

# **Stress factors among teachers in schools of industry**

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# **Stress factors among teachers in schools of industry**

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## **DECLARATION**

I, Lourens Putter, declare that the dissertation entitled: *Stress factors among teachers in schools of industry* is my own work, and has not been submitted for a degree at another university. All the sources used or quoted have been indicated and acknowledged by means of complete references.

L. Putter

October 2003

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## **SUMMARY**

The primary objective of this study was to determine the nature of stress experience by teachers in schools of industries and to determine whether there are significant statistically relevant differences in the stress levels and manifestations for teachers in mainstream education and schools of industry. Secondary aims were to determine whether variables such as the gender, age and experience play a role in the perceived levels of stress manifestations. A total of 106 teachers participated in this study. A total of 40 (37,7%) teachers came from the two schools of industry and 66 from the two mainstream schools. The teachers were asked to complete the Teachers Concerns Inventory which included a short demographic survey. Analysis of the variance revealed that teachers from schools of industries experience high levels of stress. Fifteen of the 40 teachers (37,5%) indicated that stress is a problem to them, while approximately half of the teachers (19 of the 40) indicated that the intensity of stress experienced, was higher than average. The study showed that teachers experience high levels of stress with regard to time management, work-related stressors, professional distress, discipline and motivation and professional investment as well as high levels of stress manifestations with regard to emotional, fatigue, cardiovascular, gastronomic and behavioural manifestations. The results of this study indicated that there are no difference between the stress levels and stress manifestation for teachers in schools of industry and mainstream schools and that demographic variables do not play a significant role in the stress levels of teachers.

## OPSOMMING

Die primêre doelwit van die studie was om vas te stel wat die aard van stress is wat deur onderwysers in nywerheidskole ervaar word en om te bepaal of daar statistiese beduidende verskille is ten opsigte van stress vlakke en - manifestasies van stress van onderwysers in hoofstroom onderwys en nywerheidskole. Die sekondêre doelwitte was om vas te stel of veranderlikes soos geslag, ouderdom en ondervinding 'n rol speel in die waargenome vlakke van stress manifestasies. 'n Totaal van 106 onderwysers het deel geneem aan die studie. 'n Totaal van 40 (37,7%) onderwysers was afkomstig van twee nywerheidskole en 66 van twee hoofstroom skole. Onderwysers is gevra om die "Teachers Concerns" opname, wat 'n kort biografiese opname insluit, te voltooi. Analises van variansie onthul dat onderwysers in nywerheidskole hoër vlakke van stress ervaar. Vyftien van die 40 onderwysers (37,5%) het aangedui dat stress 'n probleem vir hulle is, terwyl ongeveer helfte van die onderwysers (19 van die 40) aangedui het dat die intensiteit van die stress wat hulle ervaar hoër as die gemiddeld was. Die studie het aangetoon dat onderwysers ervaar hoër vlakke van stress ten opsigte van tydbestuur, werkverwante stressore, professionele stress, dissipline en motivering, asook professionele belegging. Hoër vlakke van stress manifestasies ten opsigte van emosioneel simptome, uitputting, kardiovaskulêre en gastronomiese simptome en gedrags manifestasies is ervaar. Die resultate van die studie dui aan dat daar geen verskille is tussen die stress vlakke en stress manifestasies van onderwysers in nywerheidskole en hoofstroom onderwys nie en dat demografiese veranderlikes nie 'n betekenisvolle rol speel ten opsigte van die stress vlakke van onderwysers.

## TABLE OF CONTENTS

	Page
Declaration	(i)
Acknowledgements	(ii)
Summary	(iii)
Opsomming	(iv)
 CHAPTER 1            INTRODUCTION	
1.1    Motivation for the study	1
1.2    Statement of the problem	5
1.3    Aims of the study	5
1.4    Hypotheses	5
1.5    Operational definition of terms	6
1.5.1   Stress	6
1.5.2   Schools of Industry	6
1.5.3   Teacher	7
1.6    Method of investigation	7
1.6.1   Literature Study	7
1.6.2   Research paradigm	7
1.6.3   Method of sampling	7
1.6.4   Method of data collection	7
1.6.5   Method of data analysis	8
1.6.6   Plan of study	8
1.6.6.1      Chapter 1	8
1.6.6.2      Chapter 2	8
1.6.6.3      Chapter 3	8
1.6.6.4      Chapter 4	8
1.6.6.5      Chapter 5	8

## CHAPTER 2            LITERATURE REVIEW

2.1	Studies on the nature of stress among teachers in schools of industry	9
2.2	Studies on the nature of stress among teachers in ordinary schools	15
2.3	Studies on the relationship between demographic characteristics and level of stress	21
2.4	Studies on teachers' manifestations of stress	24

## CHAPTER 3            RESEARCH DESIGN AND METHODOLOGY

3.1	Introduction	29
3.2	The research design	29
3.3	Sampling design	30
3.4	Research instrument	31
3.4.1	The research instrument's nature in relation to the aims	32
3.4.2	Reliability and validity of the questionnaire	33
3.4.3	Scoring procedures	34
3.5	Hypotheses	35
3.6	Conclusion	35

## CHAPTER 4            RESULTS AND DISCUSSION OF RESULTS

4.1	Introduction	36
4.2	Statistical procedure	36
4.3	Descriptive statistics	38
4.4	Hypotheses	41
4.4.1	Personnel stress: schools of industry	41
4.4.2	Type of school	43
4.4.3	Gender	44



4.4.4	Age	45
4.4.5	Years experience	47
4.5	Conclusion	48

## CHAPTER 5          FINDINGS AND RECOMMENDATIONS

5.1	Introduction	49
5.2	Summery of the study	49
5.3	Findings with regard to the nature of stress experienced by teachers in schools of industry	50
5.4	Findings with regard to different stress factors experienced by teachers in ordinary education and school of industry	50
5.5	Findings with regard to whether demographic variables	51
5.6	Limitations of the study	52
5.7	Avenues for further study	52
5.8	Implications of findings	52
5.9	Implications	56
5.9	Conclusion	57

REFERENCE	58
ANNEXURE A (Questionnaire)	68
ANNEXURE B (Letter to the principle)	72
ANNEXURE C (Letter to the participates)	73

## LIST OF TABLES

Table 2.1:	Sources of stress relevant to school personnel	16
Table 2.2:	The responses to stressors and the manifestations of stress	24
Table 3.1:	Frequency distribution of the research groups in the two types of schools according to relevant demographic variables	30
Table 3.2:	Cronbach's $\alpha$ -coefficients for the subscales of the FTSl	34
Table 3.3:	Five-point Likert scale	34
Table 4.1:	Means and standard deviations for the total research group	38
Table 4.2:	Frequency and row percentages indicating the measures of personal stress of teachers in schools of industry	42
Table 4.3:	Means and standard deviations for the teachers in the different schools	44
Table 4.4:	Means and standard deviations for the teachers in the different gender groups	45
Table 4.5:	Means and standard deviations for the teachers in the different age groups	46
Table 4.6:	Means and standard deviations for the teachers in the different years experience groups	47

## CHAPTER 1

### INTRODUCTION

#### 1.1 MOTIVATION FOR THE STUDY

The impact of stress in the workplace on the employee's physical health, mental well-being and effectiveness in the workplace has been increasingly recognised in recent years (Spielberger & Reheiser, 1994).

Anyone who has worked in a helping profession such as teaching will appreciate how stressful such professions can be. Everyday interactions with students can trigger the experience of stress in teachers. The reality is that the teacher is normal but the work situation is often unpredictable and sometimes even abnormal from a professional point of view (Hayward, 1991).

Stress at work has been singled out as an important area of investigation for several reasons: most people spend a substantial amount of time at work, and work is important as a fundamental means for implementing and fulfilling personal aspirations and expectations (Yankelovich, 1979).

The teaching profession is one of the helping professions in which practitioners are normally committed to giving their best for the welfare of those entrusted in their care. While the commitment is laudable, the consequences can be detrimental when the job demands overshadow the individual's coping resources, as well as the job rewards; thus leaving the practitioner feeling unhappy and unable to perform well (Hayward, 1991).

Indications are that teacher stress is one of the main forms of professional stress (Federale Onderwysersraad, 1990). Organisational stress affects the teacher's psychological, physical and behavioural responses (Ferreira, 1994; Marais, 1992 & Beard, 1990). Millar (in Herr & Cramer, 1996) states that "there is no doubt that job related stress is rapidly becoming one of the most pressing occupational safety and health concerns in the country today". It is

therefore appropriate that teachers and the senior management teams of schools learn to understand themselves and others better through a greater awareness of the stress involved in teaching (Hayward, 1993).

Stress can have detrimental effects on both the individual and the organisation (Hayward, 1993). Exposure to chronic stress can cause teachers to experience symptoms of burnout. This robs the individual of the will to achieve, and contributes to the development of a lowered sense of self-esteem, decrements in work performance, cynicism and apathy (Sarros, 1988). Since too much stress will affect the teacher's physical, psychological and behavioural responses it will, in return, have a negative impact on students (Calabrese, 1987).

Stress is defined as the experience by a teacher of unpleasant emotions, such as frustration, anxiety, anger and depression, resulting from aspects of his/her work as a teacher (Kyriacou, 1987). A stressor is an experience or situation within or outside the individual, which elicits a stress response. It is the individual's unique perception, which determines whether the stress is viewed as negative or positive (Hayward, 1993).

The vast majority of teachers do encounter discipline problems, as stressors, both in and outside the classroom. One of the frequent causes of stress in secondary schools are learners disrupting the process of education and low levels of motivation (Payne & Furnham, 1987 & Kyriacou, 1987). Hayward (1993) asserts that discipline and classroom control issues cause interpersonal stress for teachers at all grade levels. The study conducted by Marais (1992) found that stress resulting from teachers having to cope with learners' behavioural problems, ranked seventh out of 84 factors.

Schools of Industry are established for the reception, care, education, and training of children referred by order of the children's court section 15(1)(d) of the Child Care Act, 1983. They provide care, development, protection and educational services to emotionally and behaviourally troubled learners placed there under the Child Care Act, 1983, as amended.

Schools of Industry form part of the Child and Youth Care system. This system is currently in a process of change. The Inter-Ministerial Committee states that "It is necessary to rationalise the residential care services to children, ensuring that only those services which offer effective programmes and which are essential to the community, children in conflict with the law, and those in need of care and protection, remain in place" (The Inter-Ministerial Committee on Young People at Risk, 1996).

"Professional stress is often activated by developments and changes in the work environment over which the individual practitioner has little or no control. South African education has undergone various changes on different levels, ranging from financial structures to policy structures. There are inevitable stressful consequences as teachers adapt to their new "realities" (Hayward, 1993:5). Greenberg (1984) and Van Heerden (1988) maintain that change can be a significant stressor. Greenberg (1984:57) cites Alvin Toffler, stating in his book *Future Shock*, that although change is a necessary part of society's behaviour, it ceases to yield rewards if it occurs too frequently or too intensely.

In line with the United Nations Conventions on the Rights of the Child, the Beijing rules and other international instruments, young people in conflict with the law should be diverted from the criminal justice system into programmes such as schools of industry, as a diversion option where this is appropriate. The Children's Court should become far more central to the issue of Justice than it currently is. If the child is in need of care and protection the child should be referred to the Children's Court (The Inter-Ministerial Committee on Young People at Risk). The implication for schools of industry is that, in addition to their traditional functions, they will now accommodate learners who are in conflict with the law, placing an additional stressor on the staff.

Regulation 32 of the Child Care Act no 74 of 1983, as amended, states the importance of the control and maintenance of good behaviour management in schools of industry. Regulation 32(3) and the Minimum Standards (South

Africa, 1996) state that the various old disciplinary methods and behaviour modification systems, such as reward systems (Regulation 32(3)(0)), are prohibited. This situation forces school staff to look for alternative measures in coping with deviant behaviour.

Pearlin (in Beard, 1990) notes that the common strategy in most stress research seems to identify significant relationships between one or several factors in the environment, for example factors such as changes in the environment and teaching behaviourally challenged learners and their effect on an individual's stress reaction. The personnel in schools of industry experience stress due to a variety of stressors intrinsic to the job as well as a myriad of external factors. How individuals perceive these stressors will determine the effects they will have, not only to the individual but also on the institution as a whole.

Turnage and Spielberger (1991) note that relatively little research has been directed towards understanding the specific stressors typically experienced by employees at different occupational levels. In order to alleviate job stress, the characteristics of a job that are perceived as most stressful by a particular occupational group must be identified.

It seems that changes in the Education Department as organisation (Hayward, 1993), as well as difficulties experienced in dealing with behaviour difficult learners (Payne & Furnham, 1987; Hayward, 1993 & Marais, 1992) does exacerbate stress in teachers. Both these mentioned factors are currently evident in school of industry. Stress factors that are cited as having an influence in ordinary education are long working hours, insufficient salaries and work motivation (Marais, 1992).

## **1.2 STATEMENT OF THE PROBLEM**

The goal of this study is to determine whether the factors that affect teachers in schools of industry differ from those affecting teachers in mainstream education. The question that must be asked is: what is the nature of stress that affects teachers in school of industry?

The specific research questions to be addressed by this study are:

- 1.2.1 What is the nature of stress affecting teachers in school of industry?
- 1.2.2 Is there a difference between the stress factors and their manifestations for teachers in schools of industry and for teachers in mainstream education?
- 1.2.3 Are there any demographic characteristics which influence the level of stress experienced and stress manifestations?

## **1.3 AIMS OF THE STUDY**

The aims of the research are to determine:

- the nature of stress experienced by teachers in schools of industries;
- whether there is any difference between stress factors experienced by teachers in ordinary education and those in school of industry;
- whether demographic variables such as teachers' gender, age and experience are associated with the levels of stress and stress manifestations;

## **1.3 HYPOTHESES**

The hypotheses will be formulated according to the aims.

## 1.5 TERMINOLOGY

### 1.5.1 Stress

McGrath (1984:6) defines stress in terms of a set of conditions having stress in it: "stress involves an interaction of person and environment. Something happens out there which presents a person with a demand, or a constraint or an opportunity for behaviour." He looks at stress as the relationship between a person and the environment. Stress occurs when the environment imposes demands which are perceived as being substantially out of balance with the focal person's capabilities. The imbalance can occur when the environmental demands exceed the person's capabilities or the person's capabilities exceed the environmental demands (Beard, 1990).

Stress in this study will refer to:

- Stress due to life specifically as a *changing environment*.
- Stress is a state manifested by a specific syndrome of biological events and can be both pleasant and unpleasant.
- Stress is the mobilisation of the body's defences that allow human beings to adapt to hostile or threatening events, such as behaviourally challenged learners.
- Stress is dangerous when it is unduly prolonged, occurs too often, or concentrates on one particular organ of the body.

### 1.5.2 Schools of Industry

Schools of Industry are established for the reception, care, education, and training of children set thereto by order of the Children's Court section 15(1)(d) of the Child Care Act, 1983. They provide care, development, protection and educational services to emotionally and behaviourally troubled learners.



### **1.5.3 Teacher**

In this study the term *teacher* refers to a person giving educational or life skills guidance to learners.

## **1.6 METHOD OF INVESTIGATION**

### **1.6.1 Literature study**

An in-depth literature review on stress will be conducted.

### **1.6.2 Research paradigm**

An empirical research study will be carried out to establish which aspects of the teaching profession cause stress to teachers in schools of industry.

### **1.6.3 Method of sampling**

The Free State Province has two schools of industry. The sample will consist of the teachers from these two schools as well as from two selected ordinary schools in the Free State provinces. Teachers from different culture groups will be part of the sample group. Both males and females will be tested.

### **1.6.4 Method of data collection**

The Teacher Stress Inventory developed by Fimian (1984) will be utilised for the purpose of data collection. The author used this test on teachers from both special and ordinary schools. This questionnaire evaluates the stress levels and stress manifestations of teachers within the context of the school and work situation. The time needed to distribute, complete, and gather the instrument will be approximately 20 minutes.

### **1.6.5 Method of data analysis**

Statistical tests will be used to analyse data.

### **1.6.6 Plan of the study**

#### **1.6.6.1 Chapter 1**

This chapter will consist of the motivation for the investigation into this field, the aims of the study and a layout for the organisation of the scientific report.

#### **1.6.6.2 Chapter 2**

This chapter provides a theoretical background to the study. Research evidence with regard to the aims will be investigated.

#### **1.6.6.3 Chapter 3**

This chapter details the empirical investigation, research design and methodology of the study. The sample group and the measuring instruments will be reviewed.

#### **1.6.6.4 Chapter 4**

This chapter contains presentations, analysis and the interpretation of the data. The hypotheses formulated in Chapter three are tested in this section.

#### **1.6.5.5 Chapter 5**

This chapter concludes the report and relevant recommendations are made.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 STUDIES ON THE NATURE OF STRESS AMONG TEACHERS IN SCHOOLS OF INDUSTRY**

Little research has been done on the stress levels of teachers in schools of industry. Since these schools are part of the special education sector the researcher will review research in this field to assist in the clarification of the aims. The researcher will focus on the behaviour challenged learner and the effect of change relevant to schools of industry.

Do teachers experience stress? Van der Linde (1992) refers to an investigation done by Wilson in 1979 in San Diego California where it was found that 90% of teachers experienced some form of stress and that 95% of them indicated the need for stress management training. Loudly and clearly, teachers are saying that they are vulnerable to stress (Reglin & Reitzammer, 1998).

Research indicates that the teaching profession is exposed to stress. Schaufeli and Enzmann (1998) analysed 73 United States studies that were conducted in various occupational fields. One of their aims was to determine what occupational fields are more susceptible to stress. They found that, in the US, levels of emotional exhaustion were clearly highest amongst teachers.

Fimian (1983) and Fimian and Santoro (1983) conducted a study on 365 low, moderate, and high stress, full time special education teachers from Connecticut. The Fimians' Teacher Stress Inventory was used. Results indicated that many special education teachers exhibited frequent and strong manifestations of job-related stress. The study indicated that 87.1% reported their jobs as being moderately to very stressful, with almost forty-six percent (45.6%) reporting much to very much stress.

This added stress experienced by teachers in special education takes its toll in terms of numbers. The Teacher Education Division of the Council for Exceptional Children indicated that as many as 30,000 special education teachers leave the classroom annually to escape the stressful special school environment (Vance, Miller, Humphreys & Reynolds, 1989).

Kasyoki (1997) conducted a study to determine (South Dakota regular classroom and special education) teachers' perceptions regarding selected causes of stress. The samples of 200 regular classroom and 200 special education teachers were selected using a random sampling design. Analyses of variance revealed significant differences between regular classroom and special education teachers' perceptions regarding causes of stress. Regular classroom teacher's perceived lack of respect for teachers and work overload as the most significant causes of stress. The special education teachers perceived excessive paperwork as the greatest cause of stress. In contrast, playground duties and learner violence were perceived by both regular classroom and special education teachers as the least significant causes of stress. The study indicated that there are differences between special school and ordinary education, but that learner violence is significant in both types of education.

The study conducted by Vandoan (1999) compared causes and manifestations of stress between elementary school teachers in Genessee County Catholic and public elementary schools. The participants in the study included 81 teachers in 11 Catholic elementary schools and 104 teachers in the 11 public elementary schools. The Teacher Concerns Inventory and a short demographic survey were used. Higher levels of stress for public school teachers were attributed to the basic philosophy of the schools, the types of learners attending the schools, and the administrative support of the teachers.

The type of learner that schools of industry are established for is the learner with behavioural and emotional needs. This type of learner does tend to exacerbate the stress levels of teachers (Marais, 1992). Teachers in schools

of industry deal with the direct effects of poverty, abuse and neglect (Child Care Act, 1983). Children who are born into poverty make special demands on our school system because they have more health and other socio economic problems (Cohen, 1991).

Studies indicate that a single factor or a single defining situation, for instance poverty, does not cause child and adolescent antisocial behaviour (Cohen, 1991; Brownell, 1997 & Lewandowski & Forsstrom-Cohen, 1986). Rather, multiple factors contribute to and shape antisocial behaviour over the course of development. Some factors are related to, and are enhanced by, characteristics within the child, such as neurological factors, metabolic disorders, and sexual or chemical abnormalities. Many other factors are however defined and shaped within the social environment (e.g. family, peers, school, neighbourhood, availability of weapons, exposure to violence) that enable, shape, and maintain aggression, antisocial behaviour, and related behaviour problems.

Cohen (1991) examines the social causes of the expansion of the role of teachers in schools and in society, and describes several of the consequences. She states that social pressures affecting teachers are poverty, family instability, drug and alcohol abuse, neglect and legal pressure.

Wilkinson (1988) conducted research on the causes, reactions, and coping strategies relating to teacher stress in a comprehensive high school. He found that learners who lacked motivation, a factor often mentioned in interviews by respondents, were in this predicament because of factors that had existed even before the children entered school. Consequently, teachers are faced with educating learners who present a complex array of problems.

Leung (1994) shows the importance of environmental factors in the family or society that cause teacher stress. He discusses the reasons for the suicides committed by three Chinese teachers in 1994, which were preceded by the suicides of several learners. In discussing causes, the author notes that

changes in Chinese society impact on child rearing practices and, therefore, on the types of problems that teachers have. Teachers are said to have a greater workload in addressing the needs of more troubled learners, which may increase their own stress levels.

The desire to address the needs of troubled learners can lead to strong learner-teacher relationships and can provide teachers with commitment to education, but this same desire can also make it difficult for teachers to leave their work at the schoolhouse door. As so aptly stated by a special education teacher: "As a special education teacher I have found myself counselling parents almost as much as I teach their children. I also feel that I work on children's self esteem and confidence as much I teach academics" (Cohen, 1991).

According to the study of McCormick (1992), teacher-learner relationships are the third highest factor causing stress to teachers. King and Peart (1992) conducted a study where over 17,000 teachers from across Canada were surveyed by means of questionnaires and 223 were interviewed, providing a rich body of information about the profession. The factor that contributes most to teacher satisfaction is the extent to which teachers are able to relate positively to learners. This suggests that a teacher must truly enjoy working with young people to be fully satisfied by teaching and that those who are attracted to teaching by factors other than their students are less likely to find satisfaction in teaching.

Abel and Sewell (1999) examined sources of stress and symptoms of burnout in 51 rural and 46 urban secondary school teachers from 11 school systems in Georgia and North Carolina in the United States. He concluded that stress perceived from learner misbehaviour was significantly greater than stress perceived from poor working conditions and poor staff relations for both rural and urban school teachers. The studies of McCormick (1992) and Abel and Sewell (1999) both conclude that learner misbehaviour is a high stress factor for teachers.

What is the effect of learner misbehaviour on teachers? Saptoe (2000) wanted to determine what proportion of teachers in the Southern Cape suffered from stress. The Fimian Teacher Stress Inventory was used to access relevant information from the teachers concerned. He states that lack of commitment of learners soon wears a teacher down and the situation can become so unbearable that teachers can reach a state of burnout or go on sick leave. They become despondent due to the unmotivated and undisciplined attitudes that learners display. When teachers feel unable to positively influence student learning, their personal sense of competence is diminished, and their behaviour changes. This in turn adversely affects learners' behaviour and motivation (Cohen, 1991).

Researchers found that different areas of learner misbehaviour initiate and maintain subsequent stress reactions in teachers. Class management problems, disciplinary methods, individual or overall group behaviour problems and day-to-day stressors could add to the stress experience of teachers (Kobayashi, 1994; Feitler & Tokar, 1982 & Wilkinson, 1988).

The study of Kobayashi (1994) shows that class management problems were the main triggers of stress. Feitler and Tokar (1982) report that teachers ranked the consistent misbehaviour of a few individual learners, as compared with the overall behaviour of all learners, as highly stressful. They proposed that learner misbehaviour might be stressful as a result of a poor school discipline policy.

Wilkinson (1988) conducted research on the causes, reactions and coping strategies relating to teacher stress in a comprehensive high school. Data was analysed from three sources. The first was a sample from an inventory containing statements relating to causes of stress, reactions to stress and coping strategies. A second data source was in the form of a field diary, compiled over the entire period of the study. The third, and main form of data, was provided by tape recorded, semi-structured interviews conducted individually. The most widely reported organisational issues were concerned

with standards of discipline, inability to reach desired standards in a lesson, support from external agencies over sanctions for learner misbehaviour, and communications. Disciplinary concerns centred upon consistency of application of sanctions for less serious learner misbehaviour, adequacy of punishment for more serious misbehaviour, and lack of support from external agencies.

King and Peart (1992) and Vance et al. (1989) determine in their studies that teachers in schools with a clearly established disciplinary policy and appropriate support from the school management in disciplinary matters, experienced less stress.

Cole and Walker (1989) find that the majority of teachers do not rate poor discipline particularly highly as a stressor. This is, in fact, perceived as "...a normal rather than necessarily stressful..." part of their work. This is not to say that confrontations between a teacher and learner are not stressful. They can indeed be acutely stressful. However, in most cases, these confrontations are soon over. Kyriacou (1987) points out that "it is the insidiousness of stress with its cumulative effect, and not the less frequent but occasionally intense sources of stress, which teachers are concerned with".

Schools of industry are in a transformation phase. Some of the changes are coping with the additional administrative duties that the Child Care Act places on the school in terms of their interaction with learners, ensuring that learners experience a sense of belonging, mastering, independence and generosity and multi-level orientation to new roles within district support services of support to neighbouring schools. Additional to these responsibilities, schools of industry will now provide service to learners that traditionally were not within the parameters of their responsibilities. Learners that were once confined to reformatories and juvenile correctional services are now committed to schools of industry (IMC, Child Care Act, 1983).

The study completed by Smit (2000) indicates that the South African education system, characterised by continued change and adaptation, is one



of the main sources of stress in teachers. Potgieter (1996) confirms these changes as contributing factors to increasing stress levels in teachers.

Potgieter (1996:40) indicates that negative attitudes towards the changing educational environment are the main factor correlating with increased stress experiences. One of the respondents in her study said “Rome was not built in one day... I think changing teachers, changing languages, changing exams, changing names, everything...that’s just too much change at once and I think we’re battling to keep our heads above water...”. She further determined that the teachers’ negative attitudes were the direct result of change in the education system; dissatisfaction with the change and uncertainty regarding the future.

Any sort of change is a source of stress, although certain changes are clearly more stressful than others. The more changes present in a teacher’s environment, and the faster these changes occur, the greater the stress that will be experienced. When a person’s surroundings are stable, most people learn to cope with a situation. Yet when there is rapid change, even people who are mentally the healthiest will find it difficult to avoid the impact of the ensuing stress (Cohen, 1991; Hayward, 1994).

Teachers in schools of industry have to cope with a wide range of intrinsic and extrinsic barriers to learning. They also need to keep up with the political and environmental changes in the education system, factors contributing to elevated stress levels of teachers in such schools.

## **2.2 STUDIES ON THE NATURE OF STRESS AMONG TEACHERS IN ORDINARY SCHOOLS**

There are different opinions and findings regarding the causes of levels of stress to teachers in ordinary education. For instance Kyriacou (1987) found poor learner motivation to be one of the main sources of stress to teachers, whereas, Smit (2000:96) found that “the highest levels of teacher stress were

found to be those arising from lack of rewards and recognition.” Yet Marais (1992:307) reported, “the working day never ends” as the main source of stress. Clearly different stressors in different contexts contribute to stress in the teaching profession. Table 2.1 indicates the different sources of stress relevant to school personnel (Beard 1990:111). The following discussion will outline each of these in more detail utilising relevant research.

**Table 2.1 Sources of stress relevant to school personnel (Beard, 1989:111)**

Stressor	Suggested cause
Individual	Self imposed pressures. Self doubt. The aging process.
Organizational Person/job misfit	Job demands abilities that the person does not possess. Job does not provide opportunity to utilize abilities.
Role conflict	The school's expectations contradict the person's expectations. The person/ teacher has two or more strong influences affecting him or her.
Role ambiguity	The person is unclear how to perform. The person is unclear about what is expected. Lack of clarity concerning job performance and expected consequences (rewards, penalties etc.)
Role overload	Person is incompetent. Person is asked to do more than time permits.
Fear/responsibility	Person is afraid of failure. Person feels pressure for high achievement.
Working conditions	Job environment is unpleasant. Work induces social isolation. Long and erratic work hours
Relationships	Person has problems relating to and working with superiors, peers, learners. Problems working in groups.
Alienation	Limited social interaction. Unable to participate in decision-making process.

Vance et al. (1989) examined occupational stress as measured by the Teacher Stress Inventory of 30 teachers working in a Bureau of Indian Affairs

schools. The sample consisted of twenty-two females, six males and two respondents who did not indicate their sex; nineteen were white, ten were Native Americans and one Hispanic. The findings indicated that the major source of stress for these teachers was in managing his/her job due to time demands.

Literature describes time demands and workload as one of the biggest contributors to stress (King & Peart, 1992 & Brownell, 1997). Cranwell-Ward (1990) states that role overload is pressure that occurs as a result of 'too-much-to-do-too-little-time-to-do-it'. Teachers in the high stress group were far more likely to agree that they had too much paperwork, too many deadlines to meet and too little preparation time.

The study of Wilkinson (1988) indicated that heavy workloads were widely reported and were frequently linked to the time factor. His study established that heavy workloads arose during seasonal peaks of demands when staff attempted to do more in less time. Role conflict was reported to be greatest at times of seasonal peaks of work demands.

A major aspect of workload is administrative duties. Excessive paperwork is burdensome and wasteful, because it takes time away from teaching duties *per se*, and is frustrating because it prevents teachers from pursuing the more satisfying and important aspects of their job. It reduces the role of teachers to that of clerical assistants (Mbokodi, 1995). The study conducted by Ferreira (1994) aimed to determine the factors affecting stress in teachers in schools. A structured questionnaire was utilised to achieve this aim. Administrative duties were third on the list of factors contributing to teachers' stress levels.

Role under-load is portraying a situation where too little time is available to devote to teaching. The study of Bulwalda and Kok (1991) found that 92,6% of teachers experienced either minor, reasonable or major stress as a result of the time-consuming nature of preparation, marking and teaching responsibilities.

Buwalda and Kok (1991) wanted to determine the extent of teacher stress in five main areas namely learner behaviour, administrative work, financial matters, time pressure and communication. The target group selected were the middle-level managers in all English-medium secondary schools in one of the provinces of South Africa. By far the most stressful factor was the bureaucratic paper work, followed by outdated administrative procedures and having to do administrative work in private time.

Role inadequacy is related to the gap between training and the expectations that the practical world demands. (Ferreira, 1994). Fimian and Connors (1987) compared the stress levels of 721 special education teachers who said that their previous training adequately prepared them for teaching vs. those of 992 teachers who said that they were not adequately prepared. Those who had not received adequate teacher training reported significantly stronger stress-related manifestations.

Hayward (1991) and Harden (1999) are of the opinion that role ambiguity plays a part in causing stress. He relates that the concept of role ambiguity has been defined as the lack of clear, consistent information regarding rights, duties and responsibilities. Byrne's (1994) view of role ambiguity is associated with a lack of clarity regarding a worker's obligations, rights, objectives, status, and/or accountability. Other contributing factors include increasing complexity of tasks and technology, and continued rapid organisational change.

Do teachers who receive more support experience lower stress levels than those not receiving support? Fimian (1986a, 1986b) investigated the receipt of both peer and supervisory support experienced and reported by 1,107 Vermont and Connecticut teachers. The results confirmed that the receipt of peer and supervisory support would act as a moderator of teacher stress. In another work, Courtney (1987) compared 28 teachers not receiving administrative support with 103 teachers receiving such support and found results similar to Fimian's. This factor underlines the unsatisfying

relationships and lack of recognition between teachers and superiors (King & Peart, 1992; Abel & Sewell, 1999 & Vance et al., 1989).

Buwalda and Kok (1991) found that 62,3% of the teachers played down teacher/principal communication as a stress issue while as many as 73,7% felt that teacher/teacher communications was not a stress issue of significance.

The study of Adams (1999) concludes that internal characteristics were found to be one of the most important sources of teacher's stress. In his study six internally related characteristics were studied, namely role preparedness, job satisfaction, life satisfaction, illness symptoms, locus of control and self-esteem. Teachers who have a heightened sense of efficacy, that is, confidence in their ability to teach and manage learners, may be less vulnerable to stress because they perceive themselves as having the necessary tools to do their jobs (Bandura, 1993).

Research evidence by Greenglass (1985) confirms the tangibility of causal connections between personality and stress, on the one hand, and illnesses on the other. Personality traits play a very important role in the experience of stress. Examples are the type A/B personalities. The first group are driven by achievement and acknowledgement and the secondly group are more relaxed and easygoing (Van der Linde, 1992). Type A personalities are more at risk of heart disease. Contrary to this, Coleman (1995) suggests that it is hostility rather than personality *per se* that puts people at risk.

Hart and Wearing (1995) conducted a six-year research project that aimed to identify the causes and consequences of occupational stress. One of the results was that it was found that stable personality characteristics are the strongest determinants of the employee's subjective responses to work. Therefore, stress is a highly subjective experience and "we must expect an equally high degree of subjectivity in the way individuals cope with stress or respond to stress management programmes" (Cole & Walker, 1989: 117).

An important question is that of whether teachers who prioritise their work over their personal lives are more likely to experience stress than those whose personal lives are more important. Zacherman (1984) investigated this question when he surveyed 244 New York City teachers in terms of their central life interests and stress levels. Using the Central Life Interest Questionnaire and the initial form of the Teacher Stress Inventory, Zacherman established that special education and regular teachers that prioritise their work life were more likely to report significantly larger TSI strength scores than were those primarily interested in their personal lives.

A large number of teachers believe their circumstances, such as poor physical working conditions cause them to do their jobs badly (Esteve, 1989). Mbokadi (1995) found that teachers rank a lack of physical facilities, e.g. libraries, laboratories, running water, electricity, etc. as the most important factor that causes the greatest frustration. Inadequate resources and funding can contribute to stress.

Semmer, Zape and Greif (1996) also examine the physical environment as a stimulus for the experience of stress. They compared people with the same jobs and position but different conditions, exhibiting different symptoms of strain. Cook (1992) maintains that teachers feel helpless and frustrated when working in under-resourced, badly maintained schools. The chronic problems of deprivation are emotionally draining and lead to frequent conflicts. This type of situation is closely linked to stress.

Limitations in teachers' working environments are not just physical ones. Often institutional limitations are also imposed. The study of McCormick (1992) indicates that primary school teachers were more satisfied than secondary school teachers. This probably reflects the structural and environmental differences between the two school types with primary schools being generally smaller and probably more intimate than their secondary counterparts. Further, the intrinsic nature of teaching is probably more apparent in the former than the latter, where the clientele, being adolescent,

adds increased challenge. The organisational structure and climate are important features in determining the levels of stress.

Travers and Cooper (1998) conducted a study to determine the causes of stress in UK teachers. They found that pressures from the structures and culture of the school were the major statistically significant predictors of job dissatisfaction in their sample of 1790 teachers. Structural stressors include the effects of highly interdependent departments and a high degree of departmental specialisation and formalisation, with little opportunity for individual advancement.

Clearly a vast number of stress factors affect teachers in ordinary education, from interpersonal relationships and workload factors to environmental factors. The factors that are more significant, however, seem to differ from researcher to researcher.

### **2.3 STUDIES ON THE RELATIONSHIP BETWEEN DEMOGRAPHIC CHARACTERISTICS AND LEVEL OF STRESS**

The correlation between demographic characteristics and the level of stress that is experienced by teachers will be reviewed. Characteristics such as experience, age and gender will be considered.

The transition from being a student teacher to being a novice teacher can be a traumatic encounter, and has in fact been labelled “reality shock”. New teachers enter the classrooms with high and unrealistic expectations. Once they confront the realities of teaching, panic sets in as they realise the extent of their responsibilities and the limitation of their skills (Hayward, 1994).

MacDonald’s (1992) study examines reasons for student teachers considering the teaching practicum component of the teacher education program to be a stressful experience. A group of student teachers in a Junior Primary Teacher Education Program were invited to become subjects in an in-depth study of their field experiences. Throughout the practicum experience, focus group interviews, observation reports and journals were reviewed regularly to

identify emerging conceptual categories and to identify additional questions to guide further data collection. The findings from this study are that, while learner teachers find their field placements to be a valuable experience, it was the most stressful part of the teacher's education program. The subjects identified the following factors as the main reasons they felt under constant pressure during their teaching practicum: lack of role clarification, the evaluation procedure, not knowing the expectations of the associate teacher, feeling the need to fit into existing practices and teaching styles, and lack of time to talk with the associate teacher. Maslach and Jackson (1981) conclude that stress that leads to burnout is more apparent among young employees than their older colleagues (30 - 40 years).

According to Sarros (1988) it is evident that age and experience contribute to the experience of stress in their interactive contextual significance to post position and other relevant ecological factors. Fiske (in Farber, 1991) says that teachers may be held in one position for 20 years without a promotion. School personnel with 16 or more years in their current positions recorded significantly more burnout symptoms than those with 10 or fewer years in their current positions (Sarros, 1988). Cherniss (1980) regards these symptoms as indications of the development of an identity crisis due to unsuccessful occupational socialisation. Age needs to be viewed in its interactive response to other variables such as position held.

Palm-Forster (2000) conducted a study to describe the origin of gender roles and stereotypes and the effect thereof on the performance and well being of female education managers. She determined that due to stereotyping an extreme amount of strain and pressure is encountered by the participants (women). Regarding the issue of work overload, one participant responded as follows: "I am tired and exhausted because I have two jobs, I run a family and children and I've got my job at school (education manager), whereas my husband has only got one job".

What role does gender play in the specific factors that result in stress? Van der Linde, Van der Westhuizen and Wissing (1999), Wilkinson (1988) and



Marais (1992) find a relationship between specific stressors and gender. Wilkinson (1988) examines teacher stress as related to gender. He analyses data from three sources, a stress inventory, from a field diary and from interviews. His research suggests that women (50%) might find the issue of class size more stressful than men (37%). Females rated general poor learner behaviour (noise, foul language, ill manners) and interruptions by other people or events as important.

Marais (1992) conducted a study in the Free State and Cape Province. He selected twenty-two Afrikaans and/or English speaking schools from the two provinces. He used a structured questionnaire for his research. His aim in this study was to determine what stress factors affect teachers and what differences there were between men and women. He concludes that for women the first three stress factors were: a) the school day never ends, b) the inherent motivation of learners, and c) coping with the demands of the work and home. The effect of learner behaviour is more of a concern to females than males (Wilkinson, 1988).

Van der Linde, Van der Westhuizen and Wissing (1999) undertook a study to determine burnout in female teachers due to stress. The study population were all female teachers in the North West Province in secondary schools with teaching experience. Two standardised questionnaires were applied to determine empirically to what extent female teachers were suffering from burnout. It was found that female teachers with 16-20 years experience, with Afrikaans as home language, in Afrikaans-medium urban/suburban schools, experienced a higher degree of burnout due to stress, than their colleagues in other biographic and demographic categories.

Marais (1992) reveals that for men the three most important stress factors are a) insufficient salaries, (b) the workday never ends and (c) insufficient recognition for work well done. Wilkinson (1988) finds that men experience individual workload and difficulty in achieving desired standards in lessons as second and third factor causes of stress.

Van Dick and Wagner (2001) undertook a study to test the theoretical model of teacher stress. A total of 356 female and male teachers participated. They discovered that demographic characteristics (sex and age) do not seem to be very important to stress levels experienced. The study of Fimian (1983) also determined that gender was not significantly related to stress in general. In the study of Vance et al., (1989) no differences were noted between males and females in relation to stressors.

It is evident that there are contradictions in research regarding the extent to which demographic characteristics influence the levels of stress. Cultural perceptions seem to have a negative effect on the stress levels that women experience, as does learner behaviour. Factors that men experience as stressful are insufficient salaries and lack of work recognition. The effect of experience cuts both ways. Inexperienced teachers seem to experience more stress than experienced teachers, but teachers with more experience in the same position experience more stress.

## 2.4 STUDIES ON TEACHERS' MANIFESTATIONS OF STRESS

On a general level, occupational stress has been found to result in a variety of manifestations – subjective, behavioural, cognitive, physiological and organisational responses. Research evidence of responses to stressors and manifestations of stress is presented in Table 2.2.

**Table 2.2 The responses to stressors and the manifestations of stress (Beard, 1989:111)**

Type of response	Manifestations
Subjective responses	Anxiety, depression, low self-esteem.
Behavioural responses	Accident proneness, excessive eating, drinking, smoking, impulsive behaviour.
Cognitive responses	Inability to concentrate or make decisions, frequent forgetfulness, hypersensitivity to criticism.
Physiological responses	Increased heart rate and blood pressure,

	increased blood and urine catecholamines and corticosteroids, headaches, ulcers and coronary heart disease.
Organisational responses	Absenteeism, poor productivity, high personnel turnover, poor organisational climate, job dissatisfaction, high accident rate, antagonism.

An article by Sowa (1992) presents a framework for understanding clients' perceptions of stress, called systematic rationalisation. Systematic rationalisation examines the perceptions and attributions of clients experiencing difficulty coping with stress. The systematic rationalisation process consists of three steps: a) identification of stressors, b) classification of stressors and c) review of classification. As a means of verifying the effectiveness of the systematic rationalisation framework in understanding and changing clients' perceptions of stressors, a comparative research study was conducted. A total of 48 adult clients entered a stress management program. Clients chose one of two evenings to participate in the program, thereby assigning themselves to a counselling group that used systematic rationalisation or to a counselling group that focused on general stress management techniques without using the systematic rationalisation framework. Significant differences were found between the two groups. This means, according to the systematic rationalisation, that clients may shift their classification of stressors as an effective coping response. Perception is therefore an important aspect of stress experienced. Stress seems to be a highly subjective experience. As Kyriacou (1987:28) describes it: "in one sense stress is in the eye of the beholder...we must expect an equally high degree of subjectivity in the way individuals respond to stress"

Marais (1992) conducted a study on the stress factors experienced by teachers in the Orange Free State and Cape Province. The primary objective of this study was to determine those factors within various teaching situations that create stress for teachers. The measuring instrument was a self-developed stress inventory. The results indicated that 63,7% of the teachers

experienced *subjective responses* of nervousness, anxiety and exhaustion. The study of Fimian and Santoro (1983) indicates that becoming frustrated, mentally exhausted, excessively worried, and feeling pressured, depressed, and anxious were the six strongest emotional manifestations reported.

The primary aim of the study undertaken by Saptoe (2000) was to determine the proportion of teachers in the Southern Cape that suffer from stress. He determined that emotional manifestations of teachers correlated with average stress levels, although some teachers indicated their response to stress as the experiencing of depression. King and Peart (1992) found that some teachers who were interviewed mentioned depression, chest pains and physical collapse as responses to stress. Studies have suggested that factors that exacerbate depression are conditions where life events cannot be controlled, specifically when the events have negative consequences (Keane, Ducette & Adler, 1985). Kasyoki (1997) concludes that teachers' greatest concerns were those factors over which they had no control.

According to Fimain's study the following six *behavioural responses* were noted: near-total separation of job from personal life, allowing social and professional performance to deteriorate, sleeping more than usual, dealing with learners only on an intellectual and impersonal basis and acting defensively towards colleagues and learners (Fimain & Santoro, 1983). Pierce and Molloy (1990) determine that the tendency for teachers to develop negative, cynical attitudes towards learners is the second highest factor of teachers' responses to stress. Wilkinson's (1988) study also concludes that aggression displaced onto learners and colleagues is a common behavioural response to the implied stress experiences.

Many changes in behaviour may result from stress, such as impulsive behaviour, excitability, restlessness, emotional outbursts, excessive eating or loss of appetite, drug taking, excessive drinking and smoking, absence from work and unstable employment history. The authors (Fimian, Zacherman & McHardy, 1985) find that the stronger the stressful events are perceived to be, the stronger the reported need becomes to make use of substances that

would act as stress buffers. The study of Saptoe (2000) finds that teachers do not indulge in alcohol abuse, drug abuse and prescription drugs to combat the effects of stress.

It is hypothesised that the presence of high levels of teacher stress will be related to the frequency of psychosomatic symptoms being experienced. The relationship between teachers' perceptions of stress and the physiological events has been established. Frequencies were reported for each of 16 disorders: e.g. stomach acid, cramps, and pain; racing heart; feelings of increased blood pressure; headaches; voice loss; cold sweat; physical exhaustion and weakness; nausea; rapid breathing; dizziness; fatigue; back pains; and decreased appetite (Fimian, 1986c). Buwalda and Kok (1991) established a positive link between stress and ill health. They found that more than one-third (35,7%) of the respondents suffered some form of ill health as a direct result of their duties and responsibilities as teachers.

Wilkinson (1988) determined that tension and anxiety received some support including examples of how teaching the poorly motivated learners could cause raised blood pressure and an accumulation of tension. Mbokodi (1995) concluded that 23% of teachers from schools boasting a high pass rate experience health problems and/or family conflicts as a result of their work demands. Only 17% of teachers from schools that have a low pass rate experience health problems and/or family conflicts as a result of their work. It seems that the higher the work pressures the higher the possibility of the occurrence of *physical responses*.

The third factor according to Pierce and Molloy (1990) is the *cognitive response*. The cognitive response is the tendency of negative self-evaluation, resulting in lacking feelings of personal accomplishment (Harden, 1999). Thus, teachers may develop the expectation that being a successful teacher translates into the ability to solve all learners' problems. Although this expectation is commendable, it is not always possible. Attempting perfection in each of these areas may be unrealistic. This negative self-evaluation is interpreting events and bodily sensations as much worse than the available

information merits. These types of thoughts are recognised by “must’s” and “should’s”. These thoughts should be replaced by more lenient, rational and functional thoughts (Romano, 1992).

The authors’ research (Fimian & Santoro, 1983) revealed that most days off sick were due to stress related causes, e.g. persistent virus, anxiety and depression, bowel and stomach disorders. Questionnaire responses revealed that teachers identified as being in the “high stress” group used more sick leave than those in the “low stress” group (King & Peart, 1992). The same study found that 66% of teachers had actively considered leaving the profession in the five years prior to the survey, which will have an affect on the *organisation*.

Teachers respond to stress in various ways. Indications are that perceptions of problems do affect the stress that is experienced. Responses are subjective and related to the individual’s perceptions. Stress symptoms are internalised and physical responses are evident or externalised and behavioural responses are viewed. Finally, it is clear that the responses of teachers’ stress can affect the school as a whole.

## **CHAPTER 3**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 INTRODUCTION**

While Chapter 2 concentrated on the literature study of stress and on how stress is becoming a challenging factor in schools, Chapter 3 will explain the research design and methodology, determining what factors affect the teachers of schools of industry in the Free State Province.

It seems clear from the previous literature review that teachers in special education as well as normal education do experience stress (Vance et al., 1989; Fimian, 1983). The distress seems related to adverse situations, such as dissipating energy, role conflict, the inability to comply with demands, under achievement, lacking motivation and loss of feelings of security. This adversely affects the whole functioning of the person (Hayward, 1991; Rigby, Bennett & Boshoff, 1996 & Sarros, 1988). It seems important, therefore, to determine what stress factors impact on teachers in schools of industry.

#### **3.2 THE RESEARCH DESIGN**

The research design illustrates the course of the research project. No experimental intervention was present in this research and neither were the persons used in the sample randomly chosen. The research project is a criteria group design (Huysamen, 1983). The type of research that will be used is the *ex post facto* research. The purpose of the study is to provide the researcher with information with regard to the stress levels of teachers in schools of industry. The study is nomothetic (concern group) in nature.

The identified dependent variables are the five stress factors and five stress manifestations. The independent variables are the type of school, gender,

age and years experience. The descriptive study aims at providing accurate quantitative information about stress levels of teachers (five stress factors and five stress manifestations) and their association with the independent variables.

### 3.3 SAMPLING DESIGN

A total of 40 (37,7%) teachers from the two schools of industry and 66 teachers from the two mainstream schools completed the questionnaire. A total of 106 teachers participated in this study. All the teachers who were on the staff of the selected schools were handed a questionnaire to complete. Not all teachers completed the questionnaire. Saptoe's (2000) approach in research design and sampling design were conducted in similar vein.

Information about the distribution of the 106 teachers with regard to the demographic variables was gained with the assistance of the SAS computer programme (SAS Institute, 1985) and is indicated in Table 3.1 for the two types of schools (schools of industry and mainstream schools).

**Table 3.1 Frequency distribution of the research groups in the two types of schools according to relevant demographic variables.**

<b>Demographic variables</b>	<b>Schools of industry</b>		<b>Schools of mainstream education</b>		<b>Total</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
<b>Gender:</b>						
Male	14	35,0	19	28,8	33	31,1
Female	26	65,	47	71,2	73	68,9
<b>Age:</b>						
20 – 30	5	12,5	18	27,3	23	21,7
31 – 40	9	22,5	21	31,8	30	28,3
41 – 50	17	42,5	17	25,8	34	32,1
51 – 60	9	22,5	8	12,1	17	16,0
61 and older	-	-	2	3,0	2	1,9



<b>Teacher experience:</b>						
1 - 10 years	10	25,0	33	50,0	43	40,6
11 - 20 years	14	35,0	17	25,8	31	29,2
21 - 30 years	13	32,5	13	19,7	26	24,5
31 years or more	3	7,5	3	4,5	6	5,7

Table 3.1 shows that more females (68,9%) took part in this study than males and that 60,4% of the group fell between age range 31-50 years. It shows that most of the teachers (40,6%) had between 1-10 years experience.

For some of the categories of demographic variables there were too few participants to classify a separate category (for example in the age group 61 years and older there are only two participants). For this reason, the researchers decided to combine the adjacent groups of age and years experience. For age, two categories, namely 20 – 40 years and 41 years and older were collapsed into one group. In each group there are 53 participants. For the number of years experience, two categories, 1-10 years and 10 and more years were grouped together. In the first category there are 43 participants and in the second 63 participants.

### **3.4 RESEARCH INSTRUMENT**

For this research project the Fimian Teacher Stress Inventory (FTSI) was used to gain the relevant information for determining teachers' stress-related factors. The questionnaire evaluates the stress factors and stress manifestations of teachers within the context of the school and work situation (Fimian, 1984). Data with regard to dependent variables, stress factors, manifestations and personal stress levels, were collected through the use of Fimian's Teachers Stress Inventory. The demographic information was collected by means of Section A of the questionnaire.

Questionnaires were supplied to teachers in the schools of industry, Jimmie Roos School for boys and Rosenhof School for girls. Brebner and Navalsig High Schools received questionnaires as representatives of mainstream

schools. Questionnaires were made available to all teachers on the staff at the schools, although not all teachers completed them. Written permission was given to use the questionnaire and permission from the Free State Education Department was gained to conduct the study.

The Fimian Teacher Stress Inventory consists of 49 stress-related questions focusing on the stress levels of teachers in the school situation. The questionnaire has three sections: 1) demographic variables (Section A), 2) number of teachers' concerns (Section B), and 3) personal stress (Section C).

According to Saptoe (2000:52) the following sub-headings for teacher stress and stress manifestations may be identified: Time Management (8 items), Work-Related Stressors (6 items), Professional Distress (5 items), Discipline and Motivation (6 items), Professional Investment (4 items), Emotional Manifestations (5 items), Fatigue Manifestations (5 items), Cardiovascular Manifestations (3 items), Gastronomic Manifestations (3 items) and Behavioural Manifestations (4 items). The first five subheadings relate to stress factors, while the last five sub-headings relate to stress manifestations. Saptoe (2000), Fimian (1983), Courtney (1987) and Zacherman (1984) use the same questionnaire in their research studies.

#### **3.4.1 The aims in relation to the nature of the research instrument.**

Sections B and C of Fimian's Teachers Concern Inventory will be utilised to measure the *first aim*: the nature of stress experienced by teachers in schools of industry, as well as the *second aim*: to discover whether there is any difference between stress factors and manifestations experienced by teachers in school of industry and those in ordinary education. The first five subheadings (teachers' stressors) and last five subheadings (manifestations) of Fimian's Teachers Concern questionnaire relate to these two aims.

The *third aim*, to determine whether are there any demographic characteristics such as teachers' gender, age or experience that are

associated with stress and its manifestations, will be measured by cross-tabulating data for the first aim with respondents particulars.

### **3.4.2 Reliability and validity of the questionnaire**

Numerous special education teacher populations and regular education population groups have been empirically studied with the Teacher Stress Inventory (Fimian, 1984). Data from a number of workshops, research projects, and dissertations have been collected to form an aggregated sample of 3,401 regular ( $n=2,352$ ) and special education ( $n= 962$ ) teachers. Subscale reliability estimates for the special education teachers ranged from a low of .67 (Professional Investment) to a high of .86 (Gastronomic Manifestations). The subscale reliability estimates for the regular education teachers ranged from lows of .70 (both Professional Investment and Fatigue Manifestations) to a high of .87 (Time Management). More detailed information regarding these samples can be found in Fimian (1983), Courtney (1987), Honaker (1987) and Zacherman (1984). Reliabilities for the Teacher Stress Inventory range from .89 to .95 for teachers (Fimian, 1986). A scale mean of 3.1 indicates the pool of stress items as being quite relevant to teachers stress. In the study of Vance et al. (1989) the data suggests that the Teacher Stress Inventory appears to be a psychometrically reliable and valid measure of teacher stress.

The questionnaire supplies information with regard to five stressors and five manifestations of stress. This was done calculating Cronbach  $-\alpha$  coefficient with the aid of the Statistical Package for Social Scientists computer programme. (SPSS Incorporated, 1983). The coefficients are indicated in Table 3.2.

**Table 3.2: Cronbach's  $\alpha$ -Coefficients for the subscales of the FTSl**

<b>Construct</b>	<b>Items</b>	<b><math>\alpha</math>-coefficients</b>
Time management	1, 2, 3, 4, 5, 6, 7 and 8	0,66
Work-related stressors	9, 10, 11, 12, 13 and 14	0,68
Professional distress	15, 16, 17, 18 and 19	0,76
Discipline and motivation	20, 21, 22, 23, 24 and 25	0,84
Professional investment	26, 27, 28 and 29	0,69
Emotional manifestations	30, 31, 32, 33 and 34	0,88
Fatigue manifestations	35, 36, 37, 38 and 39	0,81
Cardiovascular manifestations	40, 41 and 42	0,85
Gastronomic manifestations	43, 44 and 45	0,83
Behavioural manifestations	46, 47, 48 and 49	0,65

The calculated coefficients in Table 3.2 indicate that the subscales of the FTSl show acceptable to high internal consistency measurements.

### 3.4.3 Scoring procedures

Responses are recorded on a five-point Likert scale. Participants respond to each question by ticking off the appropriate numerical value corresponding to the contents of each question. Each subscale is scored, one at a time. For example, the eight responses associated with Time Management, the first subscale on the TSl, are summed together. Then, this sum is divided by the number of items in the subscale. This is the teacher's mean score.

The minimum and maximum scores that can be achieved on this questionnaire are 49 and 245 respectively.

**Table 3.3: Five-point Likert scale (Saptoe: 2000:52)**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

### **3.5 HYPOTHESES**

1. Teachers in schools of industry experience statistically significant high levels of stress.
2. There is a statistically significant difference existing in the average stress factors and manifestations for the teachers in mainstream education and schools of industry.
3. There are statistically significant differences existing in the average stress factors and manifestations for the different genders, age groups and years of service groups.

### **3.6 CONCLUSION**

This chapter leads the empirical section of the research project. This was achieved by focusing on the research design, sampling design and research instrument. In the next chapter the results and a discussion of the results will be provided.

## CHAPTER 4

### RESULTS AND DISCUSSIONS OF THE RESULTS

#### 4.1 INTRODUCTION

This chapter is concerned with data analysis. The statistical procedures and descriptive statistical (means and standard deviations) of the relevant dependable variables for the research group as a whole, will be indicated and briefly discussed.

#### 4.2 STATISTICAL PROCEDURE

From the above, it is clear that teachers will be compared according to four biographical variables regarding the measure of stress that they experience for different factors and the manifestations thereof. All of the relevant biographical variables consist of two categories. In the case where there are only two categories for an independent variable and these two groups are compared with regard to various dependent variables (factors and manifestations),  $H_0$  scores test for independent groups (Tabachnick & Fidell, 1989) can be used. With regard to the variables for which statistically significant  $T^2$  values are obtained, the differences will be followed up with the aid of the *post hoc t* tests.

It was decided to work according to the 1% or 5% level of significance. However, in order to judge the practical importance of statistically significant results that may be found by the investigation, the practical significance of the results will also have to be considered. As a measure of practical significance the effect sizes will have to be calculated. In the determination of the practical significance of the  $H_0$  scores  $T^2$  value, the average vectors will be compared and the effect size ( $f$ ) will be calculated as follows (Steyn, 1999):

$$f = T/\sqrt{N}$$

In order to interpret these effect sizes the following guidelines can be used:

- $f = 0,1$  : small effect
- $f = 0,25$  : medium effect
- $f = 0,4$  : large effect

If a significant  $T^2$  value with great practical significance is found, the analyses will be followed up with *post hoc t* tests, as previously indicated.

As two independent groups are being used, the *t* test for independent groups will be used. In order to determine the effect sizes in the case, Steyn (1999) advises the use of the standardised difference. This is determined by dividing the difference between the two averages (or average from a given value) by the pooled standard deviation. The formula is as follows:

$$d = M_1 - M_2 / S_{maks}$$

Where  $d$  = the standardised difference and

$S_{maks}$  = the maximum of the standard deviations of the two groups.

The guidelines which can be used here are, according to Steyn (1999), as follows:

- $|d| = 0,2$  : small effect (results not significant)
- $|d| = 0,5$  : medium effect (possibly indicating significant results)
- $|d| = 0,8$  : large effect (result is significant and of practical importance)

(The absolute value of  $d$  is given because negative values can be obtained when  $\mu_1 < \mu_2$ .)

In this study only the results indicating a medium or large effect will be considered. A discussion of the results of the study now follows.

### 4.3 DESCRIPTIVE STATISTICS

The descriptive statistics (averages and standard deviations) with regard to the dependent variables for the total research groups are shown in Table 4.1.

**Table 4.1: Means and standard deviations for the total research group.**

Variables	N	X	s	Minimum	Maximum
<b>Stressors:</b>					
Time management	106	31,21	4,50	8	40
Work-related	106	23,07	3,70	6	30
Professional distress	106	18,98	4,08	5	25
Discipline and Motivation	106	23,78	4,61	6	30
Professional investment	106	12,29	3,34	4	20
<b>Manifestations:</b>					
Emotional	106	15,90	5,00	5	25
Fatigue	106	14,75	4,33	5	25
Cardiovascular	106	8,14	3,30	3	15
Gastronomic	106	7,66	3,35	3	15
Behavioural	106	7,31	3,08	4	20

The mean scores of the norm group of 3,401 (Fimian, 1983; Courtney, 1987; Honaker, 1987; Zacherman, 1984) will be compared with the current study to determine whether the respondent is experiencing significantly stronger or weaker stress or manifestations of stress than the "typical" teacher.

On the FTIS a mean score of 31,33 (3.9) was found for time management. The scale ambits stretch from 8 to 40, where a high score is an indication of high stress. For the norm group a mean score of 3.2 was found. Indications are that the current research group experience higher levels of stress due to time management problems. Teachers in this group easily over-commit themselves, become impatient if others do things too slowly, try to do more than one thing at a time, have little time to relax, think about unrelated matters during conversations and rush in their speech.



A mean score of 23,07 (3.8) was found for work-related stress. The scale ambits stretch from 6 to 30, where a high score is an indication of high stress. The norm group scored 3.1 for work-related stress. It seems that the current sample group experience high stress due to work-related issues. They experience too little time to prepare for lessons, have too much work to do, they experience the school day as too fast, their classes as too big and feel that there is too much administrative paperwork to be done.

On the scale for professional distress, a mean score of 18.98 (3.7) was found. The scale ambits stretch from 5 to 25, where a high score is an indication of high stress levels. In relation to the norm group (a mean score of 3.1) the current group experiences professional stress such as lack of opportunities, not progressing in their jobs, lack of status and respect, inadequate salaries and lack of recognition for the extra work or good teaching.

The scale discipline and motivation achieved a mean score of 23.78 (3.3). The scale ambits stretch from 6 to 30, where a high score is an indication of high stress. The norm group mean for the subscale was 2.9. Indications are that the current group experience high stress due to discipline and motivation problems. The teachers in this study group feel frustrated because of discipline problems, having to monitor learner behaviour, having students who would do better if they tried, attempting to teach learners who are poorly motivated, inadequately defined discipline problems and when authority is rejected by learners.

A mean score of 12.29 (3.0) for professional investment was found. The scale ambits stretch from 4 to 20, where a high score is an indication of high stress. The norm group for the subscale was 2.7. It is therefore evident that the current group experience higher stress due to professional investment. They feel that their opinions are not sufficiently aired, they have lack of control over decisions made about classroom matters, that they are not emotionally/intellectually stimulated on the job and they feel there is a lack of opportunities for professional improvement.

The studies of Buwalda and Kok (1991), Saptoe (2000) and Marais (1992) all indicate that teaching can be a stressful occupation. Results from this study indicate that teachers from the schools of industry and mainstream schools in the Free State Province experience high levels of stress.

The manifestation of stress will be compared with the norm group's results.

A mean score of 15.90 (3.8) was found for emotional manifestations. The scale ambits stretch from 5 to 25, where the high score indicates high stress levels. The mean score of the norm group was 2.6. It is clear that the current group experiences higher levels of insecurity, vulnerability, depression and anxiety.

A mean score of 14.75 (2.95) was recorded for fatigue manifestations. The scale ambits stretch from 5 to 25, where the high score shows high levels of stress. The mean score for the norm group was 2.5. The current group experiences higher levels of fatigue due to disturbed sleeping patterns, procrastinating, physical exhaustion and physical weakness.

The scale cardiovascular achieved a mean score of 8.14 (2.7). The scale ambits stretch from 3 to 15, where a high score is an indication of high stress. The norm group mean for the subscale was 1.9. Indications are that the current group experiences higher levels of cardiovascular manifestations for example increased blood pressure, heart pounding and shallow breathing.

For the scale gastronomic manifestations, a mean score of 7.66 (2.5) was found. The scale ambits stretch from 3 to 15, where a high score is an indication of high stress levels. In relation to the norm group mean score (1.8) the current group experiences higher levels of gastronomic manifestations. The teachers in this group respond to stress by stomach pain, stomach cramps and stomach acid.

These results confirm the positive link between stress and ill health. Buwalda and Kok (1991) found that more than one-third (35,7%) of their respondents

suffered some form of ill health as a direct result of their duties and responsibilities as teachers.

A mean score of 7.31 (1.8) for behaviour manifestations was recorded. The scale ambits stretch from 4 to 20, where a high score is an indication of high stress. The norm group for the subscale was 1.5. It is therefore evident that the current group respond to stress by using over-the-counter drugs, prescription drugs and alcohol. Fimain & Santoro (1983) and Wilkinson (1988) also determined that behaviour manifestations were evident when teachers experienced too much stress.

Results from this study indicate that teachers from the schools of industry and mainstream schools in the Free State Province respond to stress by emotional, fatigue, cardiovascular, gastronomic and behavioural manifestations.

The nature of stress and manifestations that teachers in schools of industry experience will be discussed in the next section.

## **4.4 HYPOTHESES**

### **4.4.1 Personnel stress: Schools of Industries**

Investigations were conducted into the levels of personal stress of teachers in school of industry. This was done by calculating the frequencies of responses of these teachers to the three items (see Section C), and the results are indicated in Table 4.2 (row percentages are indicated in brackets).

**Table 4.2: Frequency and row percentages indicating the measures of personal stress of teachers in schools of industry (N=40)**

<b>Personal stress</b>	<b>Not at all</b>	<b>Some degree</b>	<b>Average</b>	<b>Above average</b>	<b>Intense</b>
Item 1: Is stress a problem to you?	2 (5,0)	8 (20,0)	15 (37,5)	10 (25,0)	5 (12,5)
Item 2: Intensity of stress experienced:	1 (2,5)	9 (22,5)	11 (27,5)	13 (32,5)	6 (15,0)
Item 3: Factors causing stress:					
Teacher problems	3 (7,9)	5 (13,2)	8 (21,1)	16 (42,1)	6 (15,8)
Marriage problems	24 (64,9)	5 (13,5)	4 (10,8)	4 (10,8)	0 (0,0)
Trouble with neighbours	27 (73,0)	3 (8,1)	5 (13,5)	1 (2,7)	1 (2,7)
Family matters	11 (28,9)	12 (31,6)	10 (26,3)	4 (10,5)	1 (2,6)

Clarification of hypothesis 1:

$H_0$ : Teachers in schools of industry experience low levels of stress.

$H_1$ : Teachers in schools of industry experience high levels of stress

According to the results in Table 4.2, 15 of the 40 teachers (37,5%) indicated that they experienced stress on above average level, while approximately half of the teachers (19 of the 40) indicated that the intensity of stress experienced, was above average and higher.

Fimian (1983) and Fimian & Santoro (1983) agree that many special education teachers exhibited frequent and strong manifestations of job-related stress. Their study indicated that 87,1% reported their jobs as being moderately to very stressful, with almost forty-six percent (45,6%) reporting much to very much stress.

According to the third stress-causing factor it was clear that in relation to the other three factors, it was *teacher problems*, which was the main cause of stress. Twenty-two of the 40 teachers (57,9%) indicated that this factor contributed to an above average to high level of stress. The teachers in the study of Saptoe (2000) admit that outside influences like marriage problems and family matters can contribute to stress, but that teacher stress overshadows the other external factors.

The deduction can therefore be made that teachers in schools of industry experience statistically significant high levels of stress

#### **4.4.2 Type of school**

With the assistance of the research hypotheses 2 and 3, research evidence will now indicate whether there are significant statistically relevant differences in the average stress factors or stress manifestations for teachers in mainstream education and schools of industry, and whether there are differences for the different gender, age and years experience groups. As indicated all the independent variables consist only of two categories and are therefore compared with the  $H_0$  score  $T^2$  test. The analysis was done with the assistance of the BMDP P3D programme (Dixon, 1985) and the results for the different independent variables are indicated in Tables 4.3 to 4.6.

The postulation of null hypotheses 2:

$H_0$ : Teachers in different types of schools do not differ in the average stress factors and manifestations .

$H_1$ : Teachers in different types of schools do differ in the average stress factors and manifestations.

An analysis for the teachers in the different types of schools (industry and mainstream) was done and the results are indicated in Table 4.3.

**Table 4.3: Means and standard deviations for the teachers in the different schools**

	Industries schools		Ordinary schools	
Variables	X	S	X	S
<b>Stressors:</b>				
Time management	31,33	3,72	31,15	4,93
Work-related	22,15	3,50	23,62	3,73
Professional distress	18,48	3,49	19,29	4,40
Discipline and Motivation	22,80	4,65	24,37	4,52
Professional investment	11,43	2,78	12,82	3,56
<b>Manifestations:</b>				
Emotional	16,25	4,07	15,68	5,50
Fatigue	15,33	3,60	14,39	4,71
Cardiovascular	8,70	2,98	7,80	3,46
Gastronomic	7,60	3,36	7,70	3,36
Behavioural	7,43	2,91	7,24	3,19

The calculated  $T^2$  value for the information in table 4.3 is 17,92, which approaches an F value of 1,473 for 11 and 94 degrees of freedom. These values are not significant on the 1% level ( $p = 0,1550$ ) so that the null hypotheses must be maintained. The deduction can therefore be made that there are no significant differences in the average stress factors or manifestations for teachers in the different types of schools.

### 4.4.3 Gender

The postulation of null hypotheses 3:

$H_0$ : Gender groups do not differ in the average stress factors and manifestations.

$H_1$ : Gender groups differ in the average stress factors and manifestations.

The analyses for teachers in the different gender groups were done and the results are indicated in Table 4.4.

**Table 4.4: Means and standard deviations for teachers in the different gender groups**

	<b>Male</b>		<b>Female</b>	
<b>Variables</b>	<b>X</b>	<b>S</b>	<b>X</b>	<b>S</b>
<b>Stressors:</b>				
Time management	30,76	4,21	31,42	4,63
Work-related	22,61	3,61	23,27	3,74
Professional distress	18,73	4,32	19,09	3,99
Discipline and motivation	23,88	3,56	23,74	5,03
Professional investment	12,12	3,30	12,37	3,38
<b>Manifestations:</b>				
Emotional	15,12	4,76	16,25	5,09
Fatigue	13,70	4,32	15,22	4,28
Cardiovascular	8,06	3,18	8,18	3,38
Gastronomic	7,36	2,86	7,79	3,56
Behavioural	7,27	3,09	7,33	3,10

The calculated  $T^2$  value for the information in table 4.4 is 6,242 which approaches an F value of 0,513 for 11 and 94 degrees of freedom. These values are not significant on the 1% level ( $p = 0,8903$ ) so that the null hypotheses must be maintained. The deduction can therefore be made that there are no significant differences in the average stress factors or manifestations for teachers from different gender groups.

#### 4.4.4 Age

The postulation of the null hypotheses 3:

$H_0$ : Age groups do not differ in the average stress factors and manifestations.

$H_1$ : Age groups differ in the average stress factors and manifestations.

The analyses for teachers in the different age groups were done and the results are indicated in Table 4.5.

**Table 4.5: Means and standard deviations for teachers in the different age groups**

	20 – 40 years		41 years and older	
Variables	X	S	X	s
<b>Stressors:</b>				
Time management	31,21	4,55	31,23	4,48
Work-related	23,51	3,81	22,62	3,56
Professional distress	19,77	4,17	18,19	3,87
Discipline and Motivation	24,62	4,64	22,94	4,63
Professional investment	12,40	3,64	12,19	3,04
<b>Manifestations:</b>				
Emotional	16,26	4,62	15,53	5,37
Fatigue	14,92	4,09	14,57	4,58
Cardiovascular	7,60	3,34	8,68	3,21
Gastronomic	7,64	3,39	7,68	3,34
Behavioural	7,57	3,14	7,06	3,03

The calculated  $T^2$  value for the information in Table 4.5 is 18,721, which approaches an F value of 1,538 for 11 and 94 degrees of freedom. These values are not significant on the 1% level ( $p = 0,1308$ ) so that the null hypotheses must be maintained. The deduction can therefore be made that there are no significant differences in the average stress factors or manifestations for teachers in the different age groups. Previous studies indicate that the teacher's age only bears a limited relationship to the teacher's stress levels (Fimian, 1983)



4.4.5 Years Experience

The postulation of the null hypotheses 3:

H<sub>0</sub>: Years experience groups do not differ in the average stress factors and manifestations.

H<sub>1</sub>: Years experience groups differ in the average stress factors and manifestations.

The analyses for teachers in the different years experience groups (1-10 years and 11 and longer) was done and the results are indicated in Table 4.6.

**Table 4.6: Means and standard deviations for teachers in the different years experience groups.**

	1 – 10 Years		11 Years and longer	
Variables	X	S	X	S
Stressors:				
Time management	31,00	4,31	31,37	4,65
Work-related	23,58	3,70	22,71	3,69
Professional distress	19,53	4,17	18,60	4,01
Discipline and Motivation	24,44	4,32	23,33	4,78
Professional investment	12,70	3,40	12,02	3,29
Manifestations:				
Emotional	16,58	4,59	15,43	5,24
Fatigue	15,42	4,19	14,29	4,40
Cardiovascular	7,72	3,37	8,43	3,26
Gastronomic	7,79	3,25	7,57	3,43
Behavioural	7,98	3,47	6,86	2,72

The calculated T<sup>2</sup> value for the information in Table 4.6 is 18,881, which approaches an F value of 1,551 for 11 and 94 degrees of freedom. These values are not significant on the 1% level ( $p = 0,1308$ ) so that the null hypotheses must be maintained. The deduction can therefore be made that

there are no significant differences in the average stress factors or manifestations for teachers in the different years of experience categories.

As a result of the statistically insignificant results that were found with the  $H_0$  score  $T^2$  test for all four independent variables (see Tables 4.3 to 4.6), no further analyses were done regarding the multiple comparisons by means of the separate  $t$ -tests.

## **4.5 CONCLUSION**

Results in the current study indicate that teachers from ordinary education and schools of industry both experience high levels of stress and show high levels of stress manifestations. There seems to be no significant difference in the stress factors and manifestations experienced by teachers in ordinary education and schools of industries (cf. aim 1.3.2).

This study determined that demographic variables such as the teacher's gender, age and experience (cf. aim 1.3.3) are not associated with the levels of stress and stress manifestations.

It seems that teachers from schools of industry experience high levels of stress and stress manifestations (cf. aim 1.3.1).

Chapter 5 concludes the report and relevant recommendations will be made.

## **CHAPTER 5**

### **FINDINGS AND RECOMMENDATIONS**

#### **5.1 INTRODUCTION**

The research findings will be discussed briefly together with previous theories. Indications will be made where the present study support or refute existing theory. Limitations will then be viewed and recommendations will be made with regard to the findings.

#### **5.2 SUMMERY OF THE STUDY**

A total of 40 (37,7%) teachers came from the two schools of industry and 66 from the two mainstream schools. Analysis of the variance revealed that teachers from schools of industries experience high levels of stress. Fifteen of the 40 teachers (37,5%) indicated that they experienced stress above average level, while approximately half of the teachers (19 of the 40) indicated that the intensity of stress experienced, was higher than average. The study showed that teachers experience high levels of stress manifestations with regard to emotional, fatigue, cardiovascular, gastronomic and behavioural manifestations. The results of this study indicated that stress levels and stress manifestation amongst teachers in schools of industry and mainstream schools are high and that demographic variables do not play a significant role in the stress levels of teachers.

### **5.3 FINDINGS WITH REGARD TO THE NATURE OF STRESS EXPERIENCED BY TEACHERS IN SCHOOLS OF INDUSTRY.**

Findings of this study indicate that teachers in schools of industry experience high levels of stress with regard to time management, work-related stressors, professional distress, discipline, motivation and professional investment.

Fimian (1983) and Miller, Humphreys and Reynolds (1989) found special education to be stressful. Previous studies (Fimian, 1983) concluded that special education teachers exhibited frequent and strong manifestations of job-related stress and that as many as 30,000 special education teachers leave the classroom annually (Vance, Miller, Humphreys & Reynolds, 1989). The present study found that 37,5% of the teachers in schools of industry experience stress on above average level, while approximately half of the teachers indicated that the intensity of stress experienced was above average and higher. The results of this study therefore support previous studies (Fimian, 1983; Vance et al., 1989).

### **5.4 FINDINGS WITH REGARD TO DIFFERENT STRESS FACTORS EXPERIENCED BY TEACHERS IN ORDINARY EDUCATION AND SCHOOL OF INDUSTRY.**

This study shows that there is no difference in the average stress factors for teachers in mainstream education and those in schools of industry.

Kasyoki (1997) concluded that there are differences between special school and ordinary school teachers with regard to average stress factors. He determined that excessive paperwork is the greatest cause of stress for special education teachers and work overload for ordinary education. The results of this study therefore differ from the results of previous studies (Kasyoki, 1997; Fimian, 1983; Vance et al., 1989).

## **5.5 FINDINGS WITH REGARD TO WHETHER DEMOGRAPHIC VARIABLES SUCH AS TEACHER'S GENDER, AGE AND EXPERIENCE ARE ASSOCIATED WITH THE LEVELS OF STRESS.**

The findings of this study have determined that there is no difference in the average stress factors for the different gender groups.

Wilkinson (1988) and Marais (1994) suggested that there are significant differences in the average stress factors for the different gender groups. They felt that learner behaviour was more of a concern to females than males. Research conducted in the current study differ from the results of both Wilkinson and Marais.

Findings of the present study show that there is no difference in the average stress factors for the different age groups. The findings also show that there is no difference in the average stress factors for the different years experience groups.

MacDonald (1992) and Maslash and Jackson (1981) concluded that stress does play a role with regard to the different age groups and experience groups. Other researchers (Sarros, 1988; Farber, 1991) concluded that age and experience should be viewed in their interactive contextual significance. The research results of this present study refute the results of these previous studies in this context.

## **5.6 LIMITATIONS OF STUDY**

This study was only conducted in schools of industry in the Free State Province which limited the sample size.

Although questionnaires were used to obtain answers from teachers, personal interviews could also have been included.

## **5.7 AVENUES FOR FURTHER STUDY**

A comparative study could be done between boys' and girls' schools of industry to compare stress levels of the teachers working in these types of schools.

Teachers across the spectrum, including primary schools of industry, should be included in future research studies.

A repetition of this study could be done in all the schools of industry in South Africa. This will increase the sample size and enhance generalisations.

## **5.8 IMPLICATIONS OF FINDINGS AND RECOMMENDATIONS**

Findings of this study indicate that schools of industry and ordinary education teachers experience high levels of stress. It is therefore important that remedies should address both types of institutions.

Since schools of industry are established to offer services to learners that experience behavioural and emotional barriers to learning, the findings in this study indicate that teachers in both types of schools experience stress due to this factor. The researcher will therefore focus on remedies to cope with challenging behaviour in order to reduce the stress levels of teachers. Research findings conclude that learner misbehaviour contributes to the

stress levels of teachers (Wilkinson, 1988; Cohen, 1991; McCormick, 1992; Abel & Sewell, 1999).

Lacey and Porter (1998) show in a study that 74% of the teachers responded that they had less than 10 hours training in the management of learners that were behaviourally challenging. Teachers on the whole are more likely to have had less rather than more training. Pre-service and in-services teachers education training programmes should be strengthened to inform teachers about the roles they will be expected to fulfil and to equip them with the necessary skills to perform effectively in those roles (Cohen, 1991).

Lally (in Lacey & Porter, 1998) writes of the importance of management support for staff working with people who have challenging behaviour. She suggests the following specifically relating to challenging behaviour: knowledge of a wide range of possible causes; relevant short- and long-term interventions tied to detailed knowledge of individuals; sophisticated behavioural techniques; psychological therapies based on cognitive and emotional change; diffusing agitation and coping with physical assault; staff stress management and support techniques. It is therefore critical that teachers who work with extreme behaviour challenging learners should be able to show empathy for learners and their problems without allowing those problems to consume them.

Teachers in ordinary education should also be aware that the Free State Department of Education's policy on learners at risk aims at providing prevention, early intervention and residential care for learners who experience emotional and behavioural barriers to learning. This policy creates support systems in the school so that teachers have both referral networks and access to assistance when they discover learners with unmet needs and when they themselves require assistance to address the problems of very needy children.

Specific recommendations with regard to schools of industry are special communication systems, so that teachers can call for help when it is needed,

and additional staff should immediately be available. Registered Child and Youth Care personnel should be appointed in all schools of industry, to do developmental work in the hostels and to assist the teacher in the classroom. Special education teachers should be taught to identify the individual needs of learners and to develop individualised programs for these learners (Greer & Greer, 1992). Non-governmental organisations, for example NICRO, NACCW and other relevant organisations can make valuable contributions to the welfare of the learners in schools of industry. These community interventions could reduce the workload of teachers. Guetzloe (1992) states that in coping with behaviourally difficult students we require the cooperation and collaboration of many institutions – the family, peers, community, every level of government, and society-at-large.

Findings of the present study indicate that teachers experience high levels of stress manifestations. Teachers who become closely involved and preoccupied with the personal and family problems of their learners may increase their vulnerability to burnout and depression (Brownell, 1997). Therefore support groups could be established at schools to assist teachers struggling with depression. Teachers should also be trained in stress reduction programmes.

The result of a study conducted by Rowe (2000) concludes that psychologists can be much more effective behavioural change agents through long-term approaches that emphasise teaching new skills. The results demonstrate that when participants were taught strategies to cope more effectively with stress they initially experienced less burnout. He also concludes that proactive strategies help participants to cope effectively with stress. (Rowe, 2000; Reglin & Reitzammer, 1998).

Four of the stress reduction programmes are the total quality management programme, systematic rationalisation, predicament-problem continuum and the coping skills intervention. A new management paradigm, named *Total Quality Management (TQM)*, has recently been coming to the fore in schools. This management approach can help reduce the teacher's stress and thus



eventually contribute to more effective education (Van der Linde, 2000). Teacher could also be trained in the *systematic rationalisation* and *predicament-problem continuum*. It examines the teacher's perceptions of their coping capabilities. The systematic rationalisation process consists of three steps:

1. identification of stressors;
2. classification of stressors; and
3. review of classification (Sowa, 1992).

The predicament-problem continuum is a strategy useful in stress and time management that focuses on problems that we have no control over. It alters the perception of problems. It has a 13-step process, from identification to utilisation community resources (Fetsch, 1992).

The *Coping Skills Intervention* aims to facilitate the development and acquisition of coping skills and effective responses, which can be used by teachers to deal with actual stressors. The intervention incorporates six components, each using different cognitive and behavioural techniques. These include an education phase, cognitive restructuring, assertiveness training, progressive relaxation training, autogenic training and physical exercise (Rigby, Bennett & Boshoff, 1996).

A yearlong study ran stress reduction programmes for teachers at a local school. The teachers rated their personal stress levels before and after the study and reported significantly lower levels at the end of the year than teachers at nearby schools who had not participated in the program (Wilson, 2000).

A major component of stress management involves the maintenance of a healthy lifestyle. Trying to meet the demands of work, the needs of a partner or family and finding time for oneself is a juggling act. The relationship between living a healthy lifestyle and managing stress should be identified and teachers could be trained in this balancing act (Underwood, 1992; Romano, 1992; Braham, 1992). Progressive relaxation and physical activity

are two methods that teachers could be trained in to acquire this balancing act (Bowman,1992).

Finally job security, financial compensation and status of teachers should be improved and there should be an approach to elevate public opinion regarding the value and expertise of teachers' roles in the lives of children.

## **5.9 RECOMMENDATIONS**

A summary of the important recommendations:

- (i) A comparative study can be done between boys' and girls' schools of industry.
- (ii) Teachers across the spectrum, primary schools of industry, should be included in future research studies.
- (iii) A study could be done in all the schools of industry in South Africa.
- (iv) Teachers can be trained in the management of learners that are behaviourally challenge.
- (v) Teachers should be made aware that the Free State Department of Education's policy on learners at risk aims at providing prevention, early intervention and residential care for learners who experience emotional and behavioural barriers to learning.
- (vi) Registered Child and Youth Care personnel should be appointed in all schools of industry.
- (vii) Non-governmental organisations can make valuable contributions to the welfare of the learners in schools of industry.
- (viii) Support groups can be established at schools to assist teachers struggling with depression.
- (ix) Teachers can be trained in stress reduction programmes

## **5.10 CONCLUSION**

Clearly teachers in the Free State Province in schools of industry and mainstream schools are experiencing high levels of stress. The Department of Education should be sensitised towards the needs of teachers and should address the problem of teachers' stress in both of these type of institutions in order to prevent teachers leaving the classrooms, manifesting with symptoms of stress manifestations and reduced service delivery to learners.

## REFERENCES

- Abel, H. & Sewell, J. (1999). Stress and burnout in rural and urban secondary school teachers. *Journal of Educational Research*, 92(5): 287-293.
- Adams, E. (1999). Vocational teacher stress and internal characteristics. *Journal of Vocational and Technical Education*, 16(1): 13.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, 28: 117-148.
- Beard, P.N.G. (1990). Strategies for teachers in identifying and overcoming stress. *South African Journal of Education*, 10(2): 109-115.
- Braham, B. (1992). 10 strategies to beat stress. *Women in Business*, 44(4): 9.
- Bowman, D. (1992). Reducing depressive symptoms through stress management: A comparison of five brief treatments. *Wellness Perspectives*, 9(1): 11.
- Buwalda, R.A. & Kok, J.C. (1991). Stress factors amongst middle-level managers in schools. *Suid Afrikaanse Tydskrif van Opvoedkundig*, 11(3): 118-123.
- Byrne, B.M. (1994). Testing for validity, replication and invariance of causal structure across elementary, intermediate and secondary teachers. *American Educational Research Journal*, 31(3): 645-673.
- Brownell, M. (1997). Coping with stress in the Special Education Classroom: Can Individual teachers more effectively manage stress? Clearinghouse on Disabilities and Gifted Education Reston. [2 May 2003]  
<http://www.ed.gov/databases/ERIC-Digest/ed414659.html>

Calabrese, R.L. (1987). The principal: an agent for reducing teacher stress. *NASSP Bulletin*, 71: 66-70.

Cherniss, C. (1980). *Professional Burnout in Human Service Organizations*. New York: Praeger.

Cohen, J.H. (1991). What is a teacher's job?: An examination of the social and legal causes of role expansion and its consequences. *Harvard Journal of Law and Public Policy*, 14(2): 427-446.

Cole, C. & Walker, S. (1989). *Teaching and Stress*. Philadelphia: Open University Press.

Cook, R. (1992). *The prevention and management of stress: A manual for teachers*. United Kingdom: Longman.

Courtney, M.B. (1987). The relationship between the perceived degree of instructional leadership and principle management style and teacher stress. M.Ed dissertation, Teachers College, New York: Columbia University.

Cranwell-Ward, J. (1990). *Thriving on stress*. London: New Fetter.

Dixon, W.J. (1985). *Biomedical computer programs*. Berkeley: University of California Press.

Esteve, J.M. 1989. Teacher burnout and teacher stress, in *Teacher and stress*, edited by M. Cole and S Walker, Milton Keynes: Open University Press.

Farber, B.A. (1991). *Crisis in education: Stress and burnout in the American teachers*. San Francisco: Jossey Bass.

Federale Onderwysersraad (FOR) (1990). Buitelandse studiebesoek. 11 March to 2 April 1990. Pretoria: Federale Onderwysraad.

Feitler, F.C. & Tokar, E. (1982). Getting a handle on teacher stress: How bad is the problem? *Educational Leadership*, 39: 456-458.

Ferreira, M.G. (1994). Organisation stress in education. *Lyra academica*, 9(1): 112-132.

Fimian, M.J. (1983). Sources and manifestations of occupational stress as reported by full-time special education teachers. *Exceptional Children*, 49(6): 540-543.

Fimian, M.J. (1984). The development of an instrument to measure occupational stress in teachers: The Teacher Stress Inventory. *Journal of Occupational Psychology*, 57: 277-293.

Fimian, M.J. (1986a). Social support and occupational stress in special education. *Exceptional Children*, 52: 436-442.

Fimian, M.J. (1986b). Social support, stress and special education teachers: Improving the work situation. *The Pointer*, 31: 49-53.

Fimian, M.J. (1986c). Psychosomatic disorders and occupational stress in teachers. Unpublished manuscript. Department of Language, Reading, and Exceptionalities, Appalachian State University, Boone, NC.

Fimian, M.J. & Conners, L. (1987). Adequacy of teacher training and its relationship to occupational stress in teachers. Manuscript submitted for publication. Department of Language, Reading, and Exceptionalities, Appalachian State University, Boone, NC.

Fimian, M.J. & Santoro, T.M. (1983). Sources and Manifestations of Occupational Stress as Reported by Full-Time Special Education Teachers. *Council for Exceptional Children*, 49(6): 540-543.

Fimian, M.J., Zacherman, J. & McHardy, R.J. (1985). Substance abuse and teacher stress. *Journal of Drug Education*, 15: 139-155.

Fetsch, R.J. (1992). The predicament-problem continuum: Dealing with stressors outside our control. *Journal of Counselling and Development*, 71(2): 192.

Greenberg, S.F. (1984). *Stress and the teaching profession*. Baltimore: Paul H Brooks.

Greenglass, E.R. (1985). Psychological implications of sex bias in the work place, *Academic Psychology Bulletin*, 7(2): 227-240.

Greer, H.G., & Greer, B.B. (1992). Stopping burnout before it starts: Prevention measures at the preservice level. *Teacher Education and Special Education*, 15(3): 168-174.

Guetzloe, E. (1992). Violent, aggressive, and antisocial students: What are we going to do with them? *Preventing School Failure*, 32(3): 4

Harden, R.M. (1999). Stress, pressure and burnout in teachers: Is the swan exhausted? *Medical Teacher*, 21(3): 245-248.

Hart, P.M. & Wearing, A.J. (1995). Occupational stress and well-being: A systematic approach to research, policy, and practise. In: Cotton, P. (ed). *Psychological health in the workplace: Understanding and managing occupational stress*, 185-216.

Hayward, R. (1991). The implication of teachers' stress in primary schools: A management perspective. M.Ed Thesis. Pretoria: University of South Africa.

Fimian, M.J. & Santoro, T.M. (1983). Sources and Manifestations of Occupational Stress as Reported by Full-Time Special Education Teachers. *Council for Exceptional Children*, 49(6): 540-543.

Fimian, M.J., Zacherman, J. & McHardy, R.J. (1985). Substance abuse and teacher stress. *Journal of Drug Education*, 15: 139-155.

Fetsch, R.J. (1992). The predicament-problem continuum: Dealing with stressors outside our control. *Journal of Counselling and Development*, 71(2): 192.

Greenberg, S.F. (1984). *Stress and the teaching profession*. Baltimore: Paul H Brooks.

Greenglass, E.R. (1985). Psychological implications of sex bias in the work place, *Academic Psychology Bulletin*, 7(2): 227-240.

Greer, H.G., & Greer, B.B. (1992). Stopping burnout before it starts: Prevention measures at the preservice level. *Teacher Education and Special Education*, 15(3): 168-174.

Guetzloe, E. (1992). Violent, aggressive, and antisocial students: What are we going to do with them? *Preventing School Failure*, 32(3): 4

Harden, R.M. (1999). Stress, pressure and burnout in teachers: Is the swan exhausted? *Medical Teacher*, 21(3): 245-248.

Hart, P.M. & Wearing, A.J. (1995). Occupational stress and well-being: A systematic approach to research, policy, and practise. In: Cotton, P. (ed). *Psychological health in the workplace: Understanding and managing occupational stress*, 185-216.

Hayward, R. (1991). The implication of teachers' stress in primary schools: A management perspective. M.Ed Thesis. Pretoria: University of South Africa.



Hayward, R. (1993). Teacher stress in the primary school: an identification and description of stressors. *Educational Bulletin*, 37(1): 3-20.

Hayward, R. (1994). Managerial strategies to handle negative teacher stress. *Educational Bulletin*, 38(1): 84-101.

Herr, J.L., & Cramer, S.H. (1996). *Career guidance and counselling through the lifespan*. New York: Harper Collins.

Huysamen, G.K. (1983). *Inferensiele statistiek en navorsingsontwerp: 'n inleiding*. Kaapstad: Academica.

Kasyoki, B.N. (1997). Regular classroom and special education teachers' perceptions regarding causes of stress. *Dissertation Abstracts International Section A: Humanities and Social Sciences*, 58(1-A): 0043.

Keane, A., & Ducette, J., & Adler, D.C. (1985). Stress in ICU and non-ICU nurses. *Nursing Research*, 34(4): 231-236.

King, A.J.C. & Peart, M.J. (1992). The satisfaction and stress of being a teacher. *Worklife Report*, 8(6): 12-14.

Kobayashi, H. (1994). A study of teachers under suspension owing to depressive state. *Seishin Igaku ( Clinical Psychiatry)*, 36(3): 297-300.

Kyriacou, C. (1987). Teacher stress and burnout: An international review. *Educational research*, 29(2): 146-152.

Lacey, P. & Porter, J. 1998. Enabling Teachers: in-service education in learning difficulties and challenging behaviour. *Journal of In-service Education*, 24(3): 475-491.

Leung, J.P. (1994). Teacher suicide in Hong Kong: Causes and prevention. *Bulletin of the Hong Kong Psychological Society*, 32: 96-104.

Lewandowski, L.J. & Forsstrom-Cohen, B. (1986). Neurological bases of violence. In: S.J. Apter & A.P. Goldstein (Eds.) *Youth violence*. New York: Pergamon, 58-74.

MacDonald, C.J. (1992). The multiplicity of factors creating stress during the teaching practicum: The student teacher's perspective. *Education*, 113(1): 48-59.

McGrath, M. (1984). *Teachers today*. California: Corwin Press Inc.

Marais, J.L. (1992). Faktore wat stress veroorsaak by onderwysers in die Oranje-Vrystaat en Kaapprovinsie. *South African Journal of Education*, 12(3): 305-312.

Maslach, C. & Jackson, S.E. (1981). The measurement of experienced burnout. *Journal of Occupational Behaviour*, 2: 99-113.

Mbokodi, S.M. (1995). *The influence of teacher burnout on the quality of education in schools in the Eastern Cape*. Bloemfontein: University of the Orange Free State.

McCormick, J. (1992). Teachers' attributions of responsibility for occupational stress and satisfaction: an organisational perspective. *Educational Studies*, 18(2): 201-223.

Palm-Forster, T.I. (2000). *The impact of gender stereotype-related stress on female education managers: An education management perspective*. Bloemfontein: University of the Orange Free State.

Payne, M.A., & Furnham, A. (1987). Dimensions of occupational stress in West Indian secondary school teachers. *British Journal of Educational Psychology*, 57: 141-150.

Pierce, C.M.B. and Molloy, G.N. (1990). Relations between school type, occupation stress, role perceptions and social support. *Australian Journal of Education*, 34: 330-338.

Potgieter, A.C. (1996). *Die onderwyser se belewenis van die Suid-Afrikaanse Onderwysstelsel*. Johannesburg: RAU.

Reglin, G., & Reitzammer, A. (1998). Dealing with the stress of teachers. *Education*, 118(4): 590.

Rigby, C.J., Bennett, H.F. & Boshoff, A.B. (1996). Teacher stress interventions: a comparative study. *South African Journal of Education*, 16(1): 38-44.

Rowe, M. (2000). Skills training in the long-term management of stress and occupational burnout. *Current Psychology*, 19(3): 215.

Romano, J.L. (1992). Psychoeducational interventions for stress management and well-being. *Journal of Counselling & Development*, 71(2): 199.

SAS Institute (1985). *SAS user's guide: statistics version 5 edition*. Cary: Author.

South Africa. (1996). Inter-Ministerial Committee on Young People at Risk. Interim Policy Recommendations. Pretoria: Ministry for Welfare and Population Development.

South Africa. (1996). Inter-Ministerial Committee on Young People at Risk. Minimum Standards. South Africa Child and Youth Care System. November.

South Africa. (1983). The Child Care Act, Act 74 of 1983. Pretoria: Government Printer.

SPSS Incorporated (1983). *SDSS user's guide*. New York: Author.

Saptoe, C.W. (2000). *Factors which cause stress to teachers in the Southern Cape*. Port Elizabeth: University of Port Elizabeth.

Sarros, J.C. (1988). Administrator burnout: findings and future directions. *The Journal of Educational Administration*, 26(2): 184-196.

Schaufeli, W.B. & Enzmann, D. (1998). *The burnout companion to study and research: A critical analysis*. London: Taylor and Francis.

Semmer, H., Zape, D. & Greif, S. (1996). Shared job strain: A new approach for assessing the validity of job stress measurements. *Journal of Occupational and Organizational Psychology*, 69: 293-310.

Smit, S. (2000). Job stress in management personnel in secondary schools and educational, psychological investigation. M.Ed Thesis. PU vir CHO: Potchefstroom.

Sowa, J. (1992). Understanding clients' perceptions of stress. *Journal of Counselling and Development*, 71(2): 179-184.

Speilberger, C.D. & Reheiser, E.C. (1994). Job stress in university, corporate and military personnel. *International Journal of Stress Management*, 1(1): 19-31.

Steyn, H.S. (1999). *Praktiese beduidendheid: die gebruik van effekgroottes*. Potchefstroom: Publikasiebeheer Komitee, PU vir CHO.

Tabachnick, B.G., & Fidell, L.S. (1989). *Using multivariate statistics* (2<sup>nd</sup> ed.). New York: Harper & Row.

Travers, C.J. & Cooper, C.L. (1998). Stress in the teaching. In: Shorrock-Taylor, D. (ed). *Directions in Educational Psychology*. Whurr Publishers, Routledge, London, 365-390.

Turnage, J.J. & Spielberger, C.D. (1991). Job stress in managers, professionals and clerical workers. *Work & Stress*, 5(3): 165-176.

Underwood, A. (1992). Coping with on-the-job stress. *Black Enterprise*, 23(1): 86.

Vance, B., Miller, S., Hamphreys, S. & Reynolds, F. (1989). Sources and manifestation of occupational stress as reported by fulltime teachers working in a big school. *Journal of American Indian Education*, 28(2): 8.

Van der Linde, C.H. (1992). Stres en die diensleweringprofessies met spesifieke verwysing na hoe dit in die onderwysprofessie manifesteer. *South African Journal of Education*, 12(2): 207-210.

Van der Linde, A.H., Van der Westhuizen, P.C. & Wissing, M.P. (1999). Burnout in female educators. *South African Journal of Education*, 19(3): 192-196.

Van der Linde, C.H. 2000. The teacher's stress and its implications for the school as an organization: How can TQM help?. *Education*, 121(2): 375.

Van Dick, R. & Wagner, U. (2001). Stress and strain in teaching: A structural equation approach. *British Journal of Educational Psychology*, 71(2): 243-259.

Vandoan, V.H. (1999). A comparison study of elementary teachers stress in Catholic and public schools. *Dissertation Abstracts International Section A: Humanities & Social Sciences*, 60(1-A):0040.

Van Heerden, C. (1988). Stres- en konflikthantering. *Neon*, 53:49-53.

Wilkinson, R.G. (1988). Teacher stress and coping strategies: a study of Eastlake Comprehensive. *School Organization*, 8(2): 185-195.

Wilson, A. (2000). Teaching Teachers To De-Stress. *Psychology Today*, 32(4): 18.

Yankelovich, D. (1979). Work values and the new breed. In: Kerr, C. & Rosow, J.M. (eds). *Work in America: the decade ahead*. New York: Van Nostrand Rheinhold.

Zacherman, J. (1984). The relationship between stress, job involvement, and teaching the handicapped. Doctoral dissertation, Yeshiva University. *Dissertation Abstracts International*, 44, 3244A.

ANNEXURE A (Questionnaire)

TEACHER CONCERNS INVENTORY

This inventory consists of three sections. Before attempting to do this questionnaire, complete the details in Section A

Section A

Demographical variables  
Please circle the block applicable to you

1. Gender

Male	Female
------	--------

2. Years of experience as a teacher:

1-10	11-20	21-30	31
------	-------	-------	----

3. Age in years:

20-30	31-40	41-50	51-60	61
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4. Home language:

Afrikaans	English	Xhosa	Sotho	Other
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5. Highest level of Education:

Std 8	Std 10	Teachers Diploma	B.A., B.Sc. Etc.	Hons. B. Ed., ect	Master	Doctorate
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Office Use

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9-13

14

# Section B

The following are a number of teacher concerns. Please identify factors that cause you stress in your present position. Read each statement carefully and decide if you ever feel this way about your job. Then indicate how strong the feeling is when you experience it by circling the appropriate number on the 5-point scale. If you have not experienced this feeling, or if the item is inappropriate for your position, circle number 1 (strongly disagree). The rating scale is shown at the top of each page.

Examples:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
I feel insufficiently prepared for my job.					

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Office use
1.	I easily over commit myself	1	2	3	4	5	15
2.	I become impatient if others do things too slowly	1	2	3	4	5	16
3.	I have to try doing more than one thing at a time	1	2	3	4	5	17
4.	I have little time to relax / enjoy the time of day	1	2	3	4	5	18
5.	I think about unrelated matters during conversations	1	2	3	4	5	19
6.	I feel uncomfortable wasting time	1	2	3	4	5	20
7.	There isn't enough time to get things done	1	2	3	4	5	21
8.	I rush in my speech	1	2	3	4	5	22
9.	There is little to prepare for my lessons	1	2	3	4	5	23
10.	There is too much work to do	1	2	3	4	5	24
11.	The pace of the school day is too fast	1	2	3	4	5	25
12.	My class is too big	1	2	3	4	5	26
13.	My personal priorities are being short changed due to time demands	1	2	3	4	5	27



14.	There is too much administrative paper work in my job	1	2	3	4	5	28
15.	I lack promotion and/or advanced opportunities	1	2	3	4	5	29
16.	I am not progressing in my job as rapidly as I would	1	2	3	4	5	30
17.	I need more status and respect on my job	1	2	3	4	5	31
18.	I receive an inadequate salary for the work I do	1	2	3	4	5	32
19.	I lack recognition for the extra work and/or good teaching I do	1	2	3	4	5	33
20.	I feel frustrated because of discipline problems in the classroom	1	2	3	4	5	34
21.	I feel frustrated having to monitor pupil behaviour	1	2	3	4	5	35
22.	I feel frustrated because some of the students who are poorly motivated	1	2	3	4	5	36
23.	I feel frustrated attempting to teach students who are poorly motivated	1	2	3	4	5	37
24.	I feel frustrated because of inadequate / poorly defined discipline problems	1	2	3	4	5	38
25.	I feel frustrated when my authority is rejected by pupils	1	2	3	4	5	39
26.	My personal opinions are not sufficiently aired	1	2	3	4	5	40
27.	I lack control over decisions made about classroom/ school matters	1	2	3	4	5	41
28.	I am not emotionally / intellectually stimulated on the job	1	2	3	4	5	42
29.	I lack opportunities for professional improvement	1	2	3	4	5	43
30.	I respond to stress by feeling insecure	1	2	3	4	5	44
31.	I respond to stress by feeling vulnerable	1	2	3	4	5	45
32.	I respond to stress by feeling unable to cope	1	2	3	4	5	46
33.	I respond to stress by feeling depressed	1	2	3	4	5	47
34.	I respond to stress by feeling anxious	1	2	3	4	5	48
35.	I respond to stress by sleeping more than usual	1	2	3	4	5	49
36.	I respond to stress by procrastinating	1	2	3	4	5	50
37.	I respond to stress becoming fatigued in a very short time	1	2	3	4	5	51
38.	I respond to stress with physical exhaustion	1	2	3	4	5	52

39.	I respond to stress with physical weakness	1	2	3	4	5	53
40.	I respond to stress with feelings of increased blood pressure	1	2	3	4	5	54
41.	I respond to stress with feelings of heart pounding or racing	1	2	3	4	5	55
42.	I respond to stress with rapid and/or shallow breathing	1	2	3	4	5	56
43.	I respond to stress with stomach pain or extend duration	1	2	3	4	5	57
44.	I respond to stress with stomach cramps	1	2	3	4	5	58
45.	I respond to stress with stomach acid	1	2	3	4	5	59
46.	I respond to stress by using over-the-counter drugs	1	2	3	4	5	60
47.	I respond to stress by using prescription drugs	1	2	3	4	5	61
48.	I respond to stress by using alcohol	1	2	3	4	5	62
49.	I respond to stress by calling in sick	1	2	3	4	5	63

### Section C

1. Is stress a problem to you ?

Not at all	To some degree	Average	Above Average	Intense	Office Use
1	2	3	4	5	6

2. How intense do you experience stress ?

Not at all	To some degree	Average	Above average	Intense	
1	2	3	4	5	7

3. Which of the following factors causes you stress

	Not at all	To some degree	Average	Above average	Intense	
1. Teachers stress	1	2	3	4	5	8
2. Marriage problems	1	2	3	4	5	9
3. Trouble with the neighbours	1	2	3	4	5	10
4. Family matters	1	2	3	4	5	11

## **ANNEXURE B**

### **The Principle**

I am conducting research on the stress factors among teachers in schools of industries. The goal of this study will be to determine whether the factors that affect teachers in schools of industries differ from that of teachers in mainstream schools.

I need the participation of your schools personnel in completing a questionnaire on stress. It would not take longer than half an hour. Would you consider your school to be part of this research project.

Yours truly,

Lourens Putter

## **ANNEXURE C**

### **RESEARCH PROJECT**

Dear participant

I am conducting research on the stress factors among teachers in schools of industry. The goal of this study will be to determine whether the factors that affect teachers in schools of industry differ from that of teachers in mainstream schools.

To do this I need your assistance. I require approximately half an hour of your time. There is no risk associated with your participation, and we even hope that you may find responding to this questionnaire a stimulating experience. Participation is voluntary.

If you are willing to participate please complete the following questionnaire as it pertains to you.

Your responses will be treated with complete confidentiality. You remain anonymous, and all conclusions will be based on the group's responses. I, however, need every individual's honest and reliable response.

I offer to inform you as a group on the results of the research. In the case of any further questions about this research project you are welcome to contact me.

I kindly request you to fill in and tear off the slip at the end of this letter to be handed in separately. In doing so you confirm that you understood the explanations above, and that you grant permission for your anonymous responses to be used for research purposes.

Thank you very much for your participation and contribution.

Project supervisor

.....

Prof. PT Sibaya

Researcher:

Lourens Putter

0846050269

I ..... hereby declare that I understand the content of this letter, and that I grant permission that information obtained from my anonymous questionnaire may be used for research purposes.

.....

Signature:

.....

Date