2-tailed)

Table 4.4 depicts the results of regressing the seven independent variables against total stress. The results shown in Table 4.17 suggest a high percentage of the variation in Total Stress explained by the variables entered in the equation ($R^2 = 96.60\%$; R^2 (adjusted) = 96.10%). Thus 96.1% of the variance in total stress can be explained by administration, support, student behaviour, the classroom, parents, professional competency and personal competency. The F-ratio of 216.301 ($p = 0.00$) indicates the regression of total stress on the administration, support, student behaviour, classroom, parents, professional and personal competency, expressed through the adjusted squared multiple (R^2 (adj.) = 96.1%) is statistically significant. These variables account for 96.1% of the variance in total stress, and suggest that other unexplored variables could explain the variance in stress levels experienced by teachers involvement with the inclusion of learners with intellectual disabilities in mainstream classrooms. Hence, the null hypothesis is rejected.



4.2.5 ANOVA: Stress and biographical variables

A series of one-way ANOVA's was carried out to determine whether the educators' stress levels (dependent variable) differed in terms of their biographical variables (age, gender, total years teaching, levels taught, position occupied, highest qualification and number of years involved in teaching learners with disabilities). Scheffe's post hoc multiple comparison technique was used to determine the statistical difference based on their biographical characteristics.

Table 4.5 : ANOVA: Job stress by Age

	Sum of squares	df	Mean square	F	P
Between groups	18.7888	3	6,263	.581	0.001**
Within groups	614.458	57	10.780		
Total	633.246	60			

** $p < 0.01$

Table 4.5 depicts the ANOVA with respect to job stress based on the age of respondents. The results indicate that there are statistically significant differences ($F = 0.581$; $p < 0.01$), in the stress levels of teachers based on their age. Hence, the null hypothesis, is rejected with respect to differences in stress levels of educators based on age. Scheffe's post hoc multiple comparison method was used to determine whether there were any statistically significant differences between the stress levels of teachers involved in teaching learners with intellectual disabilities in mainstream classes based on age.

Table 4.6: Scheffe's Post hoc comparison of the age of respondents in relation to job stress

	Mean	Std error	P
21-30 years	64.72	9.24	0.000**
31-40 years	74.26	11.35	
41-50 years	102.36	12.32	
51-60 years	76.34	11.26	

** $p < 0.01$

The results indicate that teachers in the age group 41-50 differ significantly from the other groups, with respondents in the age category 21-30 years experiencing the lowest levels of stress relative to the other age categories. The stress levels for those in the age category 41-50 years (Mean = 102.36, $s = 12.32$, $p < 0.01$) are significantly higher than those in the age category 18-24 years (Mean = 64.72, $s = 11.46$), those in the age category 31-40 (Mean = 74.26, $s = 11.35$), and compared to those in the age category 51-60 years (Mean = 76.34, $s = 11.26$).

Table 4.7: T-test: Job stress by Gender

	Mean	S	Std error	T	P
Male teachers	73.18	12.16	2.72	3.573	0.04*
Female teachers	91.27	17.34	3.45		

* $p < 0.05$

Table 4.7 depicts the results of the t-test with respect to job stress based on the gender of respondents. The results indicate that there are statistically significant differences, $t = 5.573$; $p < 0.05$, in the stress levels of teachers based on their gender, with male teachers experiencing significantly lower levels of stress (Mean = 73.18, $s = 12.16$) compared to female teachers involved in teaching learners with an intellectual disability in mainstream classes (Mean = 91.27, $s = 17.34$). Hence, the null hypothesis is rejected with respect to differences in stress levels of educators based on gender.

Table 4.8: ANOVA: Job stress by Years' teaching

	Sum of squares	Df	Mean square	F	P
Between groups	25.729	3	8.576	.954	0.04*
Within groups	512.533	57	8.992		
Total	538.262	60			

* $p < 0.05$

The results with respect to job stress based on the number of years' teaching are shown in Table 4. 8. The results clearly indicate that there is a statistically significant difference in the stress levels of teachers based on their years' involved in teaching ($F = .954, p < 0.05$). Hence, the null hypothesis is rejected with respect to differences in stress levels of educators based on their number of years' teaching. Scheffe's post hoc multiple comparison method was used to determine whether there were any statistically significant differences between the stress levels of educators based on the number of years they have been teaching.

Table 4.9: Scheffe's Post hoc comparison of the number of years' teaching of respondents in relation to job stress

	Mean	Std error	P
0-5 years	103.15	7.12	0.000**
6-10 years	67.63	10.25	
11-20 years	73.26	9.54	
> 20 years	76.23	7.64	

** $p < 0.01$

In terms of Table 4.9., Scheffe's post hoc multiple comparison revealed that there is a statistically significant difference between educators' stress levels on the basis of their number of years' involved in teaching. Respondents with 0-5 years' teaching experience, reported significantly higher stress levels ($p < 0.01$) relative to the other three groups. Those teachers with 0-5 years' teaching experience stress levels were the highest (Mean = 103.15), followed by teachers who have more than 20 years experience (Mean = 76.23), those teaching between 11-20 years (Mean = 73.26) and those teaching 6-10 years (Mean = 67.63).

Table 4.10: ANOVA: Job stress by Level taught

	Sum of squares	Df	Mean square	F	P
Between groups	15.977	3	5.326	.871	0.046*
Within groups	348.383	57	6.112		
Total	364.361	60			

* $p < 0.05$

Table 4.10 shows the ANOVA with respect to job stress based on the level taught by teachers. The results indicate that there are statistically significant differences, ($F = 0.871$, $p < 0.05$), in the stress levels of teachers based on the levels they teach. Scheffe's post hoc multiple comparison method was used to determine whether there were any statistically significant differences between the stress levels of teachers based on the levels they teach.

Table 4.11: Scheffe's Post hoc comparison of the level taught by respondents in relation to job stress

	Mean	Std error	P
Grade R – 3	104.28	7.43	0.000**
Grade 4-7	87.63	12.42	
Grade 8-10	79.23	13.45	
Grade 11-12	76.46	13.36	

** $p < 0.01$

The results indicate that teachers involved in teaching learners with an intellectual disability in mainstream classes in Grade R –3 experience significantly higher stress levels compared to those teaching at the other levels ($p < 0.01$). The stress levels for those teaching at the Grade R –3 level (Mean = 104.28) are significantly higher than who teach Grades 4-7 (Mean = 87.63), those who teach Grades 8-10 (Mean = 79.23) and those who teach Grades 11-12. Hence, the level at which teachers are involved has an impact on their stress levels experienced.

Table 4.12: ANOVA: Job stress by Position

	Sum of squares	df	Mean square	F	P
Between groups	109.826	3	36.609	4.389	0.008**
Within groups	475.420	57	8.341		
Total	585.246	60			

** $p < 0.01$

Table 4.12 depicts the ANOVA with respect to job stress based on the position that teachers occupy. The results indicate that there are statistically significant differences, ($F = 4.389$; $p < 0.01$), in the stress levels of teachers based on their position occupied. Scheffe's post hoc multiple comparison method was used to determine whether there were any statistically significant differences between the stress levels of teachers based on the position they occupy.

Table 4.13: Scheffe's Post hoc comparison of the position of respondents in relation to job stress

	Mean	Std error	P
Class teacher	92.34	8.26	0.000**
Teaching Principal	78.23	9.15	
Teaching deputy principal	84.43	11.72	
Level 3-classroom teacher	86.26	8.45	

** $p < 0.01$

The results indicate that a teachers' position plays a role in the stress level experienced. Class teachers differ significantly from the other groups with respect to stress levels ($p < 0.01$), with respondents who are teaching principals experiencing the lowest stress levels (Mean = 78.23). The stress levels for those who are class teachers (Mean = 92.34) are significantly higher than those who are teaching principals (Mean = 78.23), those who are teaching deputy principals (Mean = 84.43), and those who are level-3 teachers (Mean = 86.26).

Table 4.14: ANOVA: Job stress by Qualification

	Sum of squares	df	Mean square	F	P
Between groups	78.857	3	26.286	5.248	0.003**
Within groups	285.504	57	5.009		
Total	364.361	60			

** $p < 0.01$

Table 4.14 depicts the ANOVA with respect to job stress based on qualifications. The results indicate that there are statistically significant differences, ($F = 5.248$; $p < 0.01$), in the stress levels of teachers based on their qualifications. Scheffe's post hoc multiple comparison method was used to determine whether there were any statistically significant differences between the stress levels of teachers based on their qualifications.

Table 4.15: Scheffe's Post hoc comparison of the qualification of respondents in relation to job stress

	Mean	Std error	P
Teaching certificate	85.24	7.82	0.000**
Graduate diploma	78.68	10.12	
B-Ed	73.23	9.83	
M-Ed	67.34	7.85	

** $p < 0.01$

The results indicate that those who possess a teaching certificate experience significantly higher levels of stress ($p < 0.01$). Those with teaching certificates experience the highest stress (Mean = 85.24), followed by those with graduate diplomas (Mean = 78.68), those with B-Ed Qualifications (Mean = 73.23) and those with M-Ed qualifications (Mean = 67.34).

Table 4.16: ANOVA: Job stress by Number of years involved with inclusive education

	Sum of squares	df	Mean square	F	P
Between groups	61.693	3	20.564	3.873	0.014*
Within groups	302.668	57	5.310		
Total	364.361	60			

* $p < 0.05$

Table 4.16 depicts the ANOVA with respect to job stress based on the number of years teachers have been involved in inclusive education. The results indicate that there are statistically significant differences, ($F = 3.873$; $p < 0.05$), in the stress levels of teachers based on the number of years they have been involved in inclusive education. Scheffe's post hoc multiple comparison method was used to determine whether there were any statistically significant differences between the stress levels of teachers based on the number of years they have been involved with the inclusion of students who have needed support for an intellectual disability.

Table 4.17: Scheffe's Post hoc comparison of the number of years' involved in inclusive education in relation to job stress

	Mean	Std error	P
0-5 years	101.94	4.38	0.000**
6-10 years	89.17	6.84	
11-20 years	82.54	9.14	
> 20 years	84.43	7.65	

** $p < 0.01$

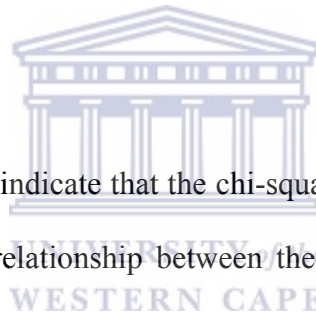
The results indicate that those teachers who have between 0-5 years involvement in inclusive education experience significantly higher stress levels ($p < 0.01$), with respondents who have the least experience, reporting the highest stress (Mean = 101.94), followed by those with 6-10 years' experience (Mean = 89.17), those with more than 20 years' experience (Mean = 84.43) and those with 11-20 years' experience.

4.2.6 Chi-square

Table 4.18: Stress in comparison to whether teachers have accessed professional development for inclusive schooling

	Stress			
	Mean	Std dev	Chi-sq	P
Accessed professional development	97.83	3.38	.47	0.036*
Have not accessed professional development	89.17	2.84		

* $p < 0.05$

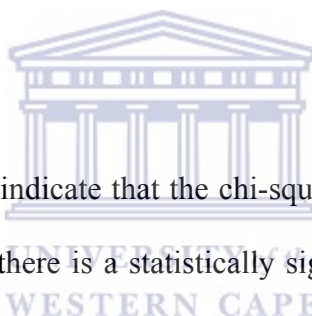


Results depicted in Table 4.18 indicate that the chi-squared value (0.47) is significant ($p < 0.05$). Hence there is a relationship between the stress levels of teachers and whether or not they have accessed professional development offered for inclusive schooling.

Table 4.19: Stress in comparison to whether teachers have undergone training to deal with students with special needs

	Stress			
	Mean	Std dev	Chi-square	P
Have undergone training to deal with students with special needs	67.45	14.11	10.64	0.005**
Have not undergone training to deal with students with special needs	90.17	20.75		

** $p < 0.01$



Results depicted in Table 4.19 indicate that the chi-square value (10.64) is significant ($p < 0.01$). This indicates that there is a statistically significant relationship between the stress levels of teachers and whether or not they have undergone training to deal with students with special needs.

4.3. Conclusion

This chapter focused on the presentation of results obtained from the analysis of the descriptive and inferential data that was generated based on the sample of teachers who are involved with the inclusion of students with an intellectual disability in mainstream classes. Both descriptive and inferential statistical techniques were applied. With respect to the inferential techniques, Pearson's product moment

correlation, multiple regression analysis, analysis of variance and chi-square were used to indicate relationships and differences in the stress levels of teachers involved with the inclusion of students with an intellectual disability in mainstream classes. In the following chapter, the results arising from the empirical data analysis will be discussed and contextualised based on previous research within the field.

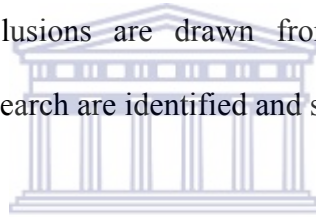


CHAPTER 5

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

In this section the prominent findings of the research will be discussed and where relevant research is available, reference is made to it. The discussion focuses on the causes of stress within an inclusive education environment, relationships between biographical characteristics and stress, differences in stress and access to training and developmental support. Conclusions are drawn from the results obtained and recommendations for future research are identified and suggested.



In terms of the National Qualifications Framework, teachers have to teach learners of any age, at any level of education and regardless of their circumstances (Bhengu, 1997, as cited by Olivier & Venter, 2003) whereby all learners attend a school in the community. This means that any learner can attend a mainstream school, regardless of disability, social background, cultural origin, religion or language (Ngidi & Sibaya, 2002; Olivier & Venter, 2003).

Some of the challenges that educators are faced with are a movement to accommodate diverse groups in the country. Many educators who were trained under the old traditional or conventional system, which was teacher centred, have to adapt their teaching style to the new outcomes-based system, where learner participation is

encouraged (Luczyn & Pretorius, 2002; Ngidi & Sibaya, 2002). Together with a change in teaching style, educators also have to cope with a greater workload in the form of additional administration work and serious disciplinary problems. Many teachers perceive disciplinary problems as a result of the abolishment of corporal punishment, resulting in tremendous insecurity and stress amongst educators (Edward, 2000; Greydanus, Ptatt, Spates, Blake-Dreher, Greydanus-Gearhart, & Patel, 2003).

5.2. Discussion

5.2.1. Descriptive Results

5.2.1.1 Results of the Biographical Questionnaire

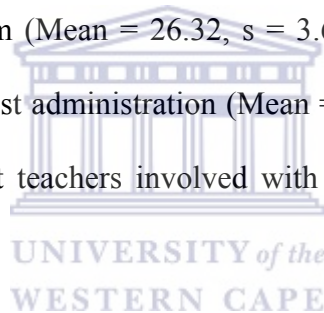


The sample consisted of 115 teachers. As viewed in Figure 3.1 the majority of respondents were female [(N=69)(60%)]. The majority of respondents as observed in Figure 3.2 were in the age group 30-39 years [(N=51)(44,3%)]. The majority of respondents as seen in Figure 3.3 have 11-25 years experience in the Western Cape Education Department [(N=56)(48,7%)]. It can be seen from Figure 3.4 that most of the respondents teach grades 8-10[(N=34)(29.6%)]. From Figure 3.5 it can be noted that the majority of respondents are class teachers [(N=95)(82,6%)]. As observed in Figure 3.6 the majority of respondents are graduates [(n=56)(48,7%)]. The majority of respondents as observed in Figure 3.7 indicated that they have no experience of inclusive or non-involvement in inclusive education [(N=42)(36,5%)]. As viewed in

Figure 3.8 the majority of respondents have indicated that they have not accessed any professional development [(N=77)(67%)].

5.2.1.2 Results of the Inclusion of Students with an Intellectual Disability in Mainstream Classes Questionnaire

The results in Table 4.1 suggest that of the seven factors outlining the various sources of stress, teachers indicate that student behaviour (mean = 33.26, s = 5.26) was regarded as the most stressful for teachers. This was followed by support (Mean = 31.28, s = 6.34), the parents (Mean = 29.84, s = 4.35), personal competency (Mean = 27.42, s = 5.78), the classroom (Mean = 26.32, s = 3.63), professional competency (Mean = 18.58, s = 5.92), whilst administration (Mean = 17.73, s = 4.38) yielded the lowest level of stress amongst teachers involved with students with an intellectual disability.

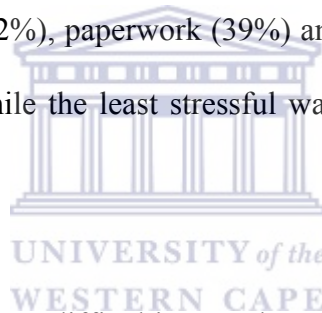


Some of the most common teacher reported sources of stress include lack of time (Kyriacou, 1987), poor relationships with colleagues and principals (Troman, 2000), large class size (Trendall, 1989, in Nagel & Brown, 2003), inadequate resources (Chaplain, 1995), poor student behaviour (Friedman, 1995), adapting to change (Kyriacou, 2001) and role conflict (Pearlin, 1989).

Research (Engelbrecht et al., 2001), has highlighted similar findings. Behaviour of learners was rated as one of the factors that were found to cause teachers most stress. Male and May (1997) investigated the sources of stress, burnout, and workload in

teachers of children with special education needs amongst a sample of 221 teachers in 64 schools. The results indicate that for schools with special education needs, most teachers cited excessive work (45%), paperwork (41%) and challenging behaviour (21%) as the most stressful, while inspection was the least stressful (1%).

For those schools for children with emotional and behavioural disorders, Male and May (1997) report challenging behaviour to be the most stressful for teachers (66%), followed by relationships with colleagues (43%) and workload (33%). Less than 1% rated resources as stressful in their environments. In their research in schools categorized as having pupils with moderate learning difficulties, Male and May (1997) report that workload (42%), paperwork (39%) and curriculum (29%) were the most stressful for teachers, while the least stressful was considered to be managing support staff (2.5%).



In schools with severe learning difficulties, Male and May (1997) indicate that teachers maintained that workload was the most stressful (63%), followed by challenging behaviour (33%) and curriculum (27%), while the least stressful was rated to be inspection (3%). Although reference to sources of stress indicate some differences according to the setting in which the research was conducted, workload was a frequently cited source of stress.

Male and May's (1997) research findings corroborate previous research by Male (1996), Lewis, et al. (1997) and Johnstone (1993), in which challenging behaviour

was amongst the most frequently cited sources of stress for teachers involved in inclusive education environments.

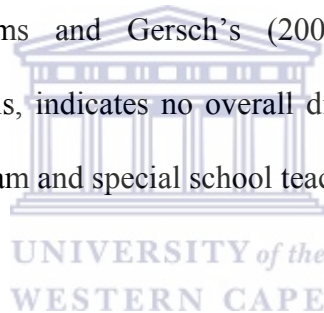
McEwen and Thompson (1997) investigated stress and morale amongst 459 teachers following the introduction of a new national curriculum. They found that male teachers rated too much to do, pupil behaviour, pupils' attainments, a lack of standards and poor pay as being the most stressful aspects of their jobs. Similarly, female teachers rated too much to do as the most stressful, followed by pupil behaviour, pupils' attainments and a lack of standards.

Forlin's (1997) research based on 571 teachers revealed that teachers attributed the most stressful aspects of their work in inclusive environments as being due to professional competence, administrative issues and issues relating to the classroom. There is consistent evidence that employees with more support from others experience lower strain and burnout (Lee & Ashforth, 1996), and where an employee is faced with potentially stressful demands, conflicts and problems in the workplace, having support from others may reduce the impact of the pressures on the individuals well-being (Jarvis, 2002; O'Driscoll & Cooper, 2002).

McEwen and Thompson's (1997) research indicated that teachers in both primary and post-primary teaching positions indicated they experienced problems with their school principals which they cited as one of their most highly rated stressors. They also indicated their pay to be unsatisfactory and as a contributory factor in their level of stress.

There is a strong positive correlation between isolation and stress (Dussault, Deaudelin, Royer & Loïselle, 1997, George et al., 1995; Lawrenson & McKinnon, 1982; McManus & Kauffman, 1991). Negative interpersonal relations and the absence of support from colleagues or superiors can be significant stressors for employees (Driscoll and Beehr, 2000).

Research by Trendall (1989, cited in Nagel & Brown, 2003) based on a comparison of special school teachers and mainstream teachers found special school teachers to be less stressed by their school situation. In contrast with Trendall's (1989, cited in Nagel & Brown, 2003) finding that teachers in special schools were less stressed than mainstream teachers, Williams and Gersch's (2004) research comparing 41 mainstream and special schools, indicates no overall difference in the total level of stress experienced by mainstream and special school teachers.



5.2.2. Inferential Results

5.2.2.1. Pearson Correlation Coefficient

The results in this research indicate that there are significant relationships between the biographical characteristics and stress amongst teachers involved in inclusive education. Hence, the null hypothesis is rejected.

Engelbrecht, et al. (2001) highlighted in their study that the independent variable gender, number of years teaching and qualifications did not significantly correlate

with any of the seven stress level factors (administration, support, student behaviour, the classroom, parents, professional competency and personal competency). Furthermore although the correlation between gender and the different stress level factors was not significant, the means for all the factors indicated a higher level of stress for female teachers than for male teachers. In terms of gender, this was also a result of the study as there was found to be a statistically significant relationship between the gender of respondents and their total stress experienced ($r = 0.65$, $p < 0.01$).

Engelbrecht et al. (2001) indicated that teachers concern for being personally accountable for learners' educational outcomes as well as having to adapt the curriculum and adjusting the unit plans to meet the needs of learners were all stressful. Research (Dinham, 1993; Kyriacou, 2001; Louden, 1987; Pithers & Soden, 1999; Punch & Tuetteman, 1996) has highlighted administrative demands and excessive paper work as major sources of stress for teachers, as there is inadequate time for preparation; unrealistic deadlines imposed and issues concerning the workload of teachers

5.2.2.2. Multiple Regression Analysis

The results in the study indicate that the seven independent variables significantly explain the variance in stress experienced by teachers involved in inclusive education. The results shown in Table 4.4 suggest a high percentage of the variation in Total Stress explained by the variables entered in the equation ($R\text{-squared} = 96.60\%$; $R\text{-}$

squared (adjusted) = 96.10%). Thus 96.1% of the variance in total stress can be explained by administration, support, student behaviour, the classroom, parents, professional competency and personal competency. These variables account for 96.1% of the variance in total stress, and suggest that other unexplored variables could explain the variance in stress levels experienced by teachers' involvement with the inclusion of learners with intellectual disabilities in mainstream classrooms.

McEwen and Thompson (1997) conducted research on teacher stress and morale amongst a sample of 459 teachers. They cite a lack of resources and limited career prospects as stressful. Moreover, Eloff et al.'s (2002) research indicates that administrative issues, parents and professional competency were regarded as the most stressful for a sample of 52 South African teachers, while they found health, safety and hygiene aspects as the least stressful. Sutton and Huberty (1984) found that time management, intrapersonal conflicts and student behaviour were rated as the most stressful in a sample of 20 teachers. Interestingly, their research indicates that regular education teachers and special education teachers for individuals with severely disabilities had similar perceptions of stress within their jobs.

Pupils' attitudes to work and a heavy workload have been found to be the most intense sources of stress in the majority of studies (Trendall, 1989 in Nagel & Brown, 2003; Borg & Falzon, 1991). Disruptive behaviour was rated as a lower source of stress than workload. Williams and Gersch (2004) report that pressure from inspection and having too much work to do were perceived to be the most stressful for teachers.

Miller, Brownwell and Smith (1999) investigated the factors that predict teachers staying in, leaving, or transferring from the special education classroom amongst a sample of 1 576 special education teachers. They report that several variables such as age, gender, education levels and levels taught are associated with general stress levels of educators. Similarly, Boe, Bobbitt, Cook, Whitener and Weber (1997) found that attrition is affected by the age, years' teaching and salary of special needs educators.

5.2.2.3. Differences in Stress Based on Age

The study revealed that teachers in the age group 41-50 (Mean = 102.36, s = 12.32, $p < 0.01$) differ significantly from the other groups and that stress levels are significantly higher than that of the other respondents. Respondents in the age category 21-30 years (Mean = 64.72, s = 11.46), experienced the lowest levels of stress relative to the other age categories.

Literature suggests that younger teachers experience lower levels of stress due to the absence of family responsibilities. Older respondents are probably more likely to experience higher levels of stress due to the fact that they are less mobile and more loyal to the profession that they have chosen (Van Zyl, 2002; Van Zyl & Pietersen, 2003). Indeed, Borg and Falzon (1989) found that, despite the high prevalence of stress, the majority of teachers regarded their profession as highly rewarding.

Naylor (2001) reported on relatively young teachers who experienced such high levels of stress and anxiety that they contemplated suicide. Research (Karasek & Theorell, 1990; Theorell & Karasek, 1996) suggests that age is associated with stress amongst teachers. However, research by Pisanti, Gagliardi, Razzino and Bertini (2003) amongst a sample of secondary school teachers in Italy did not find evidence of a relationship between the age of teachers and the level of stress experienced. Results, are hence, unequivocal.

5.2.2.4. Differences in Stress Based on Gender

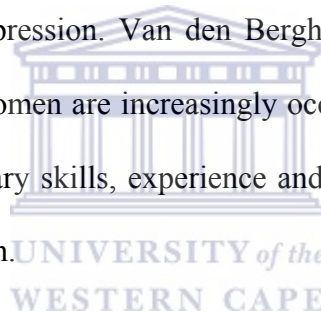
Table 4.6 depicts the results of the t-test with respect to job stress based on the gender of respondents. The results indicate that there are statistically significant differences, $t = 5.573$; $p < 0.05$, in the stress levels of teachers based on their gender, with male teachers experiencing significantly lower levels of stress (Mean = 73.18, $s = 12.16$) compared to female teachers involved in teaching learners with an intellectual disability in mainstream classes (Mean = 91.27, $s = 17.34$).

Much of the research on gender and stress is contentious. However, there is evidence that men and women experience stress differently. Tung (1980) found that women experienced lower levels of stress compared to men. Pisanti et al. (2003) conducted research to determine the relationship between gender and stress amongst a sample of 2 182 secondary school teachers in Italy. However, they found an insignificant relationship between stress and gender.

The reason why female employees experience more stress than men may be due to the fact that they are more committed to their jobs and they have more barriers to overcome to attain their positions. Van Zyl and Pietersen (1999) argue that this commitment of female teachers results in high stress levels.

While Davidson and Cooper (1983) found that men and women responded differently to various types of stressors, Aamodt (2004) and Martocchio and O'Leary (1989) did not find any significant gender differences in stress.

Research (Van Zyl, 2002) suggests that women have more stress than men and that women are more prone to depression. Van den Bergh (2001) as cited by Van Zyl (2002) postulates that black women are increasingly occupying managerial positions, sometimes without the necessary skills, experience and support which result in high levels of stress for these women.

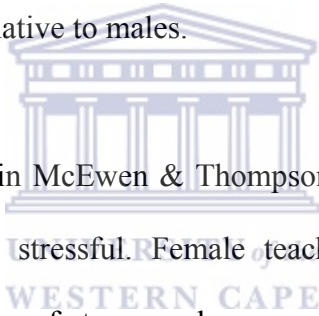


According to Aamodt (2004) role conflict and ambiguity in female employees are some factors that can contribute to higher stress levels amongst women. He states that when an employee has competing roles, it can cause her a great deal of stress. "For example, a female employee's role as manager may require her to work on a Saturday, but her role as a mother requires her to attend her daughter's soccer game on the same day" (Aamodt, 2004, p. 478).

Many female teachers experience the changes in the South African educational system as traumatic. Pearlin (1989) posits the view that "greater vulnerability to stress

may be attributable to social roles that reflect the unequal distribution of resources, opportunities and self-regard". Nevertheless, the adjustments associated with these changes, together with the female teachers' normal duties and busy work schedules, result in continuous stress (van der Linde, van der Westhuizen & Wissing, 1999).

With regard to gender, the evidence appears to be inconsistent; some researchers indicate that female teachers have a greater tolerance for integration and for special needs persons than do male teachers (Askamit, Morris & Leunberger, 1987). Eichinger (2000) conducted research on job stress and job satisfaction amongst a sample of 142 special education teachers. The results from this study indicate that females reported more stress relative to males.



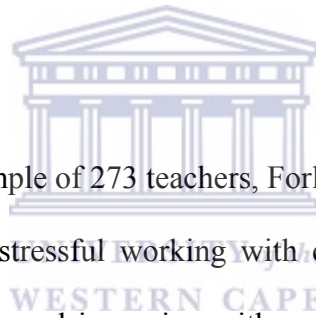
Kyriacou and Sutcliffe (1978, in McEwen & Thompson, 1997) found differences in what men and women found stressful. Female teachers appeared to find pupil misbehaviour the greatest source of stress, and men reported greater stress in coping with administrative work, although more generally, Miller (1982) has suggested that male secondary teachers feel less fulfilled than others.

5.2.2.5. Differences in Stress Based on Experience

Table 4.7 clearly indicates that there are statistically significant difference in the stress levels of teachers based on their years' involved in teaching ($F = .954, p > 0.05$). Moreover, Scheffe's post hoc multiple comparison revealed that there is a statistically significant difference between educators' stress levels on the basis of their number of

years' involved in teaching. Respondents with 0-5 years' teaching experience (Mean = 103.15), reported significantly higher stress levels ($p < 0.01$) followed by teachers who have more than 20 years experience (Mean = 76.23).

Teaching is often cited as having an influence on teachers' attitudes towards inclusion. Younger teachers and those with fewer years of experience have been found to more supportive of integration (Berryman, 1989; Clough & Lindsay, 1991). Trendall (1989 in Nagel & Brown) found that teachers with five to ten years' experience felt more highly stressed than older teachers with more experience. The majority of the teachers in this study rated teaching as either very stressful or stressful.



In their research based on a sample of 273 teachers, Forlin et al. (1996) found that, not only did teachers consider it stressful working with children with disabilities, but there was additional stress incurred in coping with regular children already in their class.

Forlin et al.'s (1996) research indicates that teacher stress for coping with children with disabilities was significantly higher than coping with mainstream children. Their research also indicated that stress was higher for those teachers who had to be closely involved with a disabled child compared to those who were not involved with inclusion.

5.2.2.6. Differences in Stress Based on Level Taught

Table 4.10 indicates that there are statistically significant differences ($F = 0.871$, $p < 0.05$), in the stress levels of teachers based on the levels they teach. Scheffe's post hoc multiple comparison method results indicate that teachers involved in teaching learners with an intellectual disability in mainstream classes in Grade R –3 (Mean = 104.28) experience significantly higher stress levels compared to those teaching at the other levels ($p < 0.01$).

Williams and Gersch (2004) report that the amount of paperwork to do and age of pupils taught are often cited as significant factors related to stress. They found that the more paperwork teachers had to attend to, the higher their stress levels tended to be, and the younger the age group taught, the lower their levels of stress. Similarly, Pratt (1977) reported that stress-related classroom interactions increased with the age of the children taught. Borg and Falzon (1991) found that teachers of older pupils reported greater overall stress levels in both mainstream and special schools.

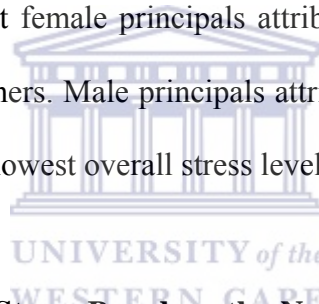
5.2.2.7. Differences in Stress Based on Position

Table 4.12 results indicate that there are statistically significant differences, ($F = 4.389$; $p < 0.01$), in the stress levels of teachers based on their position occupied. Scheffe's post hoc multiple comparison method indicates that a teachers' position plays a role in the stress level experienced. Class teachers (Mean = 92.34) differ significantly from the other groups with respect to stress levels ($p < 0.01$); the stress

levels are significantly higher than those who are teaching principals (Mean = 78.23), those who are teaching deputy principals (Mean = 84.43), and those who are level-3 teachers (Mean = 86.26).

Farber's (1991) research indicated that the degree of stress is mediated by gender, with male principals appraising the stress of inclusion considerably less severe than all other educators. Similarly, Forlin et al. (1996) found that while gender was a critical determinant of stress, this was only so for male principals as female principals recorded similar levels of severity of stress.

Forlin et al. (1996), report that female principals attributed the highest stress levels compared to regular class teachers. Male principals attributed significantly less stress than female principals and the lowest overall stress levels for coping with inclusion.

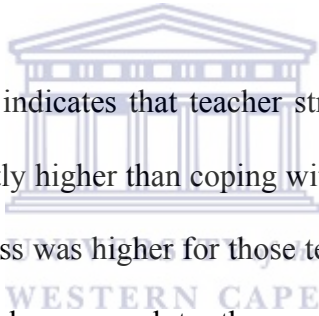


5.2.2.8. Differences in Stress Based on the Number of Years Involvement in Inclusive Education

Table 4.16 results indicate that there are statistically significant differences, ($F = 3.873$; $p < 0.05$), in the stress levels of teachers based on the number of years they have been involved in inclusive education. Scheffe's post hoc multiple comparison method results indicate that those teachers who have between 0-5 years (Mean = 101.94), involvement in inclusive education experience significantly higher stress levels ($p < 0.01$), in relatively to the other groups. The opposite was found to be true in a study conducted by Engelbrecht, et al. (2000). They highlighted that years of

teaching in an inclusive environment correlates significantly administrative issues ($p < .01$), learner behaviour ($p < .05$), the classroom ($p < .05$) and with professional competency ($p < .05$). However, the teachers with 0-2years teaching experience in an inclusive environment experienced less stress on all the above mentioned factors, than those with longer experience in an inclusive environment.

In their research based on a sample of 273 teachers, Forlin et al. (1996) found that, not only did teachers consider it stressful working with children with disabilities, but there was additional stress incurred in coping with regular children already in their class.



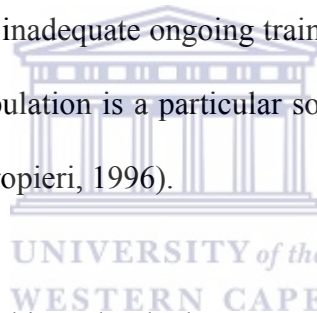
Forlin et al.'s (1996) research indicates that teacher stress for coping with children with disabilities was significantly higher than coping with mainstream children. Their research also indicated that stress was higher for those teachers who had to be closely involved with a disabled child compared to those who were not involved with inclusion.

Forlin (1997) found that the number of years that teachers had been involved with inclusion and whether they had received any training in dealing with children with special needs was a strong predictor of stress. He reports that, greater involvement with inclusion and participating in formal training are associated with less stress.

5.2.2.9. Differences in Stress Based on Access to Professional Development and Training Received

Results depicted in Tables 4.18 indicate that there is a relationship between the stress levels of teachers and whether or not they have accessed professional development offered for inclusive schooling. Results depicted in Table 4.19 indicate that there is a statistically significant relationship between the stress levels of teachers and whether or not they have undergone training to deal with students with special needs.

A lack of appropriate professional training specifically where teachers are required to implement new practices with inadequate ongoing training in order to meet the needs of an increasingly diverse population is a particular source of stress (Engelbrecht & Forlin, 1998; Scruggs & Mastropieri, 1996).



Stressful situations occur within schools because of the organisation's culture, function, structure, the nature of the management procedures, insufficient training of teachers, time pressure, poor work conditions and poor consultation and communication (Brown & Ralph, 1998; Kyriacou, 1998). Research has highlighted that high stress levels are associated with adapting the curriculum to meet the learners' needs and sustaining an effective learning environment for learners with Down's syndrome. This is attributed to the lack of effective in-service or pre-service training associated with the implementation of inclusion and special needs (Engelbrecht et al., 2001).

A lack of appropriate professional training particularly where teachers are required to implement new practices with inadequate ongoing training in order to meet the needs of an increasingly diverse learner population is a particular source of stress (Engelbrecht, et al. 2001). The separate general and special education programmes in teacher education have not provided teachers with the necessary skills and dispositions to handle diversity (Engelbrecht & Forlin, 1998).

5.3 Delimitation of Study

The research findings in the study should be interpreted with caution due to the limitations of the research. Whilst the response rate is acceptable for the current research, the unequal distribution of males and females could have introduced elements of bias in the research findings. Furthermore, the Education Department divides schools in the Western Cape into metropole clusters, namely Central, North, South and East Metropoles. Whilst a stratified random sample was drawn to reduce errors, most of the respondents were from the Central and East Metropoles and hence results are specific to these clusters, and cannot be generalised to the other metropole clusters. However, it does not seem improbable that similar situation may be found in other inclusive classrooms. In addition, because of factors that are specific to the teaching environment surveyed, these results cannot be extrapolated to other employment settings.

5.4. Conclusion

Eloff et al (2002), indicate that the research on stress experienced by teachers in inclusive education in a South African context is limited and research exploring the specific stress experienced by including a learner with a physical disability is sparse and anecdotal.

Stress in teaching is a well-recognised phenomenon and research (Johnstone, 1993) indicates that the profession is a stressful one. Research by Trendall (1989 in Nagel & Brown, 2003) based on a comparison of special school teachers and mainstream teachers found special school teachers to be less stressed by their school situation. In contrast with Trendall's (1989, in Nagel & Brown, 2003) finding that teachers in special schools were less stressed than mainstream teachers, Williams and Gersch (2004) found no overall difference in the total level of stress experienced by mainstream and special school teachers.

The results from this study and other studies (Engelbrecht, Eloff and Swart, (2001), highlight that since the inception of inclusive education in 2001, teachers are still faced with the same systemic factors that are significant sources of stress for teachers.

The three most stressful areas identified related to the behaviour of learners, the classroom and support, and the least stressful area is administration, indicating an improvement in how teachers perceive and cope with their administrative tasks.

It is clear that the inclusive education environment makes additional demands on teachers (Forlin, Hattie & Douglas, 1996; Mastropieri & Scruggs, 2000; Soto & Goetz, 1998 cited in Engelbrecht et al., 2001), and having the necessary support often reduces the impact of stressors. Hence the importance of creating support structures cannot be overemphasised (Engelbrecht et al., 2001). Brownel (1997) similarly states that endeavours to produce more prolific, caring, supportive and clearly defined approaches to inclusive education can be the best prevention against teacher stress.

In addition, the research has also highlighted that teachers perceive that access to development in dealing with learners with disabilities as deficient. According to Brownell and Pajares (1999) mainstream teachers perceive their effort to include learners with disabilities as more successful when they have participated in the pre- and in-service programmes that included information about the needs of learners with specific disabilities, curricular and instructional adaptations as well as behaviour management strategies.

Swart and Pettipher (2000), Oswald et al (2000) and Prozesky (1999) found that teachers felt that they did not possess adequate knowledge or skills to address diversity or to teach learners with special education needs.

In light of this, the need for further training and ongoing learning is evident, indicating that the current in-service training received does not always meet teachers' needs.

Because of the important role that school leaders will need to play in reducing stress and improving the school climate, there will need to be concerted efforts to develop collaborative skills of building principals and teachers as well as their knowledge of special education and how students with disabilities can be supported in general education environments (Miller et al., 1999). Being able to identify the specific issues that are causing teachers stress during inclusion enables more appropriate training and support to be provided to assist teachers (Forlin, 2001). If stress in teaching as in other occupations cannot be eliminated, it needs to be reduced to manageable proportions (McEwen & Thompson, 1997).

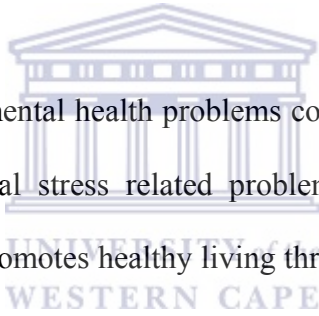
Stress in teaching is a well-recognised phenomenon and research (Johnstone, 1993) indicates that the profession is a stressful one. Research by Trendall (1989, cited in Nagel & Brown, 2003) based on a comparison of special school teachers and mainstream teachers found special school teachers to be less stressed by their school situation. In contrast with Trendall's (1989, cited in Nagel & Brown, 2003) finding that teachers in special schools were less stressed than mainstream teachers, Williams and Gersch (2004) found no overall difference in the total level of stress experienced by mainstream and special school teachers.

5.5. Recommendations

Several recommendations for future research include targeting the following areas:

- Research should focus on the barriers to on-going training or reasons for the lack of appropriate training, specifically in instances where teachers have to implement new practices.
- Priorities for the future would involve investigating how to create effective collaboration across areas of expertise to build support networks.
- The plausibility of including stress management as part of the formal and professional training of teachers should be investigated.

The following therapeutic implications are indicated in this study:

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- Addressing employee mental health problems could possibly involve training, assessment of individual stress related problems as well as introducing a medical aid fund that promotes healthy living through an incentive and reward programme. In accordance with this, one way to deal with stress is to institute stress management programmes at regular intervals to ensure the stress is managed proactively at schools. This would involve teaching individuals to manage their stress. Efforts to reduce employee stress by decreasing role-related problems are also recommended by (Beard, 1990; Swart, 1987), who suggest that teachers combat stress by delegating responsibilities, setting realistic goals, better time-management and realistic self-assessment.

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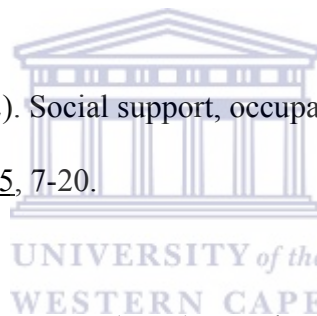
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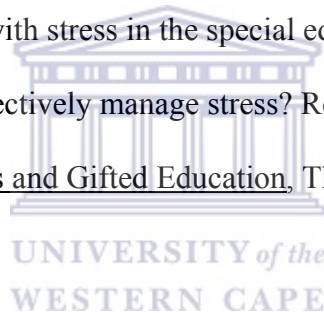
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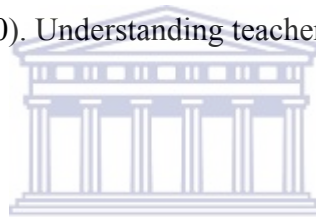
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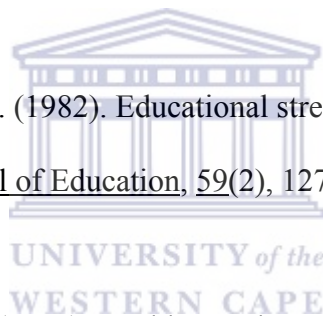
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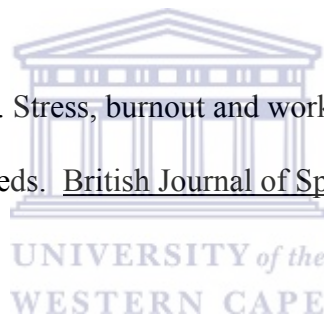
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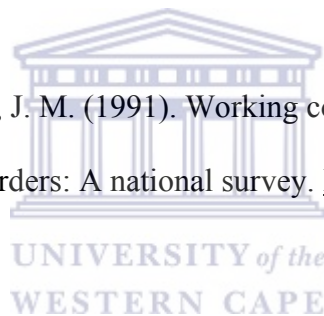
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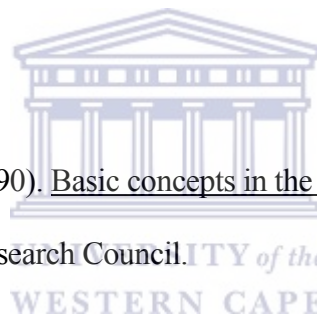
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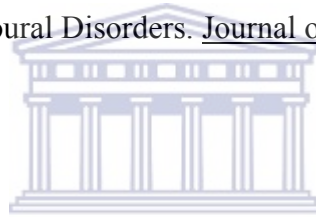
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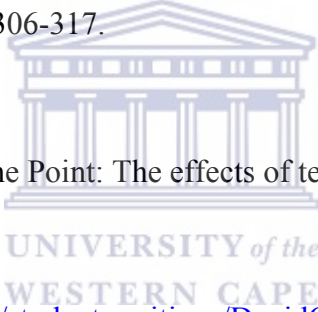
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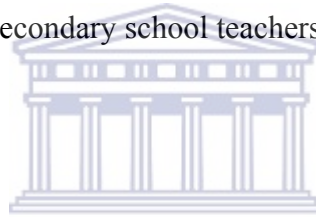
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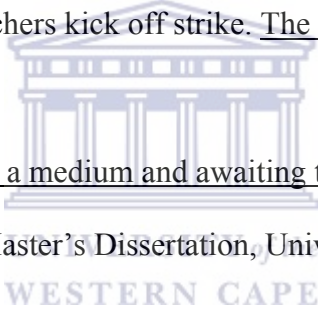
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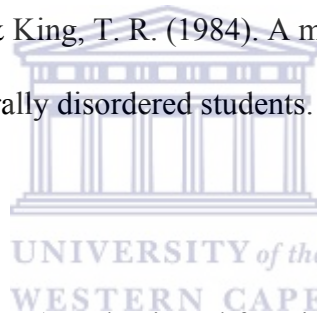
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