

BURNOUT OF SECONDARY SCHOOL TEACHERS IN THE GOLDFIELD REGION OF THE FREE STATE PROVINCE

Debri van Wyk,
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Supervisor: Dr J Pienaar

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Opinions expressed and conclusions arrived at are those of the author and are not necessarily to be attributed to the Free State Department of Education.

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ABSTRACT

Subject: Burnout of secondary school teachers in the Goldfield region of the Free State Province

Key words: Burnout, teachers, education.

The future of South Africa depends largely on the type of education that it offers. If the quality of education is good, the quality of the workforce will be good. For any education system to be of good a quality, quality presenters, i.e. teachers, must present it. But with the constantly changing organisational and educational environment, the well-being of these teachers is under serious threat. The whole system of transformation causes teachers to be uncertain of their jobs, which leads to high stress levels. Constant stress may lead to sicknesses which in turn may lead to increased rates of illness and decreased levels of job satisfaction and job performance. Chronically high stress levels may eventually lead to burnout, rendering teachers unable to do their jobs and causing them to quit their profession. The prevention of burnout could save the education department substantial amounts of money and time, but there is a lack of empirical research regarding burnout among teachers in South Africa.

The present research in the Northern Free State is a first step in studying burnout among teachers in this province. In this regard, it is important to use a reliable and valid instrument to measure burnout. The validation of such a measuring instrument formed the first objective of this study. Furthermore it was also investigated if there are any relationship between biographical variables and burnout, and whether differences exist regarding burnout for different demographical groups.

The research method consisted of a brief literature review and an empirical study. A cross-sectional survey design was used. Random samples ($N = 469$) were taken from teachers in the Goldfields district of the Northern Free State. An adapted version of the Maslach Burnout Inventory and a biographical questionnaire were administered.

A three-factor structure of burnout was confirmed in this study. It was also found that a model incorporating Depersonalisation fitted the data better than one of Cynicism.

Differences regarding burnout were found in respect of marital status, intentions of quitting, perceptions of availability of equipment and skills, knowledge and abilities.

By way of conclusion, recommendations for future research are made.

OPSOMMING

Onderwerp: Uitbranding by sekondêre skool onderwysers in die Goudveldstreek in die Vrystaat.

Sleutelwoorde: Uitbranding, onderwysers, skole

Die toekoms van Suid-Afrika hang grootliks af van die tipe onderwys wat dit aanbied. As die kwaliteit van die onderwys goed is, sal die kwaliteit van die werksmag goed wees. Indien 'n onderwys sisteem van hoë kwaliteit moet wees, moet dit oor kwaliteit aanbieders, met ander woorde, onderwysers, beskik wat dit aanbied. Die voortdurende veranderende organisatoriese en onderwysomgewing, stel egter onderwysers se welstand in gevaar. Die hele sisteem van transformasie veroorsaak dat onderwysers onseker is oor hulle werk, wat tot hoë spanningsvlakke lei. Aanhoudende spanningsvlakke kan lei tot ongesondheid wat weer op sy beurt kan lei tot verhoogde vlakke van siekte en verlaagde vlakke van werksbevreëdiging en werksprestasie. Kroniese hoë spanningsvlakke kan uiteindelik lei tot uitbranding wat sal veroorsaak dat onderwysers nie hulle werk sal kan verrig nie en dus sal lei dat hulle hul werk moet staak. Die voorkoming van uitbranding kan die onderwysdepartement baie geld en tyd bespaar, maar daar bestaan 'n leemte van empiriese navorsing aangaande uitbranding onder onderwysers in Suid-Afrika.

Die huidige navorsing in die Noord-Vrystaat is 'n eerste stap in die bestudering van uitbranding onder onderwysers in die provinsie. Dit is dus baie belangrik om 'n betroubare en geldige instrument te gebruik om uitbranding te meet. Die eerste doel van die studie is dus om die meetinstrument geldig te maak. Verder word daar ook bepaal of daar enige verband is tussen biografiese veranderlikes en uitbranding, en of daar enige verskille is ten opsigte van uitbranding vir verskillende demografiese groepe.

Die navorsingsmetode bestaan uit 'n bondige literatuuroorsig en 'n empiriese studie. 'n Dwarsdeursnee-opnameontwerp is gebruik. Ewekansige steekproewe ($N = 469$) is geneem uit onderwysers van die Goudveld distrik van die Noord-Vrystaat. 'n Aangepaste weergawe van die Maslach Uitbrandingsvraelys en 'n biografiese vraelys is afgeneem.

'n Drie-faktorstruktuur van uitbranding is bevestig in die studie. Daar is ook bevind dat 'n model wat Depersonalisasie inkorporeer die inligting better gepas het as Sinisme. Verskille rakende uitbranding was gevind vir verskillende huwelik status, intensies om hul werk te staak, persepsies van die beskikbaarheid van toerusting en vaardighede en kennis.

Ter afsluiting word aanbevelings vir toekomstige navorsing aan die hand gedoen.

CHAPTER 1

INTRODUCTION

This research article deals with the validation of the Maslach Burnout Inventory – General Survey for Secondary school teachers in the Goldfield region of the Northern Free State. It also establishes whether biographical variables can be used to determine burnout. In this the motivation for the research is discussed in terms of the problem statement and aims of the research. Thereafter the research method and division of chapters are discussed.

1.1 PROBLEM STATEMENT

The concepts of change and transformation in South African organisations are becoming increasingly important as time goes by. Organisations must change from within to become more competitive, locally as well as internationally. Changes and transformation in organisations include affirmative action, democratisation of the workplace, job creation, the improvement of quality of products and services, international competition, keeping abreast with technological development and acknowledging the importance of diversity in the workplace (Human, 1995; Wood, 1995). Any changes, and especially the aforementioned changes in organizations, contribute to high levels of stress.

The education sector is also experiencing these changes and stress factors. Educators' (teachers') work becomes more complex as new rules and regulations are being added (Greenberg, 1999). International research and surveys accumulate daily regarding education-stress and the factors responsible for it (Nummela, 1983). The scope of these studies shows this problem to be of international importance (Pont & Reid, 1985).

Specific to the Free State Province, Marais (1989) found a high level of stress in teachers. He also noted that there are a variety of stressors that lead to teacher burnout, like the pressure of the workload and low salaries. Typically teachers enter the education profession with high expectations, a vision for the future and a mission to help students

learn. These soon get hindered by a lack of discipline, shortage of professional help, insufficient financial support, pressure from unions, education departments and school governing bodies, lack of community support, poor image of the profession and role ambiguity (Gold & Roth, 1993). This leads to disillusionment and eventually, even burnout (Mesthrie, 1999).

Burnout is a syndrome characterised by emotional exhaustion, depersonalisation and lowered feelings of personal capability that occurs in individuals who work with people. It is a response to chronic emotional stress that is developed when working with people, especially if they have problems (Maslach, 1982). Pines, Aronson & Kafry (1981) define burnout as a state of physical, emotional and psychological exhaustion that is caused by continual involvement in situations that are emotionally demanding. The emotional demands are mostly caused by a combination of high expectations and chronic situational stress. Various symptoms are associated with burnout, like physical exhaustion, a feeling of helplessness and a negative attitude towards people around you.

Schaufeli and Enzman (1998, p. 36) define burnout as “a persistent, negative, work-related state of mind in ‘normal’ individuals that is primarily characterised by exhaustion, which is accompanied by distress, a sense of reduced effectiveness, decreased motivation, and the development of dysfunctional attitudes and behaviours at work”. Burnout is recognised as a serious threat, especially for workers who work with other people (Van Dierendonck, Schaufeli & Buunk, 1993). Burnout has been recognised as an increasing problem in the teaching profession (Mesthrie, 1999).

Kyriacou (in Greenberg, 1984) defines stress in teachers as the experience of unpleasant emotions like anger, frustration, anxiety, depression and tension due to the type of work they do. Initially teachers experience personal rewards during their training and first few months of teaching. Soon, however, they are faced with criticism, overcrowded classrooms, the impact of teacher shortages, illness, lack of mobility, lack of financial and emotional rewards, difficult assignments, poor working conditions, disruptive students, difficult administrators, lack of respect, little or no social support, and other

negative conditions (Gold & Roth, 1993). Faced with these types of situations, many teachers feel angry and discouraged. When conditions do not improve and they do not receive support, teachers begin to experience a sense of hopelessness, lose their self-esteem and depression sets in. This leads to disillusionment and ultimately burnout (Gold & Roth, 1993). A high incidence of burnout has been observed in education managers and educators at large in South Africa, following on the introduction of curriculum 2005 and Outcomes Based Education (OBE) (National Centre for Curriculum Research and Development, 2000; Motseke, 2000).

Studies have shown that the possible causes of burnout can be categorised into organisational, biographical and personality factors:

- The organisational factors that contribute to burnout include work overload (Rantanen, 1998), role conflict and role ambiguity (Melzer & Nord, 1981), poor collegial support (Golembiewski & Munzenrider, 1998), lack of feedback, and career concerns such as lack of career progress (Ivancevich & Matteson, 1990).
- The biographical factors that could relate to burnout are age, work experience and sex (Marais, 1989). Burnout is said to be more prevalent among younger workers and negatively related to work experience. Kunzel and Schulte (1986) explain the prevalence of burnout among the younger work force and less experienced workers in terms of reality shock. Cherniss (1980), however, relate it to identity crisis due to unsuccessful occupational socialisation. Maslach, Jackson and Leiter (1996) have observed that symptoms of burnout to reduce with growing age or work experience. Women are prone to emotional exhaustion, while men are prone to depersonalisation. Schaufeli and Enzmann (1998) tend to explain this in terms of sex role-dependent stereotypes. Men typically hold instrumental attitudes, whereas women are more emotionally responsive, and seem to disclose emotional and health problems more easily. Again, due to additional responsibilities at home, working women carry higher workloads compared to men. Schaufeli and Enzmann (1998) are again of the view that unmarried people, especially men, seem to be more prone to burnout when

compared with those who are married. Cash (1988) has found that people with a higher level of education tend to be more prone to burnout than less educated ones. This, according to Schaufeli and Enzmann (1998) could be attributed to the higher expectations of the educated workers, or that the more educated workers more often tend to hold higher positions of responsibility.

- According to Schaufeli and Enzmann (1998), the personality traits of employees correlate with burnout. The tendency to perceive events and circumstances as stressful, the different ways of coping with them and dealing with failure in coping is dealt with, depend in part on the *dispositional characteristics* of a person. These characteristics involve one's beliefs about the world and the possibilities of dealing with them (Semmer, 1996).

It is important to use a reliable and valid instrument to measure burnout. A recent trend in burnout research is the adaptation of the original version of the MBI for use outside the human services. This new version was called the MBI-General Survey (MBI-GS: Schaufeli, Leiter, Maslach & Jackson, 1996). Thus the concept of burnout and its measurement were broadened to include all employees and not only those who do "people work" (Maslach & Leiter, 1997). However, the MBI-GS has not yet been validated for teachers and little information is available regarding its internal consistency and construct validity (Rothmann, 2002).

The objectives of this study were to determine the construct validity and internal consistency of the MBI-GS and to determine if biographical variables could be used to describe burnout of teachers in the education department in the Goldfields district of the Free State province.

The Maslach Burnout Inventory – General Survey (MBI-GS)

Burnout was originally almost exclusively studied as an occupational issue for people providing human services (Schaufeli & Enzmann, 1998). However, nearly a quarter of a century of research and practice has taught that burnout also exists outside the realm of the human services. Therefore, some researchers used the original version of the MBI, which was developed for the helping professions, for other occupational groups as well. Not surprisingly, they found that the scores for these groups differed from the norms established with human service workers. Furthermore, the three factors were not maintained as the Emotional Exhaustion and Depersonalisation subscales tended to combine into one factor (Maslach, Jackson & Leiter, 1997).

The apparent need for an instrument that measures burnout in non-contactual professional contexts was met by the introduction of the Maslach Burnout Inventory – General Survey (Schaufeli et al., 1996). The MBI-GS assesses parallel dimensions to those contained in the original MBI, except that the items do not explicitly refer to working with people. The MBI-GS comprises three subscales: Exhaustion (Ex), Cynicism (Cy) and Professional Efficacy (PE). Contrary to the MBI-Health Service Survey (HSS), the exhaustion items of the MBI-GS are generic; they refer to fatigue, but without direct reference to the people as the source of those feelings, as in the MBI-GS Depersonalisation subscale. Cynicism reflects indifference or a distant attitude towards one's work in general. Unlike previous versions, the MBI-GS items refer to the work itself rather than to the recipients of one's service or personal relationships at work. Professional efficacy covers a broader scope than personal accomplishment as measured by the MBI-HSS. It encompasses both social and non-social accomplishments at work. Also, a person is not classified as "burned out" or "not burned out" but rather placed on a continuum from "more" to "less burned out". Depersonalisation refers to the development of negative, impersonal and cynical attitudes and feelings about recipients in which the employee treats others like objects. In the model underlying the MBI, depersonalisation represents a form of mental distancing from others in response to exhaustion and discouraging aspects. People who cope by mentally disengaging themselves from

situations experience more emotional exhaustion and depersonalisation (Carver et al., 1989). Depersonalisation presents the specific interpersonal dimension of burnout (Schaufeli, 2003). Recently, Depersonalisation and Cynicism is being regarded as two sub-factors of a super-order factor in burnout, namely Mental Disengagement (W.B. Schaufeli, personal communication, 25 March 2004). This research project also tests this assumption.

The importance of a reliable and valid instrument for the measurement of burnout is evident not only for the purpose of empirical research, but also ultimately for individual assessment. Since the development of the MBI, a large body of empirical literature has indicated that the inventory provides a psychometrically sound tool for measuring burnout and that there is strong evidence supporting its reliability and validity.

With regard to the MBI-GS, internal consistencies are equally satisfactory, ranging from 0,73 (Cynicism) to 0,91 (Exhaustion) (Leiter & Schaufeli, 1996). Reliability analyses done by Schutte, Toppinen, Kalimo and Schaufeli (2000) showed that the Exhaustion and Professional Efficacy subscales were sufficiently internally consistent, but that one Cynicism item should be removed in order to increase the internal consistency beyond the criterion of 0,70. According to them, this might be caused by the ambivalence of the particular item: "I just want to do my job and not be bothered". In their studies, Schaufeli, Leiter and Kalimo (1995) and Leiter and Schaufeli (1996) also found that this item had the lowest factor loadings of the three subscales.

Previous South African studies on burnout report the following: Storm and Rothmann (2002) found satisfactory alpha coefficients: Exhaustion = 0,88; Cynicism = 0,78 (after item 13 had been omitted); Professional Efficacy = 0,79. Malan and Rothmann (2002) found higher alphas coefficients for Exhaustion = 0,89 and Professional Efficacy = 0,85, but lower alphas coefficients for Cynicism = 0,76. Schaufeli et al (1995) found satisfactory alpha coefficients for all dimensions of burnout where Exhaustion = 0.88; Personal Accomplishments = 0.74 and Depersonalisation = 0.70 These alpha coefficients

differ very little and taking above-mentioned studies into account, it can be expected that the MBI will be sufficiently internally consistent.

The three dimensions of the MBI-GS are interrelated: Cynicism is highly related to Exhaustion ($0,44 < r < 0,61$), and also strongly related to Professional Efficacy ($-0,38 < r < -0,57$) (Schaufeli et al., 1996). Taking the above into consideration, it appears that burnout can validly be measured across a range of different occupations, despite the differences between human service and non-contactual professions. According to Taris et al. (1999), the strong resemblance between the two versions of the MBI ensures maximum comparability and generalisability of results obtained for one occupational group to another.

The above discussion leads to the following hypotheses:

- H1: Burnout as measured by the MBI is a three dimensional construct and the MBI shows high internal consistency.
- H2: The burnout dimension of Mental Disengagement is made up of the dimensions of Depersonalisation and Cynicism.
- H3: Biographical variables can be used to describe teacher burnout.

1.2 AIM OF THE RESEARCH

The research aims are divided into a general aim and specific objectives.

1.2.1 General aim

The validation of the Maslach Burnout Inventory – General Survey among secondary school teachers in the Goldfields region of the Northern Free State.

1.2.2 Specific objectives

The specific research objectives are as follows:

- To determine the validity and reliability of the MBI-GS among teachers of secondary schools in the Goldfields region of the Northern Free State.
- To determine if biographical variables can be used to determine burnout.
- To determine if the burnout dimension Mental Disengagement consists of Cynicism and Depersonalisation

1.3. RESEARCH METHOD

The research method consists of a literature review and an empirical study.

1.3.1 Literature review

The literature review focuses on burnout.

The following databases have been consulted:

- Library catalogues
- Academic Search Lists
- Internet journals
- International journals
- RGN Nexus: current and completed research
- PsychLIT

1.3.2 Empirical study

The empirical study comprises the research design, study population, measuring battery and the statistical analysis.

1.3.2.1 Research design

A cross-sectional survey design (Shaughnessy & Zechmeister, 1997) will be used to achieve the research objectives. This design allows for the description of a population at a specific point in time, and can thus be used to indicate current levels of burnout of participants (Shaughnessy & Zechmeister, 1997).

1.3.2.2 Sample

Participants will be selected randomly from the total population of teachers in the Goldfield region of the Free State province. Random selection is important if we wish to draw accurate conclusions about the entire group of interest (Spector, 2000). A sample of 469 teachers will be used from the total population ($N=1014$). The formula proposed by Kerlinger and Lee (2000) was used to determine the sample size for this study:

$$n' = \frac{n}{1 + \frac{n}{N}}$$

and

$$n = \frac{z^2 \times SD^2}{d^2}$$

where n' = estimated sample size; n = the estimated sample size using the formula; N = the size of the population; z = standard score corresponding to the specified probability of risk; SD = the standard deviation of the population, and d = the specified deviation.

The values for z , SD and d as for the previous studies of burnout in South Africa (Storm & Rothmann, 2002) were used in the research.

1.3.2.3 Measuring instruments

- The *Maslach Burnout Inventory – General Survey (MBI-GS)* (Schaufeli et al., 1996) measures respondents' relationships with their work on a continuum from engagement to burnout. The MBI-GS has three subscales: Exhaustion (Ex) (five items; e.g. "I feel used up at the end of the workday"), Cynicism (Cy) (five items; e.g. "I have become less enthusiastic about my work") and Professional Efficacy (PE) (six items; e.g. "In my opinion, I am good at my job"). Together the subscales of the MBI-GS provide a three-dimensional perspective on burnout. Internal consistencies (Cronbach coefficient alphas) reported by Schaufeli et al. (1996) varied from 0,87 to 0,89 for Exhaustion, 0,73 to 0,84 for Cynicism and 0,76 to 0,84 for Professional Efficacy. Test-retest reliabilities after one year were 0,65 (Exhaustion), 0,60 (Cynicism) and 0,67 (Professional Efficacy) (Schaufeli et al., 1996). All items are scored on a 7-point frequency rating scale ranging from 0 ("never") to 6 ("daily"). High scores on Ex and Cy, and low scores on PE are indicative for burnout. Depersonalisation refers to the development of negative, impersonal and cynical attitudes and feelings about recipients in which the employee treats others like objects. In the model underlying the MBI-GS, depersonalisation represents a form of mental distancing from others in response to exhaustion and discouraging aspects. People who cope by mentally disengaging themselves from situations experience more emotional exhaustion and depersonalisation (Carver et al., 1989). Depersonalisation presents the specific interpersonal dimension of burnout (Schaufeli, 2003)
- A Biographical questionnaire will be administered that will request participants to supply their age, qualification, years of experience, job level, type of contract, gender, marital status, home language, presence of chronic illnesses, the intentions they have of quitting the profession, whether they consider themselves to have the basic equipment, and skills to perform their work successfully, whether they belong to a union, if they have access to stress management and stress counselling services available at the schools where they work.

1.3.2.4 Statistical Analysis

The statistical analysis will be carried out with the aid of the SAS-program (SAS Institute, 2000) and the Amos-program (Arbuckle, 1999). The SAS-program will be used to carry out statistical analysis regarding reliability and validity of the measuring instruments and descriptive statistics, The Amos-program will be used to carry out structural equation modelling.

Cronbach alpha coefficients, inter-item correlation coefficients and factor analysis will be used to assess the reliability and validity of the measuring instruments (Clark & Watson, 1995).

Descriptive statistics (e.g. means, standard deviations, range, skewness and kurtosis) and inferential statistics will be used to analyse the data. A cut-off point of $p = 0,05$ will be set for the statistical significance of the results. Effect sizes (Cohen, 1988) will be used to decide on the practical significance of the findings. Pearson product-moment correlation coefficients will be used to specify the relationships between the variables. A cut-off point of $d = 0,30$ (medium effect, Cohen, 1988) will be set for the practical significance of correlation coefficients. T-tests and analysis of variance will be used to determine the differences between groups. The following formula will be used to determine the practical significance of difference in means between two groups (Steyn, 1999):

$$d = \frac{Mean_A - Mean_B}{\text{Root MSE}}$$

where

$Mean_A$ = Mean of the first group

$Mean_B$ = Mean of the second group

Root MSE = Root Mean Square Error

Structural equation modelling will be used to develop a model of burnout suitable for the entire sample. Structural equation modelling is a statistical methodology that takes a confirmatory (i.e. hypothesis-testing) approach to the analysis of a structural theory bearing on some phenomenon (Byrne, 2001). The term “structural equation modelling” (SEM) conveys two important aspects of the procedure:

- that the causal processes under study can be represented by a series of structural (i.e. regression) equations, and
- that these structural relations can be modelled pictorially to make a clear conceptualisation of the theory under study.

1.4. RESEARCH PROCEDURE

The measuring battery will be compiled. Ethical aspects regarding the research will be discussed with the participants. The test battery will be administered in small groups at the different work places on suitable dates.

1.5 DIVISION OF CHAPTERS

Chapter 2: Research article

Chapter 3: Conclusion, recommendations and limitations

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BURNOUT OF SECONDARY SCHOOL TEACHERS IN THE GOLDFIELDS REGION OF THE FREE STATE PROVINCE

D. VAN WYK

J. PIENAAR

*WorkWell: Research Unit for People, Policy and Performance, Faculty of Economic &
Management Sciences, Northwest-University, Potchefstroom*

ABSTRACT

The objectives of this research were to validate the Maslach Burnout Inventory –General Survey (MBI-GS) for teachers in the Goldfields region of the Free State Province and to determine if biographical variables could be used to describe teachers suffering from burnout. A cross-sectional survey design was used where a population of teachers was drawn at one time ($N=469$) out of the Goldfields region of the Northern Free State. An expanded version of the Maslach Burnout Inventory and a biographical questionnaire were administered. Structural equation modelling confirmed three-factor models of burnout, consisting of Exhaustion, Cynicism or Depersonalisation, and Professional Efficacy. All four factors showed acceptable internal consistencies, however, the Depersonalisation model fitted the data better. Biographical variables that can be used to describe teachers suffering from burnout include their age, qualifications, overall years experience in teaching, what type of contract they have, their gender and marital status, the presence of chronic illnesses in the last three months, their intentions of quitting their job, perceptions of whether they have the basic equipment and necessary skills to perform their job effectively, union membership, and the availability of stress management programmes and staff counselling at schools.

OPSOMMING

Die doel van hierdie navorsing was om die Maslach Uitbrandingsvraelys – Algemene Opname (MBI-GS) te valideer vir onderwysers in die Goudveld distrik van die Vrystaat Provinsie en om te bepaal of biografiese veranderlikes gebruik kan word om onderwysers te identifiseer wat aan uitbranding ly. 'n Dwarsdeursnee-ontwerp is gebruik waar 'n streekproef onderwysers op een slag getrek is uit die bevolking ($N=469$) 'n Uitgebreide weergawe van die Maslach Uitbranding Vraelys en 'n biografiese vraelys is afgeneem. Strukturele vergelykingsmodellering het drie-faktormodelle van uitbranding bestaande uit Uitputting, Sinisme of Depersonalisasie en Professionele Doeltreffendheid bevestig. Al vier faktore het aanvaarbare interne konsekwentheid getoon, maar die Depersonalisasie model het die data beter gepas. Biografiese data wat gebruik kan word om uitbranding by onderwysers te identifiseer is onder andere hulle ouderdom, kwalifikasies, algehele ervaringstydperk in die onderwys, watter tipe werkskontrak hulle het, hulle geslag en huwelikstatus, of hulle enige kroniese siektes die laaste 3 maande gehad het, of hulle enige intensie het om die onderwys te los, of hulle oor die basiese toerusting en vaardighede beskik om hulle werk effektief te kan verrig, of hulle aan 'n unie behoort, of is spannings beheer programme beskikbaar by hul skole en die beskikbaarheid van beradingsdienste by hul skool.

Transformation is a buzzword that is used daily, especially in South Africa and South African organisations. Organizations must change from within to become more competitive, locally as well as internationally. Changes and transformation in organizations include affirmative action, democratization of the workplace, job creation, the improvement of the quality of products and services, international competition, keeping up with the pace of technological development and acknowledging the importance of diversity in the workplace (Human, 1995; Wood, 1995). Any changes, and especially the aforementioned changes in organizations, contribute to high levels of stress.

The education sector is also experiencing the above-mentioned changes and stress factors. The work of educators' (teachers') becomes more complex as new rules and regulations are being added (Greenberg, 1984). International research and surveys regarding education-stress and factors responsible for it accumulate daily (Nummela, 1983). The scope of these studies shows this problem to be of international importance (Pont & Reid, 1985). Mesthrie (1999) highlights the following changes in the South African environment that contribute to the experience of stress by teachers: increasing changes in education and society, with teachers having to make a variety of modifications in their personal and professional lives. These changes include amongst others: population increases, diversity in school populations, increases in cost of living, crime and its effect on student behaviour, conditions of service, new rules and regulations of the Department of Education, curriculum changes, performance appraisal systems and demands of unions. Another change that has been added to the curriculum is the so-called OBE (Outcomes Based Education) where the teacher should work as fast or slow as the students learn. Thus, teachers need to work at different paces to accommodate students, which further contributes to stress.

Marais (1989) found high levels of stress among teachers in the Free State province. He also noted that there are a variety of stressors that lead to teacher burnout, like the pressure resulting from a high workload and poor remuneration. Teachers enter the education profession with high expectations, a vision for the future and a mission to help students learn. But these soon get hindered by a lack of discipline, shortage of professional help, insufficient financial support, pressure from unions, education departments and school governing bodies, lack of community

support, the poor image of the profession and role ambiguity (Gold & Roth, 1993). All these lead to disillusionment and high levels of stress (Mesthrie, 1999).

Selye (1974) defines stress as a non-specific response of the human body from any demand that is forced on it. Van Graan (1981) defines stress as an energy-demanding negative emotional experience that usually follows on a stimulus that is cognitively evaluated and interpreted as a threat. More recently, Dunham (1995) defined stress as the physical, mental or emotional reaction resulting from an individual's response to environmental tensions, conflicts and pressure. A person's reaction to stress can clearly be noticed by the person who is experiencing stress, as well as those close to him/her. The reaction may be subtle, with the individual unaware of the effects of stress until an illness or disorder surfaces (Mesthrie, 1999). Gold and Roth (1993) describes stress as a condition of disequilibrium with the intellectual, emotional and physical state of the individual; it is generated by one's perceptions of the situation, which result in physical and emotional reactions. It can be either positive or negative, depending upon one's interpretation. With regard to this study, stress can be defined as a persons' reaction to certain surrounding circumstances for example the need for basic equipment or basic skills. Stress is also evident where language differences are involved. Different job levels also contribute to the high levels of stress. A person's age and qualifications clearly contribute to the stress levels.

Powel (1993) describes burnout as an intense form of stress that makes people feel low on energy, unproductive and isolated. He also describes it as long, cumulative and negative stress. A key aspect of burnout is the high levels of emotional exhaustion. Maslach (1982) defines burnout as a syndrome characterized by emotional exhaustion, depersonalisation and lowered feelings of personal capability that occurs in individuals who work with people. This is a response to chronic emotional stress that is developed when working with people, especially if they have problems. The burnout phenomenon is further described by Pines, Aronson and Kafry (1981) as a state of physical, emotional and psychological exhaustion that is caused by continuous involvement in situations that are emotionally demanding. The emotional demands are mostly caused by a combination of high expectations and chronic situational stress. Various symptoms are associated with burnout, like physical exhaustion, the feeling of helplessness and negative attitudes towards people around you. Schaufeli and Enzman (1998, p. 36) define burnout as "a

persistent, negative, work-related state of mind in 'normal' individuals that is primarily characterised by exhaustion, which is accompanied by distress, a sense of reduced effectiveness, decreased motivation, and the development of dysfunctional attitudes and behaviours at work". Burnout is recognised as a serious threat, especially for workers who work with other people (Van Dierendonck, Schaufeli & Buunk, 1993).

Burnout is an increasing problem in the teaching profession (Mesthrie, 1999). Initially teachers experience personal rewards during their training and first few months of teaching. Soon however, they are faced with criticism, overcrowded classrooms, the impact of teacher shortages, illness, lack of mobility, lack of financial and emotional rewards, difficult teacher assignments, poor working conditions, disruptive students, difficult administrators, lack of respect, little or no social support, and other negative conditions (Gold & Roth, 1993). Faced with these types of situations, many teachers feel angry and discouraged. When conditions do not improve and they do not receive support, teachers begin to feel a sense of hopelessness and lose their self-esteem and depression sets in. This leads to disillusionment and ultimately burnout (Gold et al, 1993). A high incidence of burnout has been observed in education managers and the educators, at large, in South Africa as a result of the introduction of curriculum 2005 and the OBE (Outcomes Based Education) (National Centre for Curriculum Research and Development (2000). and Motseke, 2000). Therefore, it seems important and relevant to investigate the burnout levels of teachers in South Africa.

The number of studies among teachers concerning burnout is very small, in particular in individual South African provinces, for example the Free State Province. The present research in the Northern Free State is a first step in studying burnout among teachers in the Free State Province. In this regard, it is very important to use a reliable and valid instrument to measure burnout. A recent trend in burnout research is the adaptation of the original version of the MBI for use in all services. This new version was called the MBI-General Survey (MBI-GS) (Schaufeli, Leiter, Maslach & Jackson, 1996). The MBI-GS has however not yet been validated for teachers in the Free State Province.

South Africa is a country of great diversity, comprising many different cultures. Organisations employ people with diverse historical, cultural and social backgrounds. In view of these different cultures and background, it is impossible to take it for granted that scores obtained in one culture,

can be compared with scores obtained in another culture. Thus, a standardised test should be used to compare the scores obtained (Van de Vijver & Leung, 1997). This study therefore sets out to determine the construct validity and internal consistency of the MBI and to determine the utility of biographical variables in predicting teacher burnout.

The Maslach Burnout Inventory

The present fascination with burnout is fairly recent. Ten years ago, very little was being said about burnout. The first articles appeared in the mid-1970s, and although they were few in number and scattered among lesser-known publications, they generated an enthusiastic response. Interest in this topic grew every day, and with all the writing, teaching, and consulting on burnout, it has become something of a small growth industry. All this activity can be interpreted as a sign of how important the issue of burnout is (Paine, 1982).

The MBI-GS was especially developed for the helping professions in particular (Schaufeli et al., 1996). The MBI-GS assesses parallel dimensions to those contained in the original MBI, except that the items do not explicitly refer to working with people. In the pioneer phase of burnout research, researchers chose to study employees in the health care professions, because of the constant emotional demands they supposedly experience in their jobs. This research was later extended to other occupational groups within the human services, including teachers, social workers, and police officers (Schaufeli & Enzmann, 1998). The MBI-GS comprises three subscales: Exhaustion (Ex), Cynicism (Cy) and Professional Efficacy (PE). The MBI-GS items refer to work itself and not to recipients of one's service or personal relationships at work. The Exhaustion items of the MBI-GS are generic as they refer to fatigue. It has no direct reference to people as the source of those feelings. Cynicism reflects indifference or a distant attitude towards one's work in general. Professional Efficacy encompasses both social and non-social accomplishments at work. A person is also not classified as "burned out" or "not burned out" but placed on a scale from "more" to "less" burned out. Depersonalisation refers to the development of negative, impersonal and cynical attitudes and feelings about recipients in which the employee treats others like objects. In the model underlying the MBI, depersonalisation represents a form of mental distancing from others in response to exhaustion and discouraging aspects. People who

cope by mentally disengaging themselves from situations experience more emotional exhaustion and depersonalisation (Carver et al., 1989). Depersonalisation presents the specific interpersonal dimension of burnout (Schaufeli, 2003). Recently, Depersonalisation and Cynicism have become regarded as two sub-factors of a super-order factor in burnout, namely Mental Disengagement (W. B. Schaufeli, personal communication, 25 March 2004). This research also tests this assumption.

It is very important to use an instrument that is reliable and valid to measure burnout. This is necessary for empirical research as well as for individual assessment. Various research studies on burnout with this inventory have indicated that this instrument is a psychometrically sound tool for the measuring of burnout and support strong evidence regarding its reliability and validity. The MBI-GS' internal consistencies are satisfactory, ranging from 0,73 (Cynicism) to 0,91 (Exhaustion) (Leiter & Schaufeli, 1996). Schutte, Toppinen, Kalimo and Schaufeli (2000) analysed the reliability and showed that Exhaustion and Professional Efficacy subscales were sufficiently internally consistent. They did however note that one Cynicism item should be removed to increase the internal consistency, namely item 13. Other studies also found that this item had the lowest factor loadings of the three subscales (Schaufeli, Leiter & Kalimo, 1995; Leiter & Schaufeli, 1996). Schaufeli et al (1995) found that the internal consistencies of depersonalisation are also satisfactory with α ranging between 0.68 – 0.70.

The MBI-GS has previously been studied in South Africa, but not within an educational context. Storm and Rothmann (2002) found satisfactory alpha coefficients for all dimensions of burnout (Exhaustion = 0,88; Cynicism = 0,78 [after item 13 had been omitted] and Professional Efficacy = 0,79). Malan and Rothmann (2002) found higher alpha coefficients for Exhaustion (0,89) and Professional Efficacy (0,85), but lower alphas coefficients for Cynicism (0,76). Schaufeli et al (1996) indicated that the MBI-GS could validly be measured across different occupations when taking into consideration that the three dimensions of the MBI-GS are interrelated. Cynicism is highly related to Exhaustion ($0,44 < r < 0,61$), and also strongly related to Professional Efficacy ($-0,38 < r < -0,57$). Schaufeli et al (1995) found satisfactory alpha coefficients for all dimensions of burnout where Exhaustion = 0.88; Personal Accomplishments = 0.74 and Depersonalisation = 0.70

The above discussion leads to the following hypotheses:

- H1: Burnout, as measured by the MBI is a three dimensional construct and the MBI-GS shows high internal consistency.
- H2: The dimension of Mental Disengagement is made up of the dimensions of Depersonalisation and Cynicism.
- H3: Biographical variables can be used to describe teacher burnout.

METHOD

Research design

A survey design was used to attain the research objectives. The specific design is the cross-sectional design, where a sample is drawn from a population at one time (Shaughnessy & Zechmeister, 1997).

Sample

Participants were selected at random from the total population of teachers in the Goldfield region of the Free State province. A sample of 469 teachers was used from the total population of 1014. The formula proposed by Kerlinger and Lee (2000) was used to determine the sample size for this study:

$$n' = \frac{n}{1 + \frac{n}{N}}$$

and

$$n = \frac{z^2 \times SD^2}{d^2}$$

where n' = estimated sample size; n = the estimated sample size using the formula; N = the size

of the population; z = standard score corresponding to the specified probability of risk; SD = the standard deviation of the population, and d = the specified deviation.

The values for z , SD and d as for the previous studies of burnout in South Africa (Storm & Rothmann, 2002) were used in the current research. Random selection was also used, since this is important in order to draw accurate conclusions about the entire group of interest (Spector, 2000).

Table 1 presents some of the biographical characteristics of the study population.

Table 1 Characteristics of the Study Population (N=469)

Variable	Category	Frequency	Percentage
Qualifications	M + 3	75	16.52
	M + 4	217	47.80
	M + 5	141	31.06
	M + 6	21	4.63
Type of contract	Permanent	416	90.43
	Temporary	30	6.52
	Fixed Term	8	1.74
Sex	Male	184	39.48
	Female	282	60.52
Status	Single	58	12.53
	Engaged	81	17.49
	Married	255	55.08
	Divorced	43	9.29
	Separated	20	4.32
	Remarried	6	1.30
Language	Afrikaans	185	39.36
	English	80	17.02
	Sepedi	5	1.06

Table 1 Characteristics of the Study Population (continued)

Variable	Category	Frequency	Percentage
	Sesotho	131	27.87
	Setswana	8	1.70
	Tshivenda	1	0.21
	IsiNdebele	1	0.21
	IsiXhosa	54	11.49
	IsiZulu	5	1.06
Any major stressful events this last 6 months	Yes	216	46.25
	No	251	53.75
Any major illnesses in the last 6 months	Yes	90	19.19
	No	379	80.81
Overall health this past 3 months	Good	282	61.71
	Alright	152	33.26
	Poor	22	4.81
Did you return to work before you were well because of work pressure	Yes	149	32.60
	No	308	67.40
Any chronic illnesses during the past 3 months	Yes	89	19.43
	No	369	80.57
I consider quitting the profession	1 - Agree	66	14.25
	2	42	9.07
	3	62	13.39
	4	192	41.47
	5 - Disagree	101	21.81
How frequent do you consider quitting the profession	1 - Frequently	61	13.29
	2	46	10.02
	3	91	19.83
	4	184	40.09
	5 - Never	77	16.78
I have the basic equipment	1 - Completely disagree	19	4.06
	2	43	9.19
	3	97	20.73
	4	196	41.88
	5 - Completely agree	113	24.15
I have the right skills, knowledge and abilities to teach effectively	1 - Completely disagree	6	1.29
	2	24	5.15
	3	77	16.52
	4	191	40.99
	5 - Completely agree	168	36.05
Union Member	Yes	252	54.19
	No	213	45.81
Provision for stress management	Yes	58	12.39
	No	290	61.97
	Don't know	120	25.64
Provision for staff counselling	Yes	67	14.29
	No	301	64.18
	Don't know	101	21.54
If available, have you used these services	Yes	185	49.33
	No	190	50.67

Table 1 *Characteristics of the Study Population (continued)*

Would you use these services if they were available	Yes	314	68.86
	No	78	17.11
	Don't know	64	14.04

The majority (47.80%) of the sample had an M + 4 (Matric +higher diploma or degree - BA) qualification. The mean age of the participants was 37.58 years, while the mean length of work experience was 13.08 years. The majority (90.43%) of the participants had permanent contracts. Regarding the gender of participants, 60.52% were female. More than half (55.08%) of the participants are married. Most participants' (39.36%) home language was Afrikaans, whilst only 17.02% of the participant's home language was English. Regarding the experience of major stressful events in the preceding 6 months, 53.75% of the participants indicated that they had experienced such an event, whilst 80.81% of the participants had experienced a major illness during the same period. When asked whether they were considering quitting the profession, 41.47% of the study sample indicated that they were not, and 40.09% of the sample almost never think about quitting the profession. The majority (41.88%) of the sample agree with the statement that they have the basic equipment to perform their tasks effectively, whilst 40.99% of the sample agree that they do have the right skills and abilities to perform their tasks effectively. More than half of participants (54.19%) indicated that they belong to a union. Most (61.97%) of the participants do not have provision for stress management and 64.18% of the participants do not have provision for staff counselling. Table 1 indicates that 50.67% of the sample had not used these services if it was available, whilst 68.86% of the participants would use these services if they were available.

Measuring battery

Two measuring instruments were used in the study. The Maslach Burnout Inventory – General Survey (Schaufeli et al., 1996) and a Biographical questionnaire were administered to attain the research objectives.

- The *Maslach Burnout Inventory – General Survey (MBI-GS)* (Schaufeli et al., 1996; Maslach, C., 1982) measures respondents' relationships with their work on a continuum from

engagement to burnout. The MBI-GS has three subscales: Exhaustion (Ex) (five items; e.g. "I feel used up at the end of the workday"), Cynicism (Cy) (five items; e.g. "I have become less enthusiastic about my work") and Professional Efficacy (PE) (six items; e.g. "In my opinion, I am good at my job"). Together the subscales of the MBI-GS provide a three-dimensional perspective on burnout. Internal consistencies (Cronbach alphas coefficient) reported by Schaufeli et al. (1996) varied from 0,87 to 0,89 for Exhaustion, 0,73 to 0,84 for Cynicism and 0,76 to 0,84 for Professional Efficacy. Test-retest reliabilities after one year were 0,65 (Exhaustion), 0,60 (Cynicism) and 0,67 (Professional Efficacy) (Schaufeli et al., 1996). All items are scored on a 7-point frequency rating scale ranging from 0 ("never") to 6 ("daily"). High scores on Ex and Cy, and low scores on PE are indicative of burnout. Depersonalisation (from the MBI-HSS, Maslach & Jackson, 1986) describes an unfeeling and impersonal response towards recipients of one's care or service. Storm and Rothmann (2002) reported internal consistencies of the dimensions of the MBI. A Cronbach alpha coefficient reported by Storm et al, (2002) varied between Emotional Exhaustion (0.88); Depersonalisation (0.70) and personal Accomplishment (0.88)

- A Biographical questionnaire was administered which requested participants to supply their age, qualification, years of experience, job level, type of contract, gender, marital status, home language, presence of chronic illnesses, the intentions they have of quitting the profession, whether they consider themselves to have the basic equipment, and skills to perform their work successfully, whether they belong to a union and if they have access to stress management and stress counselling services at the schools where they work.

Statistical Analysis

The statistical analysis was carried out with the help of the SAS-program (SAS Institute, 2000) and the Amos-program (Arbuckle, 1999). The SAS-program was used to carry out statistical analysis regarding the reliability and validity of the measuring instruments, descriptive statistics, t-tests, analysis of variance and correlation coefficients. The Amos-program was used to carry out structural equation modelling.

Cronbach alpha coefficients and inter-item correlation coefficients were used to assess the reliability and validity of the measuring instruments (Clark & Watson, 1995). Descriptive statistics (e.g. means, standard deviations, range, skewness and kurtosis) and inferential statistics were used to analyse the data. A cut-off point of $p = 0,05$ was set for the statistical significance of the results. Effect sizes (Cohen, 1988) were used to decide on the practical significance of the findings. Pearson product-moment correlation coefficients were used to specify the relationships between the variables. A cut-off point of $d = 0,30$ (medium effect, Cohen, 1988) was set for the practical significance of correlation coefficients. T-tests and analysis of variance was used to determine the differences between groups. The following formula was used to determine the practical significance of difference in means between two groups (Steyn, 1999):

$$d = \frac{Mean_A - Mean_B}{\text{Root } MSE}$$

where

$Mean_A$ = Mean of the first group

$Mean_B$ = Mean of the second group

Root MSE = Root Mean Square Error

Structural equation modelling was used to develop a model of burnout suitable for the entire sample. Structural equation modelling is a statistical methodology that takes a confirmatory (i.e. hypothesis-testing) approach to the analysis of a structural theory bearing on some phenomenon (Byrne, 2001). The term “structural equation modelling” (SEM) conveys two important aspects of the procedure:

- that the causal processes being studied can be represented by a series of structural (i.e. regression) equations, and
- that these structural relations can be modelled pictorially to enable a clear conceptualisation of the theory being studied.

RESULTS

The descriptive statistics for the measuring instruments are presented in Table 2

Table 2

Descriptive Statistics, Inter-Item Correlation Coefficients and Cronbach Alpha Coefficients of the Measuring Instrument (N = 469)

Factor	Mean	SD	Skewness	Kurtosis	r-Mean	α
Exhaustion	13.11	4.95	-0.22	0.20	0.48	0.79
Cynicism	12.20	4.65	-0.64	0.38	0.36	0.69
Depersonalisation	10.17	5.15	-0.37	-0.33	0.44	0.76
Efficacy	20.71	5.28	0.24	-0.87	0.49	0.83

Table 2 shows that the scores of the MBI factors are relatively normally distributed. The alpha coefficients of the MBI factors are acceptable compared to the guideline of $\alpha > 0,70$, although the factor of Cynicism is just below the cut-off, but still acceptable (Nunnally & Bernstein, 1994). The mean inter-item correlation coefficients are within the range of $0,15 \leq r \leq 0,50$ proposed by Clark and Watson (1995). It appears that the scales have acceptable levels of internal consistency.

Firstly, a burnout model with a Mental Distancing dimension consisting of the sub-factors of Depersonalisation and Cynicism was tested. Failure to confirm this model shifted the emphasis to finding a three-factor burnout model which best suited the sample data.

The Goodness-of-fit statistics for a three-factor model of burnout with the Cynicism dimension are presented in Table 3

Table 3

Goodness-of-fit Statistics for the Hypothesised Burnout Model (three-Factor, with Cynicism)

Model	χ^2	χ^2/df	GFI	AGFI	PGFI	NFI	TLI	CFI	RMSEA
Model 1	402.34	3.98	0.91	0.87	0.672	0.86	0.87	0.89	0.08
Model 2	202.82	2.70	0.95	0.926	0.68	0.92	0.93	0.94	0.06
Model 3	146.47	2.33	0.96	0.94	0.66	0.93	0.95	0.96	0.05
Model 4	128.65	2.11	0.96	0.94	0.65	0.94	0.95	0.96	0.05
Model 5	121.23	2.02	0.96	0.95	0.64	0.94	0.96	0.97	0.05

The statistically significant χ^2 value in Model 1 of 402,34 (df=101: p=0.0) revealed a poor overall fit for the three factor burnout model including Cynicism. The χ^2/df value above 2, the GFI, AGFI, NFI, TLI and CFI values lower than 0.95 and a RMSEA higher than 0.05 is a failure to fit the data to the hypothesized model. It was therefore apparent that some modification in specification was needed in order to determine a model that better represents the sample data

To pinpoint possible areas of misfit, standardised residuals values were examined. Standardised residuals are fitted residuals divided by their asymptotically (large sample) standard errors (Jöreskog & Sörbom, 1986). In essence, they represent estimates of the number of standard deviations that the observed residuals are from the zero residuals that would exist if model fit were perfect (Byrne, 2001). Values larger than 2,58 are considered to be large (Jöreskog & Sörbom, 1986).

Post hoc Analysis

Given the rejection of the initially postulated model, the focus shifted from model testing to model development. Considering the high-standardized residuals of items 13 and 2, it was decided to re-specify the model with these items deleted. In table 3, model 2 presents the fit statistics of the re-specified model.

Although the various fit indexes for model 2 were substantially improved compared to those for the initial model, there is still some evidence of misfit in the model. It was then decided to delete

item 16 due to the high-standardized residual loading of this item. The fit statistics are represented as model 3 in Table 3. Model 3 shows a much better fit, although the χ^2/df value is still above the recommended cut-off of 2. In an attempt to achieve a better χ^2/df value, error variances of single items within the particular subscales were then permitted to correlate. Correlations were allowed between item 12 and 14 (Model 4) as well as between item 14 and 15 (Model 5).

Model 5 indicates the best fit for the re-specified model. Although the χ^2 value ($\text{df}=60$; $p=0.00$) is still high, it is considerably lower than in model 1. All the other fit statistics indicate excellent fit of the measurement model to the data. Since this model fit was satisfactory and the results agreed with the theoretical assumptions underlying the structure of the MBI-GS, no further modifications of the model were deemed necessary.

Table 4 presents the goodness-of-fit statistics for the hypothesised MBI model with Depersonalisation.

Table 4

Goodness-of-fit Statistics for the Hypothesised Burnout Model (3-Factor, with Depersonalisation)

Model	χ^2	χ^2/df	GFI	AGFI	PGFI	NFI	TLI	CFI	RMSEA
Model 1	473.65	4.69	0.89	0.84	0.66	0.85	0.85	0.87	0.09
Model 2	246.26	3.33	0.93	0.90	0.66	0.90	0.91	0.93	0.07
Model 3	210.77	3.40	0.94	0.91	0.64	0.90	0.91	0.93	0.07
Model 4	123.04	2.02	0.94	0.94	0.65	0.94	0.96	0.97	0.05

The statistically significant χ^2 value in Model 1 of Table 4 ($\text{df}=101$; $p=0.0$) revealed a poor overall fit for the three factor burnout model including Depersonalisation. The χ^2/df value above 2, the GFI, AGFI, NFI, TLI and CFI values lower than 0.95 and RMSEA higher than 0.05 presents a failure to fit the data to the hypothesized model. It was therefore apparent that some modification in specification was needed in order to determine a model that better represents the sample data.

Post hoc Analysis

Due to the high-standardized residuals of items 2 and 9 it was decided to delete these items. A better fit was achieved, although the $\chi^2 = 246.26$ (df=74 ; p=0.00) is still unacceptably high and the NFI, TLI, CFI and RMSEA values do not make the recommended cut-offs (shown in Table 4 as Model 2).

In Model 3 item 16 was deleted. Although fit improved, it was still unsatisfactory. The $\chi^2 = 210.77$ (df=73 ; p=0.00) is lower than in Model 1, but still too high.

In Model 4 error variances of single items within the particular subscales were permitted to correlate. Correlations were allowed between item 17 and item 18. Model 4 indicates a good fit on the NFI, TLI and CFI fit indexes. The RMSEA is also 0.05 which indicates an excellent fit.

Table 5 indicates the correlations between the biographical variables.

Table 5

Correlations between biographical variables

Item	A	Q	YE	J	TC	S	St	L	CI	IQ	E	NS	U	SM
Q	0.07	-												
YE	0.93++	0.14*	-											
J	0.28*	0.30+	0.24*	-										
TC	-0.09	0.02	-0.10	-0.16*	-									
S	-0.08	0.09	-0.03	-0.01	0.04	-								
St	0.13	0.05	0.14	0.14*	-0.05	0.11*	-							
L	-0.13*	-0.16*	-0.23*	0.15	-0.06	-0.12	0.05	-						
CI	-0.07	-0.02	-0.06	0.04*	-0.02	0.03	0.06	0.18*	-					
Q	-0.04	-0.04	-0.07	0.17*	0.07*	0.02	0.06	0.16*	0.15*	-				
E	0.10*	0.12*	0.17*	-0.08*	0.11*	0.02	-0.01	-0.16*	0.06	-0.06	-			
NS	0.15*	-0.05	0.16*	0.15*	0.04	-0.01	-0.11*	-0.09	0.06	-0.10*	0.35+	-		
U	-0.18*	0.16*	-0.18*	0.10*	0.02	0.05	0.21*	0.24*	0.15*	0.23*	-0.09*	-0.37+	-	
SM	-0.08	-0.06	-0.13*	-0.10*	0.03	0.02	0.06	0.01	0.11*	0.05	0.02	-0.00	0.18*	-
SC	-0.08	-0.06	-0.10*	-0.11	0.05	0.06	0.04	0.04	0.05	0.01	-0.01	0.05	0.18*	0.70++

A=Age; Q=Qualification; YE=Years Experience; J=Job level; TC=Type of Contract; S=Sex; St=Status; L=Language; CI=Chronic Illnesses; IQ=Intention to Quit profession; E=Basic Equipment; NS=Necessary Skills; U=Union; SM=Stress Management

* Statistically significant correlation: $p \leq 0,05$

+ Practically significant correlation (medium effect): $r \geq 0,30$

++ Practically significant correlation (large effect): $r \geq 0,50$

Table 5 shows a statistically significant correlation between Age and Job level, Language (Negative correlation), Basic Equipment, Necessary Skills, and Unions (Negative correlation). A practically significant correlation (large effect) exists between Age and Years experience. Table 5 also indicates a statistically significant correlation between Qualifications and Years experience, Language (Negative correlation), Basic Equipment, and Union. Qualification also shows a practically significant correlation (medium effect) with Job level. A statistically significant correlation exists between Years Experience and Job Level, Language (Negative correlation), Basic Equipment, Necessary Skills, Union (Negative correlation), Stress Management (Negative correlation), and Staff Counselling (Negative correlation) exists. Table 5 also indicates that there is a statistically significant correlation between Job level and Type of contract, Status, Chronic Illness, Intention to quit the profession, Basic Equipment (Negative correlation), Necessary Skills, Union and Stress Management (Negative correlation). A statistically significant correlation also exists between Type of contract and Quit profession and Basic Equipment. There is also a statistically significant correlation between Sex and Status. A statistically significant correlation also exists between Status and Necessary Skills (Negative correlation) and Union (Negative correlation). Table 5 also indicates a statistically significant correlation between Language and Chronic Illnesses, Quit profession, Basic Equipment (Negative correlation) and Union. A statistically significant correlation is also present between Chronic Illness and Quit profession, Union and Stress Management. There is also a statistically significant correlation between Quit profession and Necessary Skills (Negative correlation) and Union. A statistically significant correlation also exists between Basic Equipment and Union. Basic Equipment also indicates a practically significant correlation (medium effect) with Necessary Skills. There is also a practically significant correlation (medium effect) between Necessary Skills and Union (Negative correlation). There is also a statistically significant correlation between Union and Stress Management and Staff Counselling. Table 5 also shows a practically significant correlation (large effect) between Stress Management and Staff Counselling.

Table 6 indicates the correlations between the biographical variables and the burnout dimensions. Since the burnout model with Depersonalisation showed a better fit than one with Cynicism, all subsequent analyses focus only on Depersonalisation.

Table 6

Correlations between Biographical Variables and the Burnout Dimensions

Item	A	Q	YE	J	T C	S	St	L	CI	IQ	E	NS	U	SM	SC
Exhaustion	0.02	0.06	0.05	-0.10*	0.00	0.12*	0.08	-0.19*	-0.22*	-0.32+	0.02	-0.04	-0.05	-0.05	0.05
Dep	-0.12*	0.11*	-0.10*	0.14*	-0.01	-0.00	0.17*	-0.01	-0.12*	-0.06	-0.04	-0.30+	0.34+	0.01	0.07
Efficacy	0.14*	-0.11*	0.11*	-0.23*	0.07	-0.02	-0.16	-0.09*	-0.03	0.00	0.12*	0.43+	-0.47+	-0.03	-0.03

Dep=Depersonalisation; A=Age; Q=Qualifications; YE=Years Experience; J=Job level; TC=Type of Contract; S=Sex; St=Marital Status; L=Language; CI=Chronic Illnesses; Q=Intention to quit the profession; E=Basic Equipment; NS=Necessary Skills; U=Union; SM=Stress Management; SC=Staff counselling,

* Statistically significant correlation: $p \leq 0,05$

+ Practically significant correlation (medium effect): $r \geq 0,30$

++ Practically significant correlation (large effect): $r \geq 0,50$

Table 6 shows a statistically significant correlation between Exhaustion and Job level (negative correlation), Sex, Language (negative correlation) and Chronic Illness (negative correlation). A practically significant correlation (medium effect) also exists between Exhaustion and Intention to quit the profession (negative correlation). Table 6 also indicates a statistically significant correlation between Depersonalisation and Age (negative correlation), Qualification, Years experience (negative correlation), Job level, Marital Status and Chronic illness (negative correlation). There also exist a practically significant correlation (medium effect) also exists between depersonalisation and Necessary skills (negative correlation) and Union. Statistically significant effects exist between Efficacy and Age, Qualification (negative correlation), Years Experience, Job Level, Language (negative correlation) and Basic equipment. A Practically significant correlation (medium effect) also exists between Efficacy and Necessary Skills and Union membership.

Table 7 gives the differences in Burnout Factors for Marital Status

Table 7

Differences in Burnout Factors for Marital Status

	Single	Engaged	Married	Divorced	Separated	Remarried	Root MSE	<i>p</i>
Exhaustion	11.88	13.30	13.12	14.12	12.95	14.00	4.97	0.34
Depersonalisation	9.20c	9.13c	10.11	12.33	11.68	13.67a	5.04	0.00*
Efficacy	22.90	21.04	20.47	19.61	19.25	19.83	5.25	0.32

* Statistically significant difference ($p < 0,05$)

a Practically significant difference between status in row where b (medium effect, d larger or equal to 0,50) or c (large effect, d larger or equal to 0,80) are indicated

Table 7 shows a statically and practically significant difference in the means of Remarried (large effect), Single (large effect) and Engaged teachers (large effect) exists regarding Depersonalisation.

Table 8 gives the differences in burnout factors of intentions to quit.

Table 8

Differences in Burnout Factors for Intentions to Quit

	1 Agree	2	3	4	5 Disagree	Root MSE	<i>p</i>
Exhaustion	16.52a	14.61	12.62	12.85	11.12c	4.70	0.00*
Depersonalisation	10.21	10.45	8.76	11.66a	7.86b	4.92	0.00*
Efficacy	21.71b	21.26b	22.22	18.17c	24.04a	4.78	0.00*

* Statistically significant difference ($p < 0,05$).

a Practically significant difference between "I consider quitting the profession" in row where b (medium effect, d larger or equal to 0,50) or c (large effect, d larger or equal to 0,80) are indicated

Table 8 shows a statistically and practically significant difference (large effect) in the means of those who intend leaving the profession and those who do not regarding Exhaustion. There is also a statistical and practical significant difference (large effect) in the means of those who disagree to an extent in quitting the profession and those who disagree completely with leaving the profession regarding Depersonalisation. Table 8 also indicates a statistically and practically significant difference in the means of those who intend leaving the profession and those who do

not. Regarding Efficacy, the differences is between 1-Agree (Low effect), 2 (medium effect), 4 (large effect), and 5-Disagree (large effect).

Table 9 gives the differences in burnout factors for perceptions of availability of equipment.

Table 9
Differences in Burnout Factors for Perceptions of Availability of Equipment

	1	2	3	4	5	Root MSE	<i>p</i>
	Completely disagree				Completely agree		
Exhaustion	14.88	12.30	12.81	12.91	13.62	4.98	0.26
Depersonalisation	9.12	8.95b	10.31	11.66a	8.04b	4.92	0.00*
Efficacy	20.37b	21.35	20.53b	19.05c	23.63a	5.00	0.00*

* Statistically significant difference ($p < 0,05$).

a Practically significant difference between "I have the basic equipment" in row where b (medium effect, d larger or equal to 0,50) or c (large effect, d larger or equal to 0,80) are indicated

Table 9 shows a statistical and practical significant difference in the means of those who completely agree with the statement that they have the available equipment as opposed to those that disagree that they have the available equipment to do their job effectively (medium effect) regarding Depersonalisation. Table 9 also shows a statistical and practical significant difference in the means of those who completely agree with the statement that they have the available equipment as opposed to those who disagree that they have the available equipment (medium effect) to do their job effectively regarding Depersonalisation. There exists a statistical and practical significant difference in the means of those who agree with the statement that they have the available equipment as opposed to those who do not feel that they have access to the available equipment to perform their job effectively (medium effect) regarding Efficacy. Table 9 also shows that there exists a statistical and practical significant difference of medium effect in the means of those who agree with the statement that they have the available equipment as opposed to those who do not agree nor disagree with the statement that they have the basic equipment to perform their jobs effectively regarding Efficacy. Table 9 shows a statistical and practical significant difference in the means of those who completely agree with the statement that they have the available equipment vs. those who agree to an extent that they have the available equipment to do their job effectively (large effect) regarding Efficacy.

Table 10 gives the differences in burnout factors for perceptions of personal skills, knowledge and abilities.

Table 10

Differences in Burnout Factors for perceptions of personal skills, knowledge and abilities

	1 Completely disagree	2	3	4	5 Completely agree	Root MSE	<i>p</i>
Exhaustion	13.67	13.42	13.11	13.23	12.75	4.98	0.90
Depersonalisation	14.33a	12.38c	11.88	10.86	8.14c	4.86	0.00*
Efficacy	15.67c	17.92c	18.48c	19.04c	24.16c	4.60	0.00*

* Statistically significant difference ($p < 0,05$).

a Practically significant difference between “I have the right skills” in row where b (medium effect, d larger or equal to 0,50) or c (large effect, d larger or equal to 0,80) are indicated

Table 10 shows a statistically and practically significant difference (large effect) in the means of those who completely disagree with the statement that they have the skills, knowledge and abilities to perform satisfactory as opposed to those who completely agree with the statement that they have the skills, knowledge and abilities to perform satisfactory as well as a statistical and practical significant difference (large effect) in the means of those who disagree with the statement that they have the skills, knowledge and abilities to perform satisfactory as opposed to those who completely agree with the statement that they have the skills, knowledge and abilities to perform satisfactory regarding Depersonalisation. There also exists a statistically and practically significant difference (large effect) in the means of those who completely disagree with the statement that they have the skills, knowledge and abilities to perform satisfactory as opposed to those who disagree with the statement that they have the skills, knowledge and abilities to perform satisfactory regarding Efficacy. Those who disagree with the statement that they have the skills, knowledge and abilities to perform satisfactory oppose to those who completely disagree with the statement that they have the skills, knowledge and abilities to perform satisfactory has a practically significant difference (large effect) regarding Efficacy. Those who neither agree nor disagree with the statement that they have the skills, knowledge and abilities to perform satisfactory has ‘n practically significant difference (large effect) with those

who completely agree with the statement that they have the skills, knowledge and abilities to perform satisfactory. There is also a practically significant difference (large effect) between those who agree with the statement that they have the skills, knowledge and abilities to perform satisfactory oppose to those who completely agree with the statement that they have the skills, knowledge and abilities to perform satisfactory.

DISCUSSION

An analysis revealed that there was sufficient internal consistency in all four subscales. The testing of an expanded model with a Mental Disengagement dimension made up of the sub-factors of Depersonalisation and Cynicism however failed. This study represents one of the first attempts to recover the newly theorised dimension, and unfortunately did not confirm current thinking regarding the concept. The results obtained using the structural equation modelling approach supported the three-dimensional factor structure, as has been consistently found across various samples and occupational groups (Leiter & Schaufeli, 1996; Schaufeli et al., 2002). Since the Depersonalisation model best fitted the current data, subsequent analysis only considered a three-factor model of burnout consisting of Exhaustion, Depersonalisation and Efficacy. Interestingly, Depersonalisation is specifically considered as the interpersonal dimension of burnout (Schaufeli, 2003), and thus presents a more specific focus than cynicism. It is alarming that teachers experience depersonalisation (an interpersonal attitude) stronger than cynicism (a general attitude towards work, the employer or the organisation). Teachers supposedly work with so many people everyday of their lives (overcrowded classrooms has been cited as a source of stress, Gold & Roth, 1993) that learners tend to become objects. Working with a large group of learners also makes it impossible to give personal attention to everyone, and teachers thus develop an impersonal and aloof attitude.

Based on both conceptual and empirical grounds, items 2, 9, and 13 were eliminated from the MBI model with Depersonalisation. Schutte et al. (2000) also excluded item 13 in a cross-cultural study on the factorial validity of the MBI-GS. Furthermore, error terms within subscales were also allowed to correlate in order to improve model fit. Correlated error terms in

measurement models represent systematic, rather than random, measurement error in item responses.

The age of the teachers was related to their years of experience in the teaching profession. This seems logical since the older the person is, the longer they have been in the working environment and would thus have more years of experience than somebody who has just started to work and is of a younger age. A relationship also exists between teachers' qualifications and job level. This could be interpreted as a teacher with higher or better qualifications being on a higher job level than those teachers with fewer qualifications. Teacher who feel that they have the basic equipment to do their jobs also see themselves as adequate regarding skills and knowledge to perform well at their job. The reason for this result is that the more skills a person acquires over the years, the more will they adapt to having just the basic equipment to do their job. The more skills they have, the more will they be able to perform their job with the equipment at hand. A relationship was also found between perceptions of personal skills and union membership. One of the major tasks of unions in schools is to make sure that their members can do their jobs effectively and one way to ensure that they do is ensuring that all of the teachers belonging to the union have the necessary skills. The relationship between union membership and the availability of stress management programmes in schools might be interpreted, as an indication that unions ensure that there is sufficient stress management in schools. Stress Management was also related to Stress Counselling, indicating that counselling forms a vital part of a stress management programme for secondary teachers.

Personal perceptions of skill has a negative correlation with Depersonalisation, which could indicate that teachers with less skills are also people who are most likely to develop negative, impersonal and cynical attitudes and feelings towards others. Personal perceptions of skill also correlates with perceptions of efficacy, which could be indicative of teachers who perceive themselves to be equipped with the necessary skills also experience themselves as more efficacious. Union membership has a negative relationship with perceptions of efficacy, perhaps indicating that teachers who belong to unions feel that they accomplish less at work. The possibility also exists that these teachers might join unions to protect them from employers who are not satisfied with their performance.

Remarried people showed higher levels of Depersonalisation than single and engaged people. This could imply that people who are remarried may have negative attitudes towards others. This is understandable in view of the emotional turmoil caused by a failed marriage. People who are still single or are engaged might not have had negative emotional experiences with a lot of people and will not have any negative attitudes or feelings of people like those who have been divorced and remarried.

People who have intentions of quitting their job differ largely from those who do not have such intentions regarding their levels of exhaustion. This can partially be explained by the fact that people who do suffer from exhaustion will be more prone to agree with the idea of quitting their jobs than those people that are not suffering from exhaustion. The same difference was found regarding teachers' level of depersonalisation. This could indicate that a negative feeling or attitude exists within the teaching profession that could cause a large number of teachers possibly quitting their jobs due to negative attitudes and feelings. People who agree with the statement "I have intentions to quit my job" differ largely from those who disagree with that statement regarding perceptions of personal efficacy. People who feel that they do not accomplish much in their job might quit that job. Teachers who do not accomplish their goals in the school or outside the school will want to get out of the teaching profession.

Teachers who perceive themselves as having the right equipment to perform their jobs successfully differ from those who do not hold this perception regarding their levels of depersonalisation. This could indicate that people who have the available equipment will be less prone to have negative attitudes and feelings towards others. The same result was again found for teachers who agree with the statement "I have the available equipment" from those people who disagree with the statement on Efficacy. The reason for this result is that teacher who have the available equipment will reach higher personal accomplishments and be more effective in their work.

Teachers who perceive themselves as not having the necessary personal skills, knowledge and abilities to effectively perform their job differ from those feel that they do regarding levels of

Depersonalisation. This indicates that teachers who do not perceive themselves to have the necessary personal skills, knowledge and abilities to perform effectively might develop negative feelings and impersonal relationships towards other easier than those who perceive themselves as skilled, knowledgeable and able. People who perceive themselves as less inadequately skilled and knowledgeable also differ from those that perceive themselves as skilled and knowledgeable regarding their personal feelings of efficacy. The reason for this difference could be that people who have the necessary personal skills, knowledge and abilities will be more effective in their work and personal lives and will also accomplish more than those people who do not have the necessary personal skills, knowledge and abilities.

In conclusion, this study could serve as reference for teachers in the Goldfields region of the Free State Province regarding Burnout. The three-factor structure of the burnout construct is confirmed and its subscales are internally consistent. Based on the results obtained in this study, it seems as if the MBI-GS is a suitable instrument for measuring burnout of teachers in the Goldfields region of the Free State Province. Therefore, the MBI-GS opens up further possibilities for burnout research in South Africa.

RECOMMENDATION

Based on the results of this study, it is recommended that the MBI-GS be used to assess burnout in the educational profession. However, items 2, 9 & 13 should be left out when administering the questionnaire. It appears justifiable to use the MBI to measure burnout in a multi-cultural sample, although future research should also evaluate the construct equivalence of the construct.

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CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

In this chapter the conclusions drawn on the basis of the literature and the findings of the empirical study are set out. In addition, the limitations of the research are discussed. Finally, recommendations are made for the Free State Education Department in terms of related future research.

3.1 CONCLUSIONS

The findings, as they relate to the objectives set for this research, can be summarised as follows:

- **To determine the validity and reliability of the Burnout construct for teachers of secondary schools in the Goldfield region of the Northern Free state Province.**

An expanded model of burnout, which included both dimensions of Cynicism and Depersonalisation as components of Mental Disengagement, was tested. An analysis revealed that there was sufficient internal consistency in all four subscales. Testing of an expanded model with a Mental Disengagement dimension made up of the sub-factors of Depersonalisation and Cynicism however failed. This study presents one of the first attempts to recover the newly theorised dimension, and unfortunately did not confirm current thinking regarding the concept. The results obtained using the structural equation modelling approach supported the three-dimensional factor structure, as has been consistently found across various samples and occupational groups (Leiter & Schaufeli, 1996; Schaufeli et al., 2002). Since the Depersonalisation model best fitted the current data, subsequent analysis only considered a three-factor model of burnout comprising of Exhaustion, Depersonalisation and Efficacy. Interestingly, Depersonalisation is specifically considered as the interpersonal dimension of burnout (Schaufeli, 2003), and thus presents a more specific focus than cynicism. Based on both conceptual and

empirical grounds, items 2, 9, and 13 were eliminated from the MBI model with Depersonalisation. Schutte et al. (2000) also excluded item 13 in a cross-cultural study on the factorial validity of the MBI. Furthermore, error terms within subscales were also allowed to correlate in order to improve model fit. Correlated error terms in measurement models represent systematic, rather than random, measurement error in item responses.

- **To determine if biographical variables can be used to determine burnout.**

Various biographical variables can be used to determine burnout. A persons' perception of their skills could determine burnout for example. when people do not perceive that they have the necessary skills to perform their job effectively, they could have higher levels of stress which could ultimately lead to burnout.

Marital status could also lead to burnout where people who have been divorced, develop negative feelings towards other people and become impersonal towards other teachers or even worse, towards the learners. Poor interpersonal relationships could affect social support networks, making teachers more prone to burnout.

Teachers who scored higher on burnout are also those who show greater intention to quit the profession. This finding highlights the necessity of treating teacher burnout in order to keep qualified teachers in service of the Education Department.

Teachers who perceive themselves as not having the right equipment, might be prone to worry that they would not be able to perform their jobs effectively, which could contribute to high levels of stress. The more they perceive themselves not to have the necessary equipment, the more pressure they will be under, which could eventually lead to burnout.

Teachers who perceive themselves as not having the necessary skills, knowledge and abilities show higher levels of burnout. These teachers might experience higher than

normal stress levels because they may fear that their work is unsatisfactory. This could lead this person having high levels of stress that in turn will lead to burnout.

3.2. LIMITATIONS

The following limitations of the research should be taken into account:

- The Goldfields district is an area that is mostly supported by the gold mines. When the gold price weakens, retrenchments occur and since the spouses of some of the teachers work on the mine, this could be an indication of high stress levels that were not taken into account in this study.
- The current study focused only on burnout and biographical variables. It is also possible that burnout could be related to variables like job characteristics, job perceptions, attitudes towards work and health.
- The current sample is also limited to a specific geographical area and interpretation of results should be done with caution. Results should not necessarily be generalised to other teachers in other parts of the Free State Province or South Africa.

3.3 RECOMMENDATIONS

3.3.1 Recommendations for the Free State Education Department

The following recommendations, based on the findings, should be considered and implemented:

- It must be ensured that teachers have the right skills when entering the education profession. The quality of the curriculum of the universities and technical universities must be evaluated to ensure that when teachers graduate, that they have the necessary skills, knowledge and abilities to enter the education profession with confidence.

- Union membership must also be evaluated. The law gives every person the right to belong to a union, but performance management must be done to ensure that people are performing up to standard and that they don't just join a union to protect them from their employers.
- Employers must keep a close eye on the marital status of their employees. Teachers, who have marital problems or are in the process of divorce, should be assisted because of the negative impact this could have on their professional lives.
- Teachers who intend to quit their jobs, must be assisted in finding out what their reasons for wanting to quit are, and maybe by helping them overcome the problems that motivate them to quit their jobs. This could also assist the Education Department in identifying and addressing sources of occupational stress.
- It is essential that every teacher have the right equipment to perform his or her job effectively. Teachers, who do not have the right equipment, will not be able to give their students the quality education that they deserve and the teachers will also be ineffective.
- Stress management and stress counselling are crucial in schools and must be implemented to ensure that teachers have the opportunity to get relief from high stress levels and to know that something is being done about their well-being.

3.3.2 Recommendations for future research

The following recommendations for future research are made based on the findings:

- The sample could be larger in future. This recommendation is especially important to determine the construct equivalence of constructs like burnout in multi-cultural samples.

- Future research should be done in other parts of the Free State Province as well as the rest of South Africa.
- Future research could include questionnaires investigating job characteristics, teachers' perception of their jobs, their attitudes towards the school and their health.
- Future research should study the effect of external variables that could lead to stress like for e.g. the fluctuating gold price on a community dependent on the gold mining industry.