

**BURNOUT OF ACADEMIC STAFF IN A HIGHER EDUCATION
INSTITUTION**

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COMMENTS

The reader is reminded of the following:

- The references as well as the editorial style as prescribed by the *Publication Manual (5th edition)* of the American Psychological Association (APA) were followed in this dissertation. This practice is in line with the policy of the Programme in Industrial Psychology of the PU for CHE to use APA style in all scientific documents as from January 1999.
- The mini-dissertation is submitted in the form of a research article. The editorial style specified by the *South African Journal of Industrial Psychology* (which agrees largely with the APA style) is used, but the APA guidelines were followed in constructing tables.

DEDICATION

In writing this mini-dissertation, I asked myself “Who is the one person I have known who enabled me to do this research project?” The answer was easy. One person has for the past year been a model to me of purpose-driven, hardworking, commitment and perseverance. One person continues to be my greatest inspiration and encouragement in the process of becoming a researcher. Without his friendship, motivation, tremendous support, advice and caring, I could not have written this mini-dissertation. So, it gives me great pleasure to dedicate this research project to...

Eben Kleyn

1969–2003

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ABSTRACT

Title: Burnout of academic staff in a higher education institution.

Key terms: Burnout, job characteristics, job demands, job resources, academic staff, strain, universities, dispositional optimism, pessimism

Universities worldwide are developing a disturbing imbalance with their environments. In recent years, academic working conditions in South African universities have changed dramatically as a result of the country's post-apartheid policies and the accelerating globalisation of knowledge. Academic staff are continually confronted with an overload of job demands without corresponding increases in job resources. These prolonged job stressors that academic staff are subjected to over lengthy periods of time coupled with inadequate job resources can lead to the development of a pathogenically defined construct, namely burnout.

The objective of this research was to investigate the relationships between burnout, strain, job characteristics and dispositional optimism in universities in the North-West Province. A cross-sectional design was used. The study population ($N = 279$) consisted of academic staff of universities in the North-West Province. The Maslach Burnout Inventory – General Survey (MBI-GS), The Life Orientation Test – Revised (LOT-R), Job Characteristics Scale (JCS) and General Health Questionnaire (GHQ19) were used as measuring instruments. Descriptive statistics (e.g. means, standard deviations and kurtosis) were used to analyse the data. Exploratory factor analysis and structural equation modelling were used to confirm the structure of the measuring instruments and to test theoretical models.

The results showed that the stressors of overload was associated with high levels of exhaustion and low professional efficacy. Job resources (i.e. social support, task characteristics) were related to low levels of exhaustion and cynicism and higher levels of professional efficacy. Exhaustion and low professional efficacy were significantly related to physical and psychological health problems. Exhaustion and cynicism were negatively related to optimism, whereas professional efficacy were positively related to the latter. Optimism moderated the effects of a lack of resources on exhaustion and the effects of job resources on professional efficacy.

Recommendations for future research are made.

OPSOMMING

Titel: Uitbranding van akademiese personeel by 'n hoër opvoedkundige instelling.

Sleuteltermes: Uitbranding, werkskenmerke, werkseise, werkhulpbronne, akademiese personeel, stremming, disposisionele optimisme, pessimisme

Universiteite dwarsoor die wêreld is besig om 'n steurende wanbalans te ontwikkel met die betrokke omgewing waarbinne dit funksioneer. Akademiese werksomstandighede in Suid-Afrikaanse universiteite het in die onlangse verlede dramatiese veranderinge ondergaan in reaksie op die land se postapartheid-beleidsrigtings en die toenemende globalisering van kennis. Akademiese personeel word voortdurend gekonfronteer met 'n oorlading van werkseise, sonder 'n ooreenstemmende toename in hulpbronne. Blootstelling aan spanning oor lang tydperke, saam met onvoldoende hulpbronne, kan lei tot uitbranding van akademiese personeel.

Die doel van die navorsing was om die verhouding tussen uitbranding, stremming, werkseienskappe en disposisionele optimisme in universiteite van die Noordwes-provinsie te ondersoek. 'n Dwarssnee-ontwerp is gebruik. Die studiepulasie ($N = 279$) het bestaan uit akademiese personeel van die universiteite in die Noordwes-provinsie. Die Maslach-uitbrandingsvraelys – Algemene opname, die Hersiende weergawe van die Lewensoriëntasietoets, Werkskenmerkeskaal en Algemene Gesondheidsvraelys is as meetinstrumente gebruik. Beskrywende statistiek (bv. gemiddeldes, standaardafwykings, skeefheid en kurtose) is gebruik om die data te ontleed. Verkennende faktorontleding en strukturele vergelykingsmodellering is gebruik om die struktuur van die meetinstrumente te bevestig en om teoretiese modelle te toets.

Die resultate het aangedui dat werkseise (oorlading) verband hou met hoër vlakke van uitputting en 'n lae mate van professionele bekwaamheid. Werkhulpbronne (bv. sosiale ondersteuning, taakeienskappe) sowel as optimisme het verband gehou met lae vlakke van uitputting en sinisme, en hoër vlakke van professionele bekwaamheid. Uitputting en 'n lae mate van professionele doeltreffendheid het betekenisvol verband gehou met fisieke en psigologiese gesondheidsprobleme. Uitputting en sinisme is negatief geassosieer met

optimisme, terwyl professionele bekwaamheid positief met laasgenoemde verband hou. Optimisme het die verband tussen 'n gebrek aan werkhulpbronne en uitputting asook tussen werkhulpbronne en professionele bekwaamheid gemodereer.

Aanbevelings vir toekomstige navorsing word aan die hand gedoen.

CHAPTER 1

INTRODUCTION

This mini-dissertation focuses on the relationships between burnout, job characteristics and dispositional optimism of academic staff of universities in the North-West Province.

In this chapter the problem statement and the research objectives (including the general and specific objectives) are discussed. Following this, the research method is discussed.

1.1 PROBLEM STATEMENT

Universities play a vital role in the creation of knowledge, in addition to education and training. Academics are indispensable to societal life, since they are responsible for educating virtually all the leaders of societies, conducting scientific research, and furthering a knowledge and understanding of human behaviour. In short, universities provide the foundation on which our culture rests (Bowen & Schuster, 1985). Our society as a whole depends on professionals to perform a set of vitally important and demanding tasks – thus every professoriate is expected to carry a share of the load.

The changing conditions of higher education have made it extremely difficult to speak of academic workers as a unified profession (Nixon, Marks, Rowland & Walker, 2001). Higher education is challenged by a series of complex overlapping changes that are profoundly affecting its organisational structures, traditional practices and the way in which its institutions are viewed by the public. In South Africa, the restructuring of the higher education system and transformation of higher education institutions are located within the country's broad political and socio-economic transition to democracy (Fourie, 1999). This implies that South African higher education should engage with the problems and challenges of the social, political and economic context in which it operates.

As a result of these changes, three challenges are common to all universities (Klitgaard, 1993). First, the resources allocated to universities have decreased due to the competing demands of the state. As funding decreases and is influenced by market and industry needs,

higher education cannot simply continue to offer programmes as it did in the past (Koorts, 2000). Institutions need to identify what is relevant to the market and accordingly deliver the programmes that can meet these needs. A premium is also placed on the professional identity of the university teacher as a researcher, capable of attracting external funds within an increasingly competitive research culture (Nixon et al., 2001).

Secondly, there is great pressure to enrol more students from the previously disadvantaged groups. Staff members are increasingly being confronted with students coming from cultural, social and educational backgrounds differing substantially from their own and from those of the students with whom they have been involved in the past (Fourie & Alt, 2000). The increase in students and class sizes contribute to a dramatic increase in the student-staff ratio (Gillespie, Walsch, Winefield, Dua & Stough, 2001). As a result, academic staff members have to play the role of personal and academic counsellors, and much more time and skills are required to deal with the increasing diversity of students. In the last instance, universities have to produce elite from these students that can lead the country in an internationally competitive economy.

Universities, like other environments, can be stress inducing, since faculty and staff are exposed to competing demands for teaching, research and service (Watts et al., 1991). However, during the past 15 years, many of the advantages and attractions of academic staff have been eroded. A consequence of the new educational landscape is that the occupation of a university teacher no longer carries the assumption of autonomy and status (Nixon et al., 2001). Instead, faculty members sensed that together with the decreases in salaries, untenured posts, increased workloads and declines in compensation, they have lost social status as well (Bowen & Schuster, 1985).

It is evident that in recent years, work pressure has been constantly rising within academics, and the persistent demands of academic work could almost inevitably lead to adverse work consequences for academic staff (Singh & Bush, 1998). Universities are therefore particularly vulnerable to the adverse affects of stress (Sharpley, Reynolds, Acosta & Dua, 1996). One such effect is job burnout, a psychological strain that occurs when the individual feels “done in” by the stressful situation (Blix, Cruise, Mitchell & Blix, 1994; Sheesley, 2001).

Burnout is an individual stress experience embedded in the context of complex social relationships and considered to be a long-term stress reaction that occurs among individuals who work with people in some capacity (Jansen, Schaufeli & Houkes, 1999; Maslach & Schaufeli, 1993). Burnout was initially a very slippery concept – there was no standard definition for it although many people used the term to indicate very different things (Maslach, 1998). As a result, the dimensions of burnout are conceptualised differently, depending on the nature of the job concerned. According to Maslach, Jackson and Leiter (1996), the three dimensions of burnout are distinguished in terms of emotional exhaustion, depersonalisation and low personal accomplishment in the helping professions (including education). In jobs other than the helping professions, the dimensions of burnout are labelled as exhaustion, cynicism and low professional efficacy.

Burnout can be defined 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” (Schaufeli & Enzmann, 1998, p. 36). Thus, in addition to the draining of one’s energy, burnout involves the negative evaluation of oneself (diminished personal accomplishment), of others (depersonalisation) and the development of a negative, callous or detached response to various aspects of the job (cynicism) (Jansen et al., 1999; Maslach et al., 1996).

In the development of the burnout syndrome, exhaustion emerges first. Exhaustion is considered to be the central quality of burnout and refers to feelings of being overextended and exhausted. This is primarily a response to demand stressors placed upon individuals especially work overload, interpersonal interaction, role conflict and high levels of personal and organisational expectations (Cordes & Dougherty, 1993). According to Maslach (1998), exhaustion is a necessary but not sufficient criterion for burnout, because it fails to capture the individual’s relationship with his/her work. Chronic exhaustion, however, can lead people to distance themselves emotionally and cognitively from their work, so that they are less involved with the needs of other people or the demands of the task.

Depersonalisation develops in response to increased exhaustion and is characterised by a detached and cynical response towards colleagues and students, thereby treating them as objects rather than as people (Byrne, 1991; Demerouti, Bakker, Nachreiner & Schaufeli,

2001). However, researchers currently acknowledge that employees in almost any job can develop burnout, and not just necessarily individuals who do people work of some kind (Maslach & Jackson, 1986; Schaufeli & Enzmann, 1998). Maslach et al. (1996) redefined burnout in terms of a crisis in one's relationship with work in general, thereby shifting the focus to the cynicism component of burnout. Although the individual develops impersonal relationships with his/her clients and tasks in an attempt to avoid stress, this mechanism is generally ineffective and may lead to the final phase of burnout, namely decreased professional efficacy.

Reduced professional efficacy refers to individuals evaluating themselves as ineffective and incompetent in working with the recipients of one's service and in fulfilling job responsibilities (Maslach et al., 1996). Factors such as qualitative work overload, role ambiguity, lack of performance and unmet organisational and achievement expectations contribute to these experiences of diminished personal accomplishment (Cordes & Dougherty, 1993).

A great deal of research has been devoted to the understanding of factors that contribute to burnout (Schaufeli & Greenglass, 2001). It is assumed that burnout develops in reaction to particular job stressors that occur among human service workers (Cordes & Dougherty, 1993; Schaufeli & Enzmann, 1998). The study of stressors specific to academic staff thus seems imperative from a research point of view. Results of research in higher education over recent years have indicated that the most troublesome stressors experienced by academic staff were the following: a heavy workload, time pressures, finding financial support for research, insufficient recognition and rewards, poor role clarity practices and job insecurity (Abouserie, 1996; Cross & Carroll, 1990; Daniels & Guppy, 1994; Doyle & Hind, 1998; Earley, 1994; Gillespie et al. 2001; Gmelch, Lovrich & Wilke, 1984; Kinman, 1998; Wissing, Du Toit & Rothmann, 2002).

According to Schaufeli and Enzmann (1998), organisational stressors can be divided into two groups, namely job demands and a lack of job resources. Several theories and models have been developed to explain the effects of job demands (e.g. work overload) and resources (e.g. job control) on burnout. These include the Conservation of Resources theory (Hobfoll & Freedy, 1993; Lee & Ashforth, 1996), the Job Demands-Resources (JD-R) model (Demerouti et al., 2001) and the Comprehensive Burnout and Engagement (COBE) model (Schaufeli &

Bakker, 2002). This theory and these models propose that burnout develops in response to overly high job demands and low/diminished job resources.

Fisher (1994) mentioned that demands on academics have risen rapidly over the recent years, together with a steady erosion of job resources. Several studies indicated that quantitative job demands such as work overload, role conflict, role ambiguity and role overload have increased dramatically within the academic profession (Gmelch et al., 1984; Lease, 1999; Gillespie et al., 2001). Other studies indicated a considerable lack of resources in the academic profession, such as a decline in faculty salaries (Bowen & Schuster, 1985), job autonomy (Kinman, 2001), job security (Fourie, 1999), job control (Fisher, 1994), and a lack of involvement in decision-making (Gillespie et al., 2001). It is evident that employees have to cope with many demands and often with limited resources.

In the academic context, burnout can be regarded as the result of negatively perceived work-related events that produce a level of persistent stress that in turn results in chronic frustrations, tiredness or exhaustion, adverse behaviour and/or dysfunction in one's work (Melendéz & de Guzman, 1983). Educators who fall victims to burnout are likely to be less sympathetic towards students, have a lower tolerance for classroom disruption, be less apt to prepare adequately for class and feel less committed and dedicated to work (Schwab, Jackson & Schuler, 1986). The traditional ways of teaching, research and service roles of university teachers are also influenced by burnout and may ultimately lead to increased absenteeism and an intention to leave the profession (Armour, Cafarella, Fuhrman & Wergin, 1987; Kinman, 2001).

Based on a stress framework, any factor associated with elevated stress levels may be linked to burnout through the relationship between burnout and stress (Raedeke, Granzky & Warren, 2000). According to these authors, burnout is more than just a simple reaction to chronic stress and alternative perspectives are necessary in order to develop a more complete understanding of the issue. In this regard, Rothmann (2003) stressed the need for burnout research in South Africa in stating that serious limitations of burnout research in South Africa include poorly designed studies and a lack of sophisticated statistical and controlled studies. Taken into consideration the multi-cultural context of the South-African society, cross-cultural studies have found that role stressors such as conflict and ambiguity may be universal antecedents of burnout across countries and cultures (Bhagat et al., 1994; Etzion & Bailyn,

1994). Poortinga (1992, p. 13) mentioned in this regard that the same psychological processes are operating in all humans, independent of culture.

Following a transactional perspective, burnout is a product of interactions between environmental factors (demands) and individual perceptions and behaviours (Cooper, Dewe & O' Driscoll, 2001). Certain dispositional variables might moderate the effects of job demands and a lack of job resources on burnout. According to Ganster and Schaubroeck (1995), there is growing evidence that dispositional variables may protect individuals from the adverse consequences of stressors. Cooper et al. (2001) define a moderator as "a variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable". Dispositional optimism was considered to be a moderator of burnout in this research.

Optimism has been identified as an important factor in physical health, especially for people experiencing stress (Cassidy, 2000). In a hierarchical multiple regression analysis done by Fry (1995), evidence was found that optimism significantly moderates the relationship between daily hassles and self-esteem maintenance, burnout and physical illness. A number of researchers described this personality trait as a psychological resistance factor, which could be used to conceptualise individual differences and which is related to more positive outcomes (Ebert, Tucker & Roth, 2002). Optimism seems to be an important dispositional quality that could moderate wellbeing, due to the fact that it influences a person's motivation and coping behaviour.

The above statement indicates that job burnout might be caused by certain job characteristics, including high job demands and a lack of job resources. Furthermore, it is possible that dispositional optimism could moderate the relationship between potential stressors and burnout. The ultimate goal of this research is therefore to provide some order and integration in the relationships between burnout, strain, job characteristics and dispositional optimism to advance research and encourage applications of new knowledge to pressing academic problems, especially in transforming higher education institutions.

The following research questions arise, based on the above-mentioned description of the research problem:

- How are the relationships between burnout, strain, job characteristics (job demands and resources) and optimism conceptualised in literature?
- What are the relationships between burnout, job characteristics and strain among academic staff of universities in the North-West Province?
- Does dispositional optimism moderate the effects of job characteristics on burnout of academic staff of universities in the North-West Province?

1.2 RESEARCH OBJECTIVES

The research objectives can be divided into a general objective and specific objectives.

1.2.1 General objective

The general objective of this research was to investigate the relationships between burnout, strain, job characteristics and dispositional optimism in universities in the North-West Province.

1.2.2 Specific objectives

The specific objectives of this research were:

- To conceptualise the relationships among burnout, strain, job characteristics (job demands and resources) and optimism from the literature;
- To determine the relationships among burnout, strain and job characteristics among academic staff of universities in the North-West Province;
- To determine whether dispositional optimism moderates the effect of job characteristics on burnout of academic staff of universities in the North-West Province.

1.3 RESEARCH METHOD

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

1.3.1 Literature review

The literature review focused on burnout, strain, job characteristics and dispositional optimism.

1.3.2 Empirical study

1.3.2.1 Research design

A cross-sectional survey design was used to collect the data and to achieve the research goals. One group of people was observed at one point in time (Neuman, 2000). A sample was drawn from a population at a specific time (Shaughnessy & Zechmeister, 1997). This design was also used to assess interrelationships among variables within a population. According to Shaughnessy and Zechmeister (1997), this design is ideally suited to the descriptive and predictive functions associated with correlation research.

1.3.2.2 Study population

A stratified, random sample ($N = 279$) was taken from the academic staff at Potchefstroom University and the University of North-West.

1.3.2.3 Measuring battery

- The *Maslach Burnout Inventory – General Survey* (MBI-GS) (Maslach et al., 1996) was used to measure burnout. According to Leiter and Schaufeli (1996) the MBI-GS, as a third general version of the Maslach Burnout Inventory (Maslach, Schaufeli & Leiter, 2001), evaluates burnout among professionals with and without the direct client contact that characterises human service professionals. The MBI-GS consists of 16 items that produce three scores: 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”). These three components of the burnout construct are conceptualised in broader terms relating to the job and not just the personal relationships that may be part of the job

(Maslach et al., 2001). Schaufeli, Van Diederendonck, and Van Gorp (1996) reported that internal consistencies (Cronbach coefficient alphas) 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). All items are scored on a 7-point frequency rating scale ranging from “0” (never) to “6” (always/daily). High scores on exhaustion and cynicism and low scores on efficacy are indicative of burnout. The items of the Depersonalisation sub-scale of the Maslach Burnout Inventory – Educator Survey (MBI-ES) will be used in addition. In the third edition of the Maslach Burnout Inventory, Maslach et al. (1996) distinguish the three dimensions of burnout in terms of emotional exhaustion, depersonalisation and low personal accomplishment in the educational profession.

- *The Life Orientation Test – Revised (LOT-R)*, a 10-item measure, was developed by Scheier, Carver and Bridges (1994) to measure dispositional optimism. Six items contribute to the optimism score and four items are fillers. The original Life Orientation Test (Scheier & Carver, 1985), which hypothesized a two-factor structure of optimism (i.e. optimism and pessimism) was questioned (Harju & Bolen, 1998). Follow-up analysis has demonstrated a one-factor structure, indicating that the LOT-R is measuring a continuum of high, average and low optimism/pessimism (Scheier et al., 1994). The items of the LOT-R are measured on a five-point Likert Scale, ranging from 5 = I strongly agree to 1 = I strongly disagree. The LOT-R was found to have adequate internal consistency (Cronbach’ alpha = 0,78) and excellent convergent and discriminant validity (Scheier et al., 1994). Based on a sample of 204 college students, Harju and Bolen (1998) obtained a Cronbach alpha coefficient of 0,75.
- *The Job Characteristics Scale (JCS)* was developed by the authors to measure job demands and job resources for employees. The JCS consists of 48 items. The questions are rated on a 4-point scale ranging from 1=never to 4=always. The dimensions of the JCS include pace and amount of work, mental load, emotional load, variety in work, opportunities to learn, independence in work, relationships with colleagues, relationship with immediate supervisor, ambiguities about work, information, communications, participation, contact possibilities, uncertainty about the future, remuneration and career possibilities.

- The *Health Questionnaire (HQ)*, as a subscale of the ASSET (An Organisational Stress Screening Tool), which was developed by Cartwright and Cooper (2002) was used to assess the respondents' level of health. It consists of 19 items arranged on two subscales: Physical health and Psychological wellbeing. All items on the Physical health subscale relate to physical symptoms of stress. The role of this subscale is to give an insight into physical health, not an in-depth clinical diagnosis. The items listed on the Psychological wellbeing subscale are symptoms of stress-induced mental ill health. This subscale gives an insight into psychological health, not an in-dept clinical diagnosis. Johnson and Cooper (2003) found that this questionnaire has good convergent validity with an existing measure of psychiatric disorders, the General Health Questionnaire.
- A *questionnaire* was developed to gather information about the demographic characteristics of the participants. Information that was gathered included the following: city and university, gender, marital status, satisfaction with current relationship/marriage/single status, language, age, educational qualifications, job category, job title, main educational focus, years in current institution, years in current job, chances of promotion, basis of employment, working hours, total number of weekly working hours, number of working hours outside normal office hours in a workweek, amount of time travelling to and from workplace, annual leave, quitting the job, social activities, hobbies, relaxation, planned exercise, ideal exercise programme, smoking behaviour, amount of cigarettes smoked per day, alcoholic behaviour and units of alcohol consumed per week.

1.3.2.4 Statistical analysis

The SAS-program was used to carry out statistical analysis regarding reliability and validity of the measuring instruments, descriptive statistics, correlation coefficients and canonical analyses (SAS Institute, 2000). The reliability and validity of the measuring instruments were assessed with the use of Cronbach alpha coefficients, inter-item correlation coefficients and confirmatory factor analysis (Clark & Watson, 1995). Descriptive statistics (e.g. means, standard deviations and kurtosis) were used to analyse the data. Exploratory factor analysis and structural equation modelling were used to assess the structure of the measuring instruments.

Pearson product-moment correlation coefficients were used to specify the relationships between the variables. The level of statistical significance was set at $p \leq 0,05$. Effect sizes were used to decide on the significance of the findings. A cut-off point of 0,30 (medium effect, Cohen, 1988) was set for the practical significance of correlation coefficients. Canonical correlation was used to determine the relationships between the dimensions of burnout, job characteristics, strain and dispositional optimism. The goal of canonical correlation is to analyse the relationship between two sets of variables (Tabachnick & Fidell, 2001).

Structural equation modelling (SEM) methods as implemented by AMOS (Arbuckle, 1997) were used to construct a causal model of burnout, strain and optimism. Goodness-of-fit indices were used to summarise the degree of correspondence between the implied and observed covariance matrices. These included the χ^2 Goodness-of-Fit Statistic, $\chi^2 / \text{Degrees of Freedom Ratio}$ (CMIN/DF), Goodness-of-Fit Index (PGFI), Normed Fit Index (NFI), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI) and the Root Mean Square Error of Approximation.

1.4 DIVISION OF CHAPTERS

The chapters are presented as follows in the mini-dissertation:

Chapter 1: Introduction

Chapter 2: Research article

Chapter 3: Conclusions, shortcomings and recommendations.

1.5 CHAPTER SUMMARY

This chapter sought to provide details of the motivation for this research as well as the methodology to be employed. In addition to the problem statement, the objectives of the research as well as the research method were outlined. Finally the envisaged chapter arrangement was indicated.

Chapter 2 focuses on the research article.

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CHAPTER 2

RESEARCH ARTICLE

BURNOUT OF ACADEMIC STAFF IN A HIGHER EDUCATION INSTITUTION*

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ABSTRACT

The objective of this study was to investigate the relationships between burnout, health, job characteristics and dispositional optimism in a higher education institution in South Africa. A cross-sectional design was used. The study population ($N = 279$) consisted of academic staff working in a higher education institution. The Maslach Burnout Inventory – General Survey, The Life Orientation Test – Revised, Job Characteristics Scale and the Health subscale of the ASSET were used as measuring instruments. Using structural equation modelling, the results showed that overload was associated with high exhaustion and low professional efficacy. Job resources were negatively related to exhaustion and cynicism, and positively related to professional efficacy. Exhaustion and low professional efficacy were related to health problems. Optimism moderated the effects of a lack of resources on exhaustion and the effects of job resources on professional efficacy.

OPSOMMING

Die doel van hierdie studie was om die verband tussen uitbranding, stremming, werkskenmerke en disposisionele optimisme in universiteite van die Noordwes-provinsie te ondersoek. 'n Dwarssnee opname-ontwerp is gebruik. Die studiepopulasie ($N = 279$) het bestaan uit akademiese personeel van die universiteite in die Noordwes-provinsie. Die Maslach-uitbrandingsvraelys – Algemene Opname, die Lewensorientasietoets, die Werkskenmerkeskaal en die Algemene Gesondheidsvraelys is afgeneem. Die resultate het aangedui dat werkseise verband hou met hoë vlakke van uitputting en 'n lae mate van professionele bekwaamheid. Werkshulpronne het negatief verband gehou met uitputting en sinisme en positief verband gehou met professionele doeltreffendheid. Uitputting en 'n lae mate van professionele doeltreffendheid het verband gehou met gesondheidsprobleme. Optimisme het die effek van 'n gebrek aan werks hulpronne op uitputting en professionele doeltreffendheid gematig.

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INTRODUCTION

During the past two decades, higher education institutions from all over the globe have been confronted with a series of complex changes, challenging their mandates, traditional practices, authority and organisational structures (Doyle & Hind, 1998; Hugo, 1998; Nixon, Marks, Rowland & Walker, 2001). In particular, higher education institutions in South Africa are currently undergoing a process of transformation in an attempt to move away from the ethos and struggles inherited from the apartheid educational era towards a democratic society (Dlamini, 1995; Hugo, 1998). At the same time, the realities of globalisation are forcing structural changes and adjustments on higher education institutions to create a new organisational reality (Du Toit, 2000; Quick, Nelson & Quick, 2001).

For academic staff, the above-mentioned developments present major complications. Not only is the plethora of roles (e.g., teacher, researcher, counsellor, adviser, facilitator, colleague, marketer, tutor, writer, manager) increasing, but academics are also required to make paradigm shifts, adopt new policies and practices, and approach their professional endeavours in new and innovative ways (Fisher, 1994; Fourie 1999; Fourie & Alt, 2000; Gmelch, Lovrich & Wilke, 1984). According to Fisher (1994), academics are frequently expected to perform a number of these roles simultaneously. On the one hand, such supplementary tasks may be considered a healthy diversification of one's job. On the other hand, the toll on faculty from these added responsibilities, closer scrutiny and dwindling resources may well be an important cause of an extreme and specific job-related strain, commonly labelled as burnout (Cooper, Dewe & O' Driscoll, 2001; Mintz, 1999).

Although it has been shown that employees in almost any type of job can develop burnout (Schaufeli & Enzmann, 1998), according to Maslach, Schaufeli and Leiter (2001), and Maslach and Jackson (1986), burnout is a long-term stress reaction that occurs particularly among professionals who do 'people work' of some kind. Academic staff in higher education institutions are, thus, likely candidates for burnout because of their relationships with large numbers of students, staff and administration (Blix, Cruise, Mitchell & Blix, 1994; Byrne, 1991; Melendez & de Guzman, 1983; Seiler & Pearson, 1984-5). The intense level of personal, emotional contact that characterises these kinds of relationships can be quite stressful, since it is expected of professionals to be selfless and put the needs of others first, and do whatever it takes to help the client or the learner (Maslach, 1998). Regarding this,

Maslach and Schaufeli (1993) note that burnout is an individual stress experience embedded in the context of complex social relationships.

The changing nature of academic work appears to have led to a considerable increase in job demands without corresponding increases in job resources. According to Schaufeli and Enzmann (1998), burnout develops in response to these job stressors (job demands and a lack of resources). The first stage of burnout is characterised by an imbalance between resources and demands that eventually leads to feelings of exhaustion (Maslach & Leiter, 1997; Schaufeli & Enzmann, 1998). Next, a set of negative, indifferent or overly detached attitudes develops (cynicism). Finally, reduced professional efficacy develops when the professional feels incompetent and unsuccessful in achieving his/her goals or providing service.

Several researchers have used the Conservation of Resources (COR) theory to determine the effects of job demands and resources on burnout (Hobfoll & Freedy, 1993; Lee & Ashforth, 1996). Based on the COR theory, burnout is likely to occur when valued resources are lost or threatened, or are inadequate to meet the demands. Major demands include role ambiguity, work pressure and workload, whereas major resources include control, participation in decision-making and job autonomy (Lee & Ashforth, 1996). According to Leiter (1993), demands and resources are related - work environments that are overly demanding usually offer insufficient resources as well.

Psychology, with its emphasis on human suffering, has been criticised for focusing too much on pathology (negative states) instead of positive outcomes in the work environment (Diener, Suh, Lucas & Smith, 1999). Currently, there is an emerging shift towards positive psychology with the focus on human strengths and optimal functioning, rather than on weaknesses, malfunctioning and damage (Seligman & Csikszentmihayi, 2000). According to these authors, optimism has been discovered as a human strength that acts as a buffer against mental illness.

Optimism is regarded as the generalised expectation of positive outcomes. As a dispositional variable, optimism has been of considerable interest as a potential moderator of the relationship between job stressors and psychological strain (Cooper et al., 2001). Optimism has been found to moderate the relationship between daily hassles and health outcomes (Fry, 1995), hassles and psychological symptoms (Lai, 1996), and perceived stress and depression

(Sumi, Horie & Haykawa, 1997). Since burnout is a psychological strain caused by certain job stressors (Schaufeli & Enzmann, 1998), dispositional optimism could act as a moderator between job stressors and the development of burnout.

Although studies in other countries have shown that academic staff of higher education institutions experience high levels of stress and burnout (Blix et al., 1994; Byrne, 1991; Sheesley, 2001), the concept of burnout has not been adequately researched in samples of academics. No study could be found regarding the burnout phenomenon in South African higher education institutions. The occurrence of burnout in the academic profession, however, should be considered seriously since it affects academics traditional roles of teaching, research and service (Armour, Caffarella, Fuhrmann & Wergin, 1987).

The objective of this study was to determine the relationships between burnout, health, job characteristics and dispositional optimism of academic staff in a higher education institution in South Africa.

Burnout

Burnout is a pathogenically defined construct that is characterised as a syndrome of exhaustion, depersonalisation and reduced professional efficacy (Maslach et al., 2001; Söderfeldt, Söderfeldt, Ohlsen, Theorell & Jones, 2000). In the development of burnout, exhaustion emerges first in response to an overly demanding work environment (Leiter, 1993). Blaxter, Hughes and Tight (1998) argued that the academic environment makes employees particularly prone to exhaustion.

In studies conducted with 400 tenure-track university teachers, Blix et al. (1994) found that exhaustion was the component of burnout that seemed to be the most critical in the sample studied. Teachers who rated high on exhaustion had higher work stress scores, experienced more health problems as a result of stress, reported less job satisfaction with teaching, felt less productive at work, felt less able to cope with job stress and were most likely to consider job change. Increased exhaustion can lead to cynicism as workers develop emotional distance from their jobs in an attempt to cope with exhaustion.

Demerouti, Bakker, Nachreiner and Schaufeli (2001) characterise cynicism as a specific kind of withdrawal or mental distancing from recipients which, in other jobs, may manifest itself as alienation or disengagement concerning the job and the work role. According to Sarafino (1998), withdrawal from personal interactions with students and colleagues, and a lack of input into faculty and institutional decision-making, are likely to reduce perceptions of social support, job involvement and autonomy, and consequently compound the impact of stressors on the individual. Seiler and Pearson (1984-5) noted that the consequences of dysfunctional stress (burnout) include two forms of withdrawal. Firstly, the staff member may leave the institution and search for other work. Secondly, withdrawal may be more subtle; the individual remains on the faculty payroll, but will do the bare minimum rather than their best.

According to Cooper et al. (2001), cynicism mediates the relationships between exhaustion and, the third burnout component, reduced professional efficacy. Reduced professional efficacy results primarily from cynicism and is the weakest burnout dimension in terms of significant relationships with other variables (Lee & Ashforth, 1996). Reduced professional efficacy is indicative of individuals who experience a growing sense of inadequacy about their ability to help clients (students) and evaluate themselves in terms of declined competence and productivity at work (Maslach 1998). Byrne (1991) found that certain background variables, such as age and type of student taught, were linked to personal accomplishment in university educators.

Job characteristics

Maslach et al. (2001) regard burnout as an individual experience that is specific to the work context. In developing the Job Demands-Resources (JD-R) model, Demerouti et al. (2001) proposed that the individual's working conditions consist of two broad elements, namely job demands and job resources. This model assumes that burnout develops irrespective of type of occupation, when job demands are high and resources limited.

Leiter (1993) proposed a process model of burnout that assumes that job demands and resources are differently related to the three burnout dimensions. Several studies have found that job demands (e.g., work overload) were primarily related to exhaustion (Demerouti et al., 2001; Hobfoll & Freedy, 1993; Jansen, Schaufeli & Houkes, 1999; Lee & Ashforth, 1996; Leiter & Maslach, 1998). Other studies found cynicism to be significantly related to job

resources (Leiter, 1991; Leiter, 1993). Peeters and Le Blanc (2001) confirmed that both exhaustion and cynicism were related to job demands and resources. Jansen et al. (1999) found professional efficacy to be related to work resources and quality of job content. According to these authors, high-quality job content implies that they are experiencing high levels of autonomy and feedback. In sum, these results indicate that job demands are strongly related to exhaustion, whereas job resources are related to cynicism and reduced professional efficacy.

Job demands refers to the 'things that have to be done' and include the physical, social or organisational aspects of the job that require sustained physical and mental effort (Demerouti et al., 2001; Schaufeli & Bakker, 2002). Söderfeldt et al. (2000) proposed that demands in human services can be interpreted as quantitative and emotional job demands. Peeters and Le Blanc (2001) accordingly found that these demands, along with organisational job demands, were significantly related to burnout, especially to the exhaustion and cynicism components.

According to Maslach et al. (2001), burnout researchers have focused extensively on quantitative job demands and have found that burnout is a response to work overload. Several studies in higher education revealed that excessive workload is one of the main stressors reported by academic staff (Abouserie, 1996; Blix et al., 1994; Doyle & Hind, 1998; Gillespie, Walsch, Winefield, Dua & Stough, 2001; Jackson & Hayday, 1997). The continuous rises in student numbers, increases in the diversity of roles (e.g., teacher, adviser) academic staff have to perform and the growing demand to conduct and publish research are some of the main factors contributing to these dramatic increases in academic workloads. Earley (1994) noted that increased class sizes have been identified as a factor contributing to the experienced stress and burnout in academics.

In surveying more than 1200 lecturers from 80 higher education institutions in the USA, Gmelch et al. (1984) identified role conflict as a main stressor, and role ambiguity and role overload as additional stressors, to academic staff. Strong associations have been found between role stressors (role ambiguity, conflict and overload) and performance at work (Sullivan & Bhagat, 1992). Lease (1999) found that role overload served as a consistent stressor and is likely to be an ever-present factor for academic faculty. According to Gillespie et al. (2001), academic staff reported that their current levels of stress prevent them from

fulfilling their roles and responsibilities adequately, and are likely to reduce the effort they put into their roles.

Over the recent years, studies indicated that higher education institutions in South Africa and all over the globe are moving away from a culture of collegiality towards a managerialist, bureaucratic, non-participative style of management and the adoption of business/industrial values (Peeters & Le Blanc, 2001). Employees are expected to provide maximum outputs in terms of effort, skills and flexibility and, in turn, gain minimum rewards such as decreased salaries, fewer career development opportunities and job insecurity (Maslach et al., 2001). Winter, Sarros and Tanewski (1998) highlighted studies conducted in Australian higher education institutions that suggest that an academic working under such managerialist conditions is likely to experience low morale, a crisis of professional self-identity and increased role stress.

Job resources refer to those physical, psychological, social or organisational job aspects that are necessary, firstly to achieve work goals, secondly to reduce job demands and lessen physiological and psychological costs, and thirdly to stimulate personal growth and development (Demerouti et al., 2001). Social support, as a job resource, has received considerable attention as a moderator in the stressor-strain relationship (Cooper et al., 2001). Several studies over the years have confirmed that a lack of social support is linked to burnout (Maher, 1983; Maslach et al., 2001; Peeters & Le Blanc, 2001).

Karasek and Theorell (1990) argued that social support, marked by quality and helpful interactions provided by colleagues and supervisors, can promote better well-being when combined with the characteristics of the job. Regarding this, Van Emmerik (2002) found that coping assistance from a supervisor and colleagues, as well as a supportive departmental climate and practical assistance in the department, reduced both exhaustion and dissatisfaction. Sumi (1997) also found that individuals who reported higher social support together with optimism, reflected higher physical and psychological well-being.

There is plenty of evidence in the literature that resources in the academic profession have deteriorated significantly over the past two decades. These include declines in faculty salaries (Bowen & Schuster, 1985), job autonomy (Kinman, 2001), job security (Fourie, 1999), lack of decision-making (Gillespie et al., 2001) and job control (Fisher, 1994)

The changing conditions in the academic profession has brought the issue of job insecurity to the fore. Several South African higher education institutions are already embarking on programmes of rationalisation in terms of staff, courses and projects (Fourie, 1999). Non-tenured academic staff are facing an uncertain future and even tenured staff may be required to opt for early retirement and severance packages. According to Koorts (2000), the uncertainty about their future and absence of job security contribute to a low morale among academics.

In a study conducted by Gillespie et al. (2001) with 178 academic and general staff in Australian higher education institutions, half of the respondents expressed the view that decisions made by the management were based heavily on corporate and financial considerations, with little deliberation of teaching, research and staff interests and needs. As a result of their limited inclusion in the decision-making process, staff reported feeling that they no longer had any autonomy or control over their role, and felt 'powerless' and 'helpless'.

Fisher (1994) mentioned that together with the rapid rise in demands on academics, there has been a steady erosion of job control. This trend has been confirmed in a national study conducted by Kinman (1998) with 782 academics. Three quarters of the respondents in this study indicated that their ability to control the quality and direction of teaching and research output had decreased substantially over the past few years. The demands/control model (Karasek, 1979; Karasek & Theorell, 1990) is frequently used by researchers to determine the interaction between the demands of the situation and the individual's decisional freedom in terms of meeting the requirements. This model assumes that "high strain" jobs (high demands and low control) are likely to overwhelm employees, and contribute to feelings of helplessness that can undermine employees' sense of mastery and dissuade them from developing and using skills. According to Iacovides, Fountoulakis, Kaprinis and Kaprinis (2003), inadequate control over one's work, frustrated hopes and the feeling of losing the meaning of life seem to be important causes of burnout.

Maslach, Leiter and Jackson (1996) hypothesised that burnout, as a result of the presence of particular demands and absence of particular resources, can lead to various negative outcomes such as physical illness, staff turnover and absenteeism. It is not surprising that the 'burned out' academic experiences stress-related health problems since burnout is frequently

linked with illness. Research has linked burnout to a variety of mental and physical health problems (Lee & Ashforth, 1990; Maslach, 1982), increased absenteeism (Leiter & Harvie, 1998), and decreased quality and quantity of job performance (Blix et al., 1994; Maslach & Jackson, 1984). Eventually, individuals may leave the job or profession as a culminating effect of burnout (Jackson & Simpson, 2001; Watts et al., 1991).

Dispositional optimism

Scheier and Carver's (1985) definition of optimism as a general expectation of positive experiences throughout one's life is one of the most common definitions. These authors regard optimism as a personality trait that can help people cope with the negative effects of stress. Research has shown that optimism is represented by three basic beliefs namely, positive outcome expectancies, positive efficacy expectancies and positive unrealistic thinking. Positive outcome expectancies reflect the tendency to believe that one will generally experience good outcomes in life (Scheier & Carver, 1985). Positive efficacy refers to the global confidence in one's coping ability across a wide range of demanding situations (Schwarzer, 1994). Positive unrealistic thinking includes the strategy to cognitively distort reality by believing that pleasant events are more likely to happen to the self than to others, and that negative events are less likely (Weinstein, 1980).

Optimists are therefore, indeed, "masters of their own fate", because they do not only believe that good things will happen, but also that they can make good things happen (Carver & Scheier, 2002). These authors suggest that optimists seem to initiate and to be involved in various activities providing opportunities to acquire valuable knowledge about the positive and negative consequences of their actions.

Carver and Scheier (2002) regard optimism as a basic quality of personality. Optimism influences people's orientation to events in their lives, people's subjective experiences when confronting problems and the action people engage in when trying to deal with these problems. Mäkikangas and Kinnunen (2003) found that time pressure at work was most strongly related to mental distress among female employees reporting low optimism. Different coping strategies used by optimists and pessimists could explain this result. Optimists seem to use more problem-focused coping strategies than do pessimists. When

problem-focused coping is not a possibility, optimists turn to strategies such as acceptance and positive reframing (Harju & Bolen, 1998).

Fry (1995) and Mäkikangas and Kinnunen (2003) have found dispositional optimism to be significantly negatively related to burnout, more specifically to the exhaustion component. Relationships between optimism and distress have been examined in diverse groups of people facing difficulty or adversity (e.g., Aspinwall & Taylor, 1992; Long, 1993; Sumi, 1997). Evidence was found that optimists experience less distress than pessimists when dealing with difficulties in their lives. In line with Schweizer, Beck-Seyffer and Schneider (1999), it can be suggested that individual well-being depends on optimism

Based on the above discussion, the following hypotheses are formulated:

- H1: Exhaustion will be positively related to job demands (i.e., work overload), whereas cynicism and reduced professional efficacy will be negatively related to job resources. Physical and psychological ill health will be positively associated with exhaustion and cynicism, and negatively related to professional efficacy.
- H2: Dispositional optimism will moderate the effects of job demands and job resources on burnout.

METHOD

Research design

A cross-sectional survey design, by means of which a sample is drawn from a population at a particular point in time (Shaughnessy & Zechmeister, 1997), was used to achieve the research objectives.

Study population

The participants were academic staff from a higher education institution in the North-West Province ($N = 279$). The characteristics of the participants are shown in Table 1.

Table 1
Characteristics of the Participants (N=279)

Item	Category	Percentage
Campus	Potchefstroom	92.81
	Mmabatho	7.19
Gender	Male	48.91
	Female	50.72
Education	Highest grade/standard	8.30
	3 year degree	5.05
	4 year degree or honours	14.08
	5 to 7 year degree	28.16
	Master's degree	43.68
Job Category	Doctoral degree	0.72
	Academic	83.87
Job Title	Researcher	16.13
	Junior lecturer	8.62
	Lecturer	32.33
	Senior lecturer	25.00
	Associate professor	11.21
Main Educational Focus	Professor	21.55
	Research	9.79
	Lecturing	21.28
Medical condition	Research and lecturing	67.23
	Yes	15.27
	No	84.73

Measuring instruments

The following measuring instruments were used in this study:

The *Maslach Burnout Inventory – General Survey* (MBI-GS – Maslach et al., 1996) was used to measure burnout. The MBI-GS consists of 16 items that produce three scores: 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”). These three components of the burnout construct are conceptualised in broader terms relating to the job and not just to the personal relationships that may be part of the job (Maslach et al., 2001). Schaufeli, Van Diederendonck, and Van Gorp (1996) reported that internal consistencies (Cronbach

coefficient alphas) 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). All items are scored on a 7-point frequency rating scale ranging from 0 (*never*) to 6 (*always/daily*). High scores on exhaustion and cynicism and low scores on efficacy are indicative of burnout.

The *Job Characteristics Scale* (JCS) was developed by the authors to measure job demands and job resources for employees. The JCS consists of 48 items. The questions are rated on a 4-point scale ranging from 1 (*never*) to 4 (*always*). The dimensions of the JCS include pace and amount of work, mental load, emotional load, work variety, opportunities to learn, work independence, relationships with colleagues, relationship with immediate supervisor, ambiguities of work, information, communications, participation, contact possibilities, uncertainty about the future, remuneration and career possibilities.

The *Health subscales of ASSET* (which refers to An Organizational Stress Screening Evaluation Tool) were developed by Cartwright and Cooper (2002) to assess the respondents' level of health. The Health subscales consist of 19 items arranged on two subscales: Physical health and Psychological wellbeing. All items on the Physical health subscale relate to physical symptoms of stress. The role of this subscale is to give an insight into physical health, not an in-depth clinical diagnosis. The items listed on the Psychological wellbeing subscale are symptoms of stress-induced mental ill health. This subscale gives an insight into physical health, not an in-depth clinical diagnosis. Johnson and Cooper (2003) found that the Psychological wellbeing subscale has good convergent validity with an existing measure of psychiatric disorders, the General Health Questionnaire (GHQ-12; Goldberg & Williams, 1988).

The Life Orientation Test – Revised (LOT-R), a 10-item measure, was developed by Scheier, Carver and Bridges (1994) to measure dispositional optimism. Six items contribute to the optimism score and four items are fillers. The original Life Orientation Test (Scheier & Carver, 1985), which hypothesized a two-factor structure of optimism (i.e., optimism and pessimism) was questioned (Harju & Bolen, 1998). Follow-up analysis has demonstrated a one-factor structure, indicating that the LOT-R is measuring a continuum of high, average and low optimism/pessimism (Scheier et al., 1994). The LOT-R measures optimism/pessimism on a five-point Likert Scale, ranging from 1 (*I strongly disagree*) to 5 (*I strongly*

agree). The LOT-R was found to have adequate internal consistency ($\alpha = 0.78$), and excellent convergent and discriminant validity (Scheier et al., 1994). Based on a sample of 204 college students, Harju and Bolen (1998) obtained a Cronbach alpha coefficient of 0.75.

Statistical analysis

The statistical analysis was carried out with the help of the SAS-program (SAS Institute, 2000) and the AMOS programme (Arbuckle, 1997). Cronbach alpha coefficients, inter-item correlation coefficients and confirmatory factor analysis were used to assess the reliability and validity of the measuring instruments (Clark & Watson, 1995). Descriptive statistics (e.g., means, standard deviations, skewness and kurtosis) were used to analyse the data. Pearson product-moment correlations were used to specify the relationships between the variables. A cut-off point of 0.30 (medium effect, Cohen, 1988) was set for the practical significance of correlation coefficients.

Hypothesised relationships are tested empirically for goodness of fit with the sample data. The χ^2 and several other goodness-of-fit indices summarise the degree of correspondence between the implied and observed covariance matrices. However, because the χ^2 statistic equals $(N - 1) F_{min}$, this value tends to be substantial when the model does not hold and the sample size is large (Byrne, 2001). Researchers addressed the χ^2 limitations by developing goodness-of-fit indices that take a more pragmatic approach to the evaluation process.

A value < 2 for $\chi^2/\text{degree of freedom ratio (CMIN}/df)$ indicates acceptable fit (Tabachnick & Fidell, 2001). The Goodness of Fit Index (GFI) indicates the relative amount of the variance co-variances in the sample predicted by the estimates of the population. It usually varies between 0 and 1, and a result of 0.90 or above indicates a good model fit. In addition, the Adjusted Goodness of Fit Index (AGFI) is a measure of the relative amount of variance accounted for by the model, corrected for the degrees of freedom in the model relative to the number of variables. The GFI and the AGFI can be classified as absolute indices of fit because they basically compare the hypothesised model with no model at all (Hu & Bentler, 1995). Although both indices range from zero to 1.00, the distribution of the AGFI is unknown; therefore no statistical test or critical value is available (Jöreskog & Sörbom, 1986). The Parsimony Goodness-of-Fit Index (PGFI) addresses the issue of parsimony in

SEM (Mulaik et al., 1989). Mulaik et al. (1989) suggested that indices in the 0.90's accompanied by PGFIs in the 0.50's are not unexpected, values > 0.80 are considered to be more appropriate (Byrne, 2001).

The Normed Fit Index (NFI) is used to assess the global model fit. The NFI represents the point at which the model being evaluated falls on a scale running from a null model to perfect fit. This index is normed to fall on a 0 to 1 continuum. Marsh, Balla and Hau (1996) suggested that the NFI is relatively sensitive to sample sizes. The Comparative Fit Index (CFI) represents the class of incremental fit indices in that it is derived from the comparison of a restricted model (i.e., one in which structure is imposed on the data) with that of an independence (or null) model (one in which all correlations among variables are zero) in the determination of goodness-of-fit. The Tucker-Lewis Index (TLI; Tucker & Lewis, 1973) is a relative measure of covariation explained by the model that is specifically developed to assess factor models. For these fit indices, it is more or less generally accepted that a value of less than 0.90 indicates that the fit of the model can be improved (Hoyle, 1995), although a revised cut-off value close to 0.95 has been advised (Hu & Bentler, 1999).

The Root Mean Square Error of Approximation (RMSEA) estimates the overall amount of error; it is a function of the fitting function value relative to the degrees of freedom (Browne & Cudeck, 1993). Hu and Bentler (1999) suggested a value of 0.06 to be indicative of good fit between the hypothesised model and the observed data. Researchers recently elaborated on these cut-off points and noted that RMSEA values ranging from 0.08 to 0.10 indicate mediocre fit, and those greater than 0.10 indicate poor fit (MacCallum, Browne & Sugawara, 1996).

RESULTS

Structural equation modelling (SEM) methods, as implemented by AMOS (Arbuckle, 1997), were used to test the factorial models for the MBI-GS, Health Subscale and LOT-R. Data analysis was conducted in two consecutive steps. Firstly, a quick overview of the model fit was done by looking at the overall χ^2 value, together with its degrees of freedom and probability value. Several goodness-of-fit statistics (GFI, AGFI, PGFI, NFI, TLI, CFI and RMSEA) were used to globally assess the model fits. Secondly, given findings of a poor-

fitting initially hypothesised model (the MBI-GS in this instance), exploratory analysis was done. Possible misspecifications, as suggested by the so-called modification indices, were looked for in order to fit a revised, re-specified model to the data.

Hypothesised model: MBI-GS

The full hypothesised three-factor model consisting of all 16 items was tested. Table 2 presents fit statistics for the test of the original and subsequent models.

Table 2

The Goodness-of-fit Statistics for the Hypothesised MBI-GS Model

Model	χ^2	χ^2/df	GFI	AGFI	PGFI	NFI	TLI	CFI	RMSEA
Model 1	287.32	2.84	0.88	0.84	0.65	0.83	0.86	0.88	0.08
Model 2	217.45	2.94	0.90	0.86	0.63	0.86	0.88	0.90	0.08
Model 3	197.75	2.02	0.92	0.89	0.66	0.87	0.91	0.93	0.06

The statistically significant χ^2 value of 287.32 ($df = 101$; $p < 0.0001$) revealed a poor overall fit with the originally hypothesised model MBI-GS model. All other indices indicated a poor fit between the hypothesised model and the data obtained. From a practical perspective, a large χ^2 value relative to the degrees of freedom, together with a PGFI value lower than 0.80, NFI, TLI and CFI values lower than 0.95, and a RMSEA value higher than 0.05, are indicative of a failure to confirm the hypothesised model and requires a need to modify the model to better fit the data. In order to determine a model that better represents the sample data, modification indices (MI) were examined to identify possible areas of misfit. Looking at the regression weights, one parameter which represents the cross-loading of Item 13 indicated a considerably lower regression weight compared with the other MBI items. Item 12 was also problematic, with two errors and a cross-loading on the Exhaustion factor. These two parameters could account for the substantial misspecification of the hypothesised factor loading.

Post hoc analysis

Based on the regression weights and standardised residual covariances, Model 1 was re-estimated with Item 12 and Item 13 removed. Errors of three item pairs, namely Item 3 and Item 4 (MI = 11.56), Item 14 and Item 15 (MI = 12.58), and Item 11 and Item 16 (MI = 14.49) were allowed to correlate. The subsequent analysis is therefore based on the 14-item revision, which is labelled here as Model 2. After testing Model 2, the χ^2 value of 217.44 ($df = 74$; $p < 0.0001$) and other indices seem to have improved compared to those of Model 1. The results related to the final model (Model 3) are shown in Table 2. Although the χ^2 value ($df = 98$; $p < 0.0001$) is still high, it is considerably lower than that of Model 2. The other fit statistics indicate a good fit for the re-specified model.

Similar procedures were followed to determine the fit statistics for the Health and LOT-R models. These models, however, revealed an overall good fit with their distinctive hypothesised models, and no modifications of these models were necessary. The results are indicated in Table 3 and Table 4 respectively.

Table 3

Goodness-of-fit Statistics for the Health Model

Model	χ^2	χ^2/df	GFI	AGFI	PGFI	NFI	TLI	CFI	RMSEA
Default model	126.28	2.04	0.94	0.91	0.64	0.92	0.95	0.96	0.06

The statistically significant χ^2 value of 126.28 ($df = 62$; $p < 0.0001$) indicates a satisfactory fit with the original model. According to Hu and Bentler (1999), a RMSEA value of 0.06 is indicative of good fit between the hypothesised model and the observed data. Looking at the regression weights, all the parameters were relatively high, with no exceptions. Errors of one pair of items (i.e., YH3 – YH 13) were allowed to correlate. Physical health and Psychological health were positively correlated as indicated by a correlation of 0.79.

Table 4

Goodness-of-fit Statistics for the Hypothesised LOT-R Model

Model	χ^2	χ^2/df	GFI	AGFI	PGFI	NFI	TLI	CFI	RMSEA
Default model	13.40	1.67	0.98	0.96	0.37	0.97	0.97	0.99	0.05

The statistically significant χ^2 value of 13.40 ($df = 8, p = 0.10$) indicates a good overall fit of the originally hypothesised LOT-R model. Although the PGFI value is lower than 0.80, all the other fit statistics indicate excellent fit of the measurement model to the data. Pessimism and optimism were negatively correlated as indicated by a correlation of -0.62 .

The results of the factor analysis on the JCI are shown in Table 5. Loading of variables on factors, commonalities and percent of variance and covariance are shown. Variables are ordered and grouped by size of loading to facilitate interpretation. Zeros represent loadings that are under 0.45 (20% of variance). Labels for each factor are suggested in a footnote.

Table 5

Factor Loadings, Communalities (h^2), Percentage Variance and Covariance for Principal Factor Extraction and Varimax Rotation on the JCI

Item	F ₁	F ₂	F ₃	F ₄	F ₅	F ₆	F ₇	F ₈	h^2
29. Receive sufficient information on work results	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
27. Know exactly what direct supervisor thinks of performance	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59
28. Receive sufficient information on the purpose of work	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
30. Receive information from direct supervisor on work performance	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
32. Clear decision-making processes	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
25. Know exactly what other people expect of work	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
35. Participate in decisions about nature of work	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
34. Discuss work problems with direct supervisor	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59
24. Feel appreciated by supervisor	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63
31. Kept adequately up-to-date about important issues	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
14. Feeling of work achievement	0.00	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.65
15. Possibility of independent thought and action	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.61
13. Opportunities for personal growth and development	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.56
16. Freedom in carrying out work activities	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.51
48. Opportunity to be promoted	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.26
2. Time pressure	0.00	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.47
4. Attentive to many things at the same time	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.43
6. Have to remember many things in work	0.00	0.00	0.61	0.00	0.00	0.00	0.00	0.00	0.40
1. Too much work to do	0.00	0.00	0.58	0.00	0.00	0.00	0.00	0.00	0.45
5. Have to give continued attention to work	0.00	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.40
11. Work makes sufficient demands on all skills and capacities	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.43
19. Rely on colleagues when facing difficulties in work	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.67
20. Ask colleagues for help	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.63
22. Rely on supervisor when facing difficulties in work	0.00	0.00	0.00	0.61	0.00	0.00	0.00	0.00	0.62
23. Get on well with supervisor	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.59
21. Get on well with colleagues	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00	0.32
41. Secure in keeping current job in the next year	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.00	0.96
40. Secure in still be working in one year's time	0.00	0.00	0.00	0.00	0.85	0.00	0.00	0.00	0.74
42. Secure in keeping the current level of functioning	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.00	0.71
45. Enough pay	0.00	0.00	0.00	0.00	0.00	0.79	0.00	0.00	0.70
44. Live comfortably on pay	0.00	0.00	0.00	0.00	0.00	0.68	0.00	0.00	0.50
43. University pays good salaries	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.54
46. Possibility to progress financially	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.42
17. Influence in planning work activities	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.58
18. Participation in decision-making in piece work	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.46
39. Enough contact with colleagues during working hours	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.58
38. Chat with colleagues during working hours	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.48
37. Contact with colleagues as part of work	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.35
Squared multiple correlation (SMC)	0.88	0.80	0.81	0.80	0.97	0.81	0.72	0.80	
Percentage variance	11.63	6.80	5.71	5.51	5.23	4.96	4.43	4.21	
Percentage covariance	23.40	14.03	11.78	11.37	10.79	10.23	9.14	8.68	

a Factor labels: Factor ₁ Management Factor ₂ Task characteristics Factor ₃ Overload Factor ₄ Social support Factor ₅ Job security
 Factor ₆ Rewards Factor ₇ Participation Factor ₈ Contact: Colleagues

The eight extracted factors accounted for 48.48% of the total variance in the data. With a cut-off of 0.45 for inclusion of a variable in interpretation of a factor, 11 of 48 variables did not load on the three factors.

The first factor was labelled *Management*. Items loading on this factor relate to management in the academic environment, mainly the receiving of sufficient information regarding work results, purpose of work and work performance, clear expectations from superiors and peers, as well as decision-making processes. The second factor was labelled *Task characteristics* and involves feelings of work achievement, independent thoughts and action, and opportunities for growth and development. The third factor was labelled *Overload*. The items that loaded on this factor include aspects such as time pressure, attentiveness to too many things at the same time and too much work to do. The fourth factor was labelled *Social support* and includes items such as relying on colleagues and the supervisor when facing difficulties at work, asking colleagues for help and getting on well with both colleagues and supervisors. The fifth factor was labelled *Job security*. This factor reflects respondents' indications that they are secure in keeping their current job in the next year, that they would still be working in one year's time and would keep the current level of functioning. The sixth factor was labelled *Rewards*. It involves perceptions of pay and the ability to progress financially. The seventh factor was labelled *Participation* and includes participation in planning work activities and decision-making. Factor eight was labelled *Contact: Colleagues* and measures whether sufficient contact opportunities with colleagues exist in the work context.

The descriptive statistics, alpha coefficients and inter-item correlation of the measuring instruments, namely the MBI-GS, JCI, the Health subscales of ASSET and LOT-R, are given in Table 6.

Table 6

Descriptive Statistics, Alpha Coefficients and Inter-Item Correlation of the Measuring Instruments

	Mean	SD	Skewness	Kurtosis	r(Mean)	α
MBI-GS						
Exhaustion	13.19	7.15	0.16	-0.82	0.55	0.86
Cynicism	7.24	5.12	0.44	-0.53	0.44	0.76
Professional Efficacy	28.05	5.11	-0.74	0.44	0.38	0.78
JCI						
Management	27.66	6.12	-0.05	-0.65	0.45	0.89
Task characteristics	14.50	3.22	-0.28	-0.35	0.45	0.80
Overload	19.56	3.03	-0.65	0.36	0.34	0.74
Social support	15.80	3.06	-0.34	-0.66	0.44	0.80
Job security	6.74	3.16	0.37	-1.16	0.79	0.92
Rewards	7.25	2.66	0.85	0.28	0.52	0.81
Participation	5.74	1.43	-0.23	-0.40	0.59	0.74
Contact: Colleagues	6.14	1.50	-0.37	-0.64	0.64	0.78
Health subscales						
Physical health	13.62	4.42	0.09	-0.86	0.42	0.81
Psychological health	15.64	4.90	0.04	-0.69	0.51	0.88
LOT-R						
Optimism total	21.95	4.04	-0.17	-0.29	0.35	0.76

Table 6 shows that acceptable Cronbach alpha coefficients varying from 0.64 to 0.92 were obtained for the scales (see Nunnally & Bernstein, 1994). The mean inter-item correlations of most of the scales are acceptable ($0.15 \leq r \leq 0.50$, Clark & Watson, 1995). The inter-item correlations of four scales, namely Exhaustion, Job security, Participation and Relationship with colleagues, are somewhat high. It is evident from Table 6 that most of the scales of the measuring instruments have relatively normal distributions, with low skewness and kurtosis.

The product moment correlation coefficients between burnout, job characteristics, health and optimism are given in Table 7.

Table 7

Product-Moment Correlation Coefficients between the MBI-GS, JCS, Health subscales of the ASSET and the LOT-R

Item	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Exhaustion	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Cynicism	0.55 ⁺⁺⁺	-	-	-	-	-	-	-	-	-	-	-	-
3. Professional Efficacy	-0.34 ⁺	-0.45 ⁺	-	-	-	-	-	-	-	-	-	-	-
4. Management	-0.27 ⁺	-0.35 ⁺	0.36 ⁺	-	-	-	-	-	-	-	-	-	-
5. Task characteristics	-0.28 ⁺	-0.46 ⁺	0.41 ⁺	0.45 ⁺	-	-	-	-	-	-	-	-	-
6. Overload	0.27 ⁺	0.07	0.09	0.05	0.14	-	-	-	-	-	-	-	-
7. Social support	-0.36 ⁺	-0.35 ⁺	0.30 ⁺	0.53 ⁺⁺⁺	0.40 ⁺	-0.10	-	-	-	-	-	-	-
8. Job security	0.07	0.16	-0.09	-0.11	-0.16	-0.10	-0.06	-	-	-	-	-	-
9. Rewards	-0.22	-0.27 ⁺	0.13	0.34 ⁺	0.33 ⁺	-0.14	0.26 ⁺	0.07	-	-	-	-	-
10. Participation	-0.32 ⁺	-0.33 ⁺	0.32 ⁺	0.41 ⁺	0.51 ⁺⁺⁺	-0.03	0.31 ⁺	-0.08	0.20	-	-	-	-
11. Contact: colleagues	-0.20	-0.22	0.25 ⁺	0.21 ⁺	0.22	-0.02	0.31 ⁺	-0.08	0.07	0.14	-	-	-
12. Physical health	0.44 ⁺	0.34 ⁺	-0.35 ⁺	-0.23	-0.22	0.07	-0.28 ⁺	0.21	-0.16	-0.12	-0.22	-	-
13. Psychological health	0.60 ⁺⁺⁺	0.41 ⁺	-0.46 ⁺	-0.32 ⁺	-0.27 ⁺	0.16	-0.36 ⁺	0.19	-0.19	-0.24	-0.20	0.67 ⁺⁺⁺	-
14. Optimism total	-0.32 ⁺	-0.39 ⁺	0.48 ⁺	0.23 ⁺	0.34 ⁺	-0.05	0.17	-0.20	0.08	0.26 ⁺	0.12	-0.33 ⁺	0.82 ⁺⁺⁺

- * $p \leq 0.05$ – statistically significant
- + $r > 0.30$ – practically significant (Medium effect)
- ++ $r > 0.50$ – practically significant (Large effect)

Inspection of Table 7 indicates that exhaustion is positively related to: cynicism (large effect); physical health (medium effect); and psychological health (large effect). Both exhaustion and cynicism are negatively related to professional efficacy (both medium effects). Exhaustion is negatively related to social support and participation (both medium effects). Cynicism is negatively related to: management; task characteristics; social support; and optimism (all medium effects). Cynicism is positively related to physical and psychological health (both medium effects). Professional efficacy is positively related to: management: task characteristics; social support; participation; and optimism (all medium effects).

A model was constructed upon the results of the correlations and the consensus of findings from a review of the burnout literature as it relates to the academic profession. The proposed model, including the hypothesised relationships, was tested with SEM analysis. Results indicated that the model did fit adequately to the data ($\chi^2 = 119.12$, GFI = 0.94, RMSEA = 0.07, CFI = 0.93, IFI = 0.93, and TLI = 0.91). Inspection of the modification indices (MI)

revealed that the fit between the model and the data could be further improved if correlation was allowed between the measurement errors of job characteristic dimensions. It is important to note that items with identical rating scales often have measurement errors that are correlated (Byrne, 1989). This means that the fit of the proposed model can be improved if the measurement errors amongst Overload and Rewards (MI=8.00), and between Management and Support (MI=16.27), are allowed to correlate. The revised model – including covariation – shows a good fit ($\chi^2 = 91.28$, GFI = 0.95, CFI = 0.96, RMSEA = 0.06, IFI = 0.96 and TLI = 0.94). The final model is given in Figure 1.

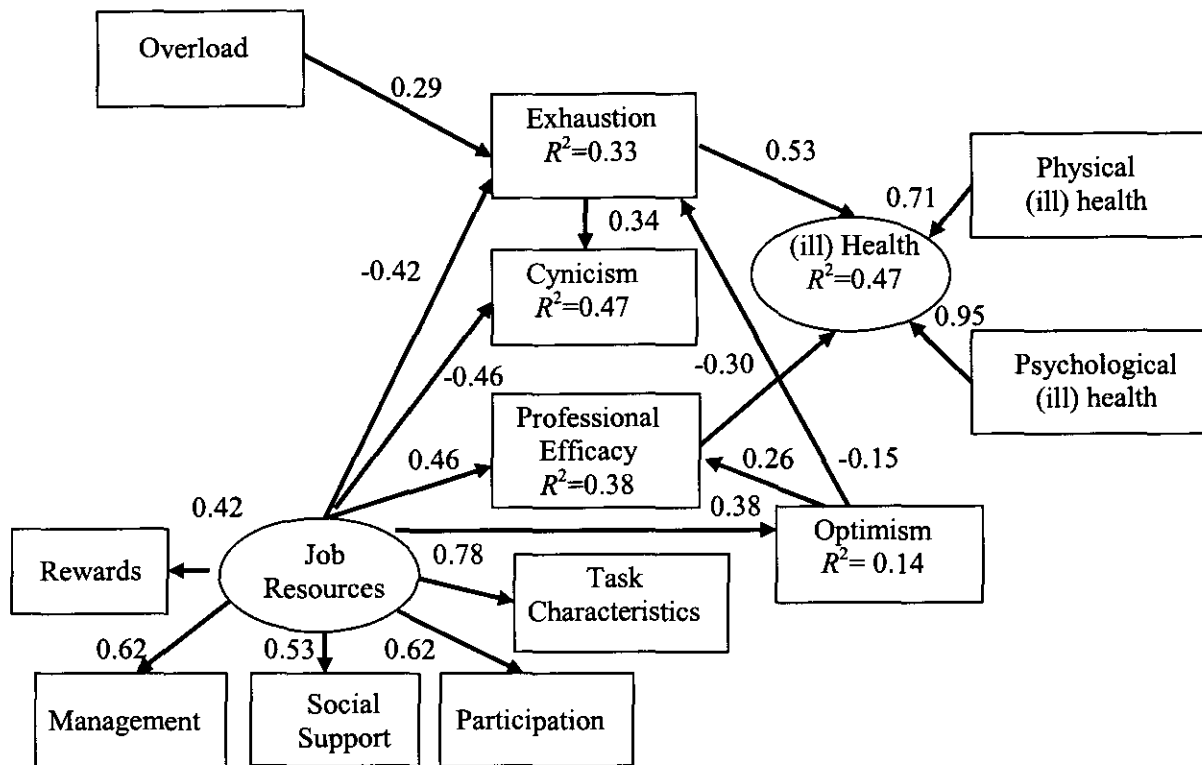


Figure 1. A causal model of burnout

As can be seen, the path from Job Resources to Exhaustion, Cynicism and Professional Efficacy is significant. This means that a lack of resources such as rewards, management, social support, participation and task characteristics increases academics' levels of exhaustion and cynicism, and decreases their levels of professional efficacy. The path from job demands (overload) to Exhaustion is significant. This means academic staff who experience excessive workloads are likely to develop high levels of exhaustion which, in turn, may lead to cynicism. The paths from Exhaustion and Professional Efficacy to Health are significant.

This means that high levels of exhaustion and low levels of professional efficacy can lead to negative physical and psychological health outcomes.

In addition, the path coefficients from Job Resources to Optimism, Job Resources to Exhaustion, and from Optimism to Exhaustion are significant. This means that optimism moderates the effects of a lack of job resources on exhaustion. Furthermore, the path coefficients from Job Resources to Professional Efficacy, Job Resources to Optimism and from Optimism to Professional Efficacy are significant. This means that optimism moderates the effects of a lack of job resources on professional efficacy. Lastly, the fact that the path coefficient from Professional Efficacy to Health is also significant implies that professional efficacy mediates the effects of optimism on health.

Based on the above-mentioned findings, both Hypotheses 1 and 2 are accepted.

DISCUSSION

The aim of this study was to investigate the relationships between burnout, health, job characteristics and dispositional optimism in a higher education institution in the North-West Province. First, the construct validity and internal consistency of the MBI-GS, the Health subscales of ASSET and LOT-R were determined. The results obtained using the structural equation modelling approach supported a three-factor structure for the MBI-GS. However, based on both conceptual and empirical grounds, items 12 and 13 were eliminated from the original MBI-GS, resulting in a 14-item scale. It seems as if problems with item 13 might be caused by the ambivalent nature of the item. Item 12, an item that is supposed to load on the professional efficacy factor, also loaded on the exhaustion factor. The structural equation modelling of the Health subscales and LOT-R indicated a good fit with the original models. Reliability analysis revealed that all three scales were sufficiently internally consistent.

The analysis of Pearson correlations in this study showed that exhaustion is positively related to job demands (overload). Both exhaustion and cynicism were negatively related to job resources, such as management, task characteristics, social support, rewards and participation. These two burnout dimensions were also positively related to physical and psychological health problems and negatively related to optimism. Professional efficacy is found to be positively related to job resources and optimism, and negatively related to

physical and psychological (ill) health. It is interesting to note that both cynicism and professional efficacy were not related to job demands, such as overload. Based on the findings of Jansen et al. (1999), this result could be attributed to the fact that the burnout process evolves differently as far as the three burnout dimensions are concerned.

The structural equation analysis showed that a lack of resources, including unfair rewards, poor management, poor social support, lack of participation and poor task characteristics, increased academics' levels of exhaustion and cynicism on the one hand, and decreased their levels of professional efficacy on the other. There is plenty of evidence in the literature reporting that resources in the academic profession have been eroded significantly over the past two decades. These include declines in faculty salaries (Bowen & Schuster, 1985), job autonomy (Kinman, 2001), job security (Fourie, 1999), lack of decision-making (Gillespie et al., 2001) and job control (Fisher, 1994). Social support is an important resource since it can promote better well-being when combined with the characteristics of the job. In this regard, Van Emmerik (2002) found that coping assistance from both the supervisor and colleagues, together with a supportive departmental climate and practical assistance in the department, reduced both exhaustion and dissatisfaction.

The results showed that work overload of academics will lead to higher levels of exhaustion. According to Cordes and Dougherty (1993), exhaustion is primarily a response to demand stressors placed upon individuals, especially work overload. Research in higher education has found excessive workload to be an ever-present stressor in academic work life (Abouserie, 1996; Cross & Carroll, 1990; Daniels & Guppy, 1994; Doyle & Hind, 1998; Earley, 1994). Singh and Bush (1998) also mentioned that in recent years work pressure has been consistently rising in academics and that the persistent demands of academic staff could almost, inevitably, lead to adverse work consequences.

From this model, it is apparent that high levels of exhaustion will contribute to the academic's development of detached and callous feelings towards students and the job (cynicism) (Schwab, Jackson & Schuler, 1986). This is in line with the development sequence model as proposed by Leiter and Maslach (1988). According to these authors, exhaustion should appear first as chronic excessive work demands, draining the academic's emotional resources. As a coping strategy, cynicism develops because individuals limit their involvement with others and their work. From this point of view, it can be argued that

burnout in academic staff develops when individuals are confronted with job demands (i.e., work overload) and a lack of job resources (i.e., insufficient rewards, non-participation, lack of management support; see Demerouti et al., 2001; Schaufeli & Bakker, 2002).

Regarding health, structural equation modelling indicated that exhaustion and a lack of professional efficacy were related to physical and psychological ill-health. This indicates that academics suffering high levels of exhaustion and low professional efficacy would develop physical and psychological health problems. This finding confirms previous findings (Kahill, 1988; Lee & Ashforth, 1990; Maslach 1982) that burnout will lead to ill-health.

Another objective of this study was to determine if dispositional optimism could act as a moderator between the effects of job demands and job resources on burnout. Firstly, it was found that optimism moderates the effects of a lack of job resources on exhaustion. For example, academic staff who perceive a lack of emotional support in the workplace but are highly optimistic could seek emotional support in other areas of life (Mäkikangas & Kinnunen 2003) and, as a result, maintain low levels of exhaustion. Secondly, the results indicated that optimism moderate the effects of job resources (or a lack thereof) on professional efficacy. Academic staff who perceive that they have high levels of job resources and are optimistic will have higher levels of professional efficacy and feel more competent and productive, and vice versa.

This study did not find evidence for a direct effect of optimism on health. However, the results suggest that optimism moderates the effects of a lack of resources on exhaustion, and that exhaustion leads to physical and psychological ill-health. Although optimism was significantly related to (physical and psychological health), the structural model showed that the relationship between optimism and health is mediated by professional efficacy.

In sum, job demands lead to higher levels of exhaustion. A lack of job resources, in contrast, leads to higher levels of exhaustion and cynicism and lower levels of professional efficacy. In line with the COR theory (Hobfoll & Freedy, 1993) and the JD-R model (Demerouti et al., 2001), it can be argued that academic staff in higher education institutions are likely to become victims of burnout when there is an increase in job demands without any corresponding increase in job resources. Burnout was also related to physical and

psychological health problems in this study. Dispositional optimism was found to moderate the effect of job resources on both emotional exhaustion and professional efficacy.

RECOMMENDATIONS

Given the pervasive nature of burnout, higher education institutions should implement interventions to prevent burnout within the academic profession. According to Kompier and Kristensen (2001), interventions may, in the first place, be directed at either the work situation or the coping capacity of the employee. Work-oriented interventions aim to improve the fit between an individual and the workplace. Worker-oriented interventions aim at teaching employees to deal more effectively with experienced stress, or to modify their appraisal of a stressful situation, so that the perceived stress threats are reduced.

Secondly, interventions may be aimed at eliminating, reducing or altering stressors (primary interventions). Possible interventions include: changes in decision-making processes; redesign of job tasks; provision of a more supportive climate, including more constructive feedback on job performance; and establishment of a more equitable system of reward distribution. Thirdly, secondary level interventions can be implemented to prevent employees who are already showing signs of stress from getting sick and to increase their coping capacity. Typical examples of this strategy would include cognitive restructuring, time management, conflict resolution techniques and coping strategies. The tertiary level of stress management interventions is concerned with the rehabilitation of individuals who have suffered ill health or reduced well-being as a result of strain in the workplace.

Based on the results obtained in this study, future studies should make use of larger and more representative samples. Research should also be conducted to evaluate the effectiveness of interventions to reduce burnout.

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CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

This chapter encompasses conclusions regarding the literature review and the empirical study. The limitations of the study are highlighted and recommendations are made for further studies.

3.1 CONCLUSIONS

In this section, conclusions are drawn in terms of specific theoretical objectives and the results of the empirical study.

3.1.1 Conclusions in terms of specific theoretical objectives

A literature study was undertaken to conceptualise burnout, strain, job characteristics and dispositional optimism. Subsequently, the following conclusions are drawn in terms of the theoretical objectives.

Burnout, an extreme and specific job-related strain, is conceptualised as a pathogenic psychological syndrome in response to chronic interpersonal stressors on the job. Burnout comprises three dimensions, which are distinguished in terms of emotional exhaustion, cynicism and reduced professional efficacy in educational settings. As the core dimension of burnout, emotional exhaustion refers to feelings of being overextended and exhausted. Cynicism relates to the interpersonal dimension of burnout and results in a negative, callous or excessively detached response to various aspects of the job. Professional efficacy, the weakest burnout dimension, refers to individuals' evaluating themselves as ineffective and incompetent in working with the recipients of one's service and fulfilling job responsibilities.

The individual's work environment can be categorised in terms of two broad elements, namely job demands and job resources. Job demands refer to the 'things that have to be done' and includes the physical, social or organisational aspects of the job that require sustained physical and mental effort. Job resources refer to those physical, psychological, social or

organisational job aspects that are firstly necessary to achieve work goals, secondly to reduce job demands and lessen psychological costs and thirdly, stimulate personal growth and development. Job demands and job resources serve as potential organisational stressors and an imbalance between these two elements (i.e. high demands and a lack of resources) can manifest in burnout.

Optimism, as a dispositional variable, is regarded as the generalised expectations of positive experiences throughout one's life. Scheier and Carver (1985, 1992) believe that this trait is one aspect of personality that can help people cope with the negative effects of stress. Studies conducted by these authors have shown that people who rate their optimism as high also reported better well-being than those who rate their optimism as low, regardless of their ratings of stress. Thus, as a basic quality of personality, optimism influences people's orientation to events in their lives, people's subjective experiences when confronting problems and the action people engage in when trying to deal with these problems. Optimists are regarded as "masters of their own fate" because they do not only believe that good things will happen, but also believe that they can make good things happen.

3.1.2 Conclusions in terms of specific empirical objectives

Structural equation modelling was conducted to determine the construct validity for the MBI-GS, Health and LOT-R models, whereas reliability analysis was used to indicate the internal consistency for the three models. Results indicated that the three models had construct validity and were sufficiently internally consistent. However, the original hypothesised MBI-GS model indicated a misfit with the data collected. As a result the model was revised by deleting two problematic items, Items 12 and 13, and replacing the Cynicism items with Depersonalisation items of the original MBI-ES version in order to establish if academic staff had developed detached attitudes towards both their colleagues/students and their profession. Correlated values indicate that academic staff are more cynical towards their work than depersonalised. Fit indices eventually indicated a good overall fit between the revised MBI-GS model and the data obtained.

The analysis of Pearson correlations in this study showed that exhaustion is positively related to job demands (overload). Both exhaustion and cynicism were negatively related to job resources such as role clarity, task characteristics, social support, rewards and participation.

These two burnout dimensions were also positively related to physical and psychological health problems and negatively related to optimism. Professional efficacy is found to be positively related to job resources and optimism and negatively related to physical and psychological health outcomes.

The results of the first canonical analysis between job characteristics, optimism and burnout indicated that academic staff who rated high on job resources and optimism are displaying high levels of professional efficacy and low levels of exhaustion and cynicism. Sumi (1997) found that individuals who reported greater social support (job resources) as well as high optimism indicated higher physical and psychological well-being. The results of the second canonical analysis indicated that high overload is associated with high levels of exhaustion and low levels of professional efficacy. Studies in recent years have revealed that academic staff frequently report workload as a main stressor (Abouserie, 1996; Doyle & Hind, 1998; Gillespie, Walsh, Winefield, Dua and Stough, 2001; Lease, 1999). According to these authors, one of the factors that contribute to high workloads is the dramatic increase in student numbers that in turn leads to increased class sizes. In this regard Earley (1994) noted that increased class sizes are related to the stress and burnout experienced by academics.

The canonical analysis between burnout and health indicated that high levels of exhaustion and cynicism and low levels of professional efficacy are associated with high levels of physical and psychological health problems. Blix, Cruise, Mitchell and Blix (1994) have found that academic staff who rated themselves high on emotional exhaustion had higher work stress scores and experienced more health problems as a result of stress.

Based on the above-mentioned description, it is clear that empirical support was found for Hypothesis 1 and Hypothesis 2. Hypothesis 1 was aimed at determining the relationships between job demands and exhaustion; between cynicism, professional efficacy and job resources; between optimism and burnout; and between physical and psychological strains and burnout. As expected, exhaustion was positively related to job demands (i.e. work overload), whereas cynicism and reduced professional efficacy were more strongly negatively related to job resources (i.e. supervisor and colleague support, job security and rewards). These results are in accordance with a process model of burnout developed by Leiter (1993) that assumes that job demands and resources are differently related to the three burnout dimensions.

The second hypothesis aimed to determine if dispositional optimism will moderate the effects of job demands and resources on burnout. In this study, structural equation modelling indicated that dispositional optimism moderated the effect of a lack of resources on exhaustion as well as the effects of job resources (or a lack thereof) on professional efficacy.

In conclusion and in line with previous findings of Demerouti, Bakker, Nachreiner and Schaufeli (2001) and Schaufeli and Bakker (2002), the results of the present study indicate that job demands and a lack of resources lead to the development of burnout. Optimism in accordance with studies conducted by Fry (1995) and Mäkikangas and Kinnunen (2003) had a moderating effect on the relationships between daily hassles, such as a lack of resources (social support), on exhaustion and professional efficacy.

3.2 LIMITATIONS

The sample size was one limitation of this study. According to Kerlinger and Lee (2001) the largest possible sample size should always be used. The smaller the sample size, the greater the error. This was the case in the present study and could account for the misfit between the originally hypothesised MBI-GS model and the data obtained.

Another limitation is the language used in the measuring instruments. The majority of respondents in this study were Afrikaans-speaking (83,33%) and Setswana-speaking (6,25%). The fact that only an English version of the measuring instruments was used was indeed a language barrier to respondents and could account for the small sample size.

The specific research design (cross-sectional) was also a limitation in the present study. It is not possible to determine the causality of relationships by using a cross-sectional design. From a practical point of view, no comparisons could be made with regard to the different race groups and gender.

3.3 RECOMMENDATIONS

Recommendations for the organisations and for future research are made in this section.

3.3.1 Recommendations for the organisation

A combined management and educational approach that builds interventions encouraging work engagement should be utilised. The engagement intervention enhances work life and should successfully promote the well-being of academic staff.

Interventions may in the first place be directed at either the work situation or the coping capacity of the employee. Work-orientated interventions on the one hand can be used to improve the fit between the individual and the workplace and worker-oriented interventions on the other hand may promote learning among employees to deal more effectively with experienced stress or to modify their appraisal of a stressful situation so that the perceived stress threats are reduced.

Primary, secondary and tertiary level interventions can be implemented, in accordance with the stress levels experienced by the employees. Primary level interventions would include aspects such as the reorganisation of the lines of authority; restructuring of organisational units; and changes in decision-making processes, such as increased employee participation in relevant decisions, to name but a few. Secondary level interventions, such as cognitive restructuring, time management, conflict resolution techniques and coping strategies, can be implemented to prevent employees who are already showing signs of stress from getting sick and to increase their coping capacity. The tertiary level of stress management interventions is concerned with the rehabilitation of individuals who have suffered ill health or reduced well-being as a result of strain in the workplace.

3.3.2 Recommendations for future research

Based on the results obtained in this study the following recommendations are made with regard to future research:

- More research is needed regarding the phrasing of MBI items as well as the conceptualisation of the dimensions. Elaborated models of the MBI-GS should be tested and can be greatly enhanced by including positively phrased Disengagement scales. Structural equivalence of the scales should be determined.

- Future research should focus more on causal relationships between burnout, strain, job characteristics (job demands and job resources) and dispositional optimism.
- Larger diverse sample sizes should be included in studies to overcome possible errors that may lead to misfit between the originally hypothesised models and the data obtained, as was the case in this study.
- In order to accommodate the multicultural context in the South African society and overcome language barriers, it is crucial to translate measuring instruments into the 11 official languages recognised by the South African Constitution. Thereafter the structural equivalence of the scales for different language groups should be determined.
- In the last instance it is recommended that research should be conducted before and after stress management interventions to ascertain the effects on burnout. Burnout in turn could be measured before and after stress management interventions to determine the effectiveness of such an intervention in relation to the reduction of burnout.

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