JOB DEMANDS, JOB RESOURCES, BURNOUT, HEALTH AND LIFE SATISFACTION OF SUPPORT 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 North-West University to use APA style in all scientific documents as from January 1999.

- The mini-dissertation is submitted in the form of a research article.

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ABSTRACT

Title: Job demands, job resources, burnout, health and life satisfaction of support staff in a higher education institution

Key terms: Burnout, job demands, job resources, physical health, psychological health, life satisfaction, support staff, higher education institution

Higher education institutions in South Africa are undergoing transformation because of increasing student numbers, government and the private sector relying on tertiary institutions to assist in solving problems in addition to the globalisation of knowledge. University staff is continuously faced major changes. Immense pressure is placed on academic institutions, including support staff. Support staff are constantly faced with increasing job demands and decreasing job resources. This imbalance and the increase of job stress over a prolonged period of time can lead to the devastating result of burnout.

The objective of this study was to investigate the relationship between task characteristics, burnout, health and life satisfaction in a higher education institution in the North West Province. A cross-sectional design was used. The study population (N=334) consisted of support staff members of higher education institutions in the North West Province. The Job Demands-Resources Scale (JDRS), The Maslach Burnout Inventory – GS (MBI-GS), the Health subscale of the ASSET and The Satisfaction with Life Scale (SWLS) were used as measuring instruments. Descriptive statistics (for example, means, standard deviations and kurtosis) were used to analyse the data. Pearson correlations and multiple regression analyses were used to assess the relationships between job demands, job resources, burnout, physical health, phychological health and life satisfaction.

The correlation coefficients indicated that exhaustion was positively related to psychological ill-health. Cynicism correlated negatively with growth opportunities. Multiple regression analysis showed that overload and growth opportunities predicted 26% of the variance for exhaustion and 29% of the variance in cynicism. Exhaustion predicted 24% of the variance for physical ill-health and 37% of the variance for psychological ill-health. Psychological ill-health predicted 16% of the variance of life satisfaction.

Recommendations for future research and the organisation were made.

OPSOMMING

Titel: Werkseise, werkshulpbronne, uitbranding, gesondheid en lewenstevredenheid van ondersteuningspersoneel in 'n hoër opvoedkundige instelling.

Sleutelterme: Uitbranding, werkskenmerke, werkseise, werkshulpbronne, fisieke gesondheid, psigologiese gesondheid, lewenstevredenheid, ondersteuningspersoneel, hoër opvoedkundige instelling

Hoër opvoedkundige instellings in Suid-Africa ondergaan transformasie aangesien, studentegetalle toeneem, regering en private sakesektore op tersiêre instellings steun om hulp te verleen met probleemoplossing en die globalisering van inligting speel hierin ook 'n rol. Personeel by universiteite word voortdurend gekonfronteer met groot veranderings. Hoë eise word gestel aan akademiese instellings en so ook aan ondersteuningspersoneel. Ondersteuningspersoneel word gekonfronteer met 'n toename in werkseise en 'n afname in werkshulpbronne. Die wanbalans en die toename in werkstres oor 'n lang tydperk kan tot uitbranding lei.

Die doel van hierdie studie was om die verband tussen werkskenmerke, uitbranding, gesondheid en lewenstevredenheid in universiteite van die Noordwes-provinsie te ondersoek. 'n Dwarssnee opname-ontwerp is gebruik. Die studiepopulasie (N=334) het bestaan uit ondersteuningspersoneel van die universiteite in die Noordwes-provinsie. Die Werks-eienskappe-skaal (WES), die Maslach-uitbrandingsvraelys – Algemene Opname, die Algemene Gesondheidsvraelys en die Lewenstevredenheid-vraelys is afgeneem. Beskrywende statistiek (byvoorbeeld gemiddeldes, standaardafwykings, skeefheid en kurtose) is gebruik om die data te ontleed. Pearson korrelasies en meervoudige regressie-analise is gebruik om die verhouding tussen werkseise en werkhulpbronne, uitbranding, fisieke gesondheid, psigologiese gesondheid en lewenstevredenheid te ondersoek en te bepaal.

Die korrelasiekoëffisiënte het getoon dat uitbranding positief verband hou met psigologiese ongesondheid. Sinisme het 'n negatiewe korrelasie met groeigeleenthede getoon. Die meervoudige regressie-analise het aangedui dat oorlading en groeigeleenthede 26% van die variansie in uitputting en 29% van die variansie in sinisme verklaar het. Uitputting het 24%

van die variansie in fisieke ongesondheid en 37% van die variansie in psigologiese probleme voorspel. Psigologiese ongesondheid het 16% van die variansie in lewenstevredenheid voorspel.

Aanbevelings vir toekomstige navorsing asook die instelling is aan die hand gedoen.

CHAPTER 1

INTRODUCTION

This mini-dissertation is about job demands, job resources, life satisfaction and their relationship to burnout of support staff at a higher education institution in South Africa.

This chapter focuses on the problem statement, research objectives and the research method.

1.1 PROBLEM STATEMENT

Economic growth and development of a country is dependent on a stable and productive support system when it comes to higher education (Robertson, 1998). South African society has experienced, and is experiencing, considerable socio-economic and political transformation (Roux, Schmidt, & Scheepers, 1997). The forces of technology, globalisation and the emergence of knowledge itself have become a combined core competence that forms a prerequisite for survival in the working place (Rowley, 2000). It is in this already-burdened context that higher education institutions in South Africa are undergoing transformation, and staff face major changes continually. These institutions face an overload of demands, but are ill equipped to meet them, since they suffer from an undersupply of resource capabilities, especially with a view to finances (Viljoen & Rothmann, 2002). This reflects the growing evidence of the rise in stress among staff members at these institutions (Winefield, Gillespie, Stough, Dua, & Hapuararchchi, 2002; Winefield & Jarrett, 2001).

The institutions also face turbulent environments caused by the following four trends (Robertson, 1998):

- Demands for participation have changed student entries from the elite to the mass universal.
- An increasing number of occupations are setting exact requirements with regard to knowledge and skills that are currently not provided by secondary education.
- Government and the private sector increasingly urge tertiary education institutions to assist them in solving societal problems on a broad spectrum.
- The globalisation of knowledge propels its growth at an accelerating pace.

These statements indicate that more pressure is placed on academic institutions, and this places increasing pressure on the personnel, including the support staff. Healthy institutions are those that are successful in maintaining support staff characterised by good physical and psychological health (Cooper & Cartwright, 1994).

Burnout has been recognised as a serious threat, particularly for employees who work with people (Van Dierendonck, Schaufeli, & Buunk, 1993), as in the case of support staff at higher education institutions. Meléndez and de Guzman (1983, p. 1) define burnout as "a state of mind that afflicts people who work with other people and give much more than what they get in return from their colleagues, friends, supervisors and clients," and it includes symptoms such as lack of enthusiasm for work, helplessness and frustration. Schaufeli and Enzmann (1998, p. 36) define burnout as "a persistent, negative, work related state of mind in 'normal' individuals that is primarily characterised by exhaustion which is accompanied by distress, a sense of reduced effectiveness, decreased motivation, and the development of dysfunctional attitudes and behaviours at work."

Schaufeli, Leiter, Maslach, and Jackson (1996) developed the Maslach Burnout Inventory – General Survey (MBI-GS), an adapted version of the original MBI for use outside the human services. The MBI-GS measures burnout. According to Schaufeli et al. (1996), burnout incorporates the following three dimensions: a) exhaustion which refers to the depletion or draining of emotional resources, and feelings of being overextended, b) cynicism which refers to negative, callous or excessively detached responses to various aspects of the job and c) professional efficacy which refers to a feeling of competence, productivity and achievement at work. However, Schaufeli, Salanova, and Bakker (2002) and Schaufeli and Bakker (2004) observe a core burnout factor that consists of exhaustion and cynicism. They found that professional efficacy loaded on an extended work engagement factor. Green, Walkey, and Taylor (1991) also refer to exhaustion and cynicism as the core of burnout.

Research elsewhere in the world has found that the possible causes of burnout can be classified into organisational, biographical and personality factors. Organisational factors that contribute to burnout are work overload (Bacharach, Bamberger, & Conley, 1991; Landsbergis, 1988), poor collegial support (Golembiewski & Munzenrider, 1988), role conflict and role ambiguity (Miller, Ellis, Zook, & Lyles, 1990) and lack of feedback (participation in decision making and autonomy). These factors represent demands on

employees (also referred to as job stressors) which are included in most models of burnout (Schaufeli & Enzmann, 1998). Burnout was also found to be related to low levels of perceived control (Shirom, 1989). However, one of the most substantial organisational factors seems to be occupational stress which is normally caused by job stressors.

Lu (1999) argues that stress has become one of the most serious health issues, a problem not just for individuals, but also for their employers. Research over the past three decades has shown that the experiences of occupational stress are closely related to the health and safety of individuals as well as the well-being of their organisations or institutions (Rees, 1995; Rees & Redfern, 2000). According to Sardi (1997, p. 1), stress may be defined as "... a situation wherein factors interact with a person to change (i.e. disrupt or enhance) his/her psychological and/or physiological condition, such that the person is forced to deviate from normal functioning."

Many studies have shown that occupational stressors can result in mental, physical and behavioural stress reactions, such as burnout, depression and psychosomatic diseases (Houkes, Janssen, de Jonge, & Hijhuis, 2001). According to the findings of Mills and Huebner (1998) there is significant evidence that occupational stress could influence the experience of burnout considerably. The link between unmanaged stress and the negative impact on health and wellbeing are well-demonstrated in stress research, and it has been linked to severe physical consequences, some of which can be fatal (Winefield, et al., 2002).

In order to explain the causal pattern or relationship between occupational stresses and their outcomes, a theoretical model has been developed: the Person-Environment Fit model proposed by French, Caplan, and Harrison (1984) views stress as arising from a misfit between the requirements of the job (for example, demands and resources) and the values, skills and traits of the individual (Cooper, Dewe, & O' Driscoll, 2001; Winefield et al., 2002). Implicit in the notion of the misfit is the person's ability to handle or cope with the encounter, while aspects such as values, resources, demands and skills available will help to determine the perceived misfit. Subjectivity of the person (how the individual perceives the encounter) will furthermore increases the likelihood that strain will occur.

According to Cooper and Cartwright (1994), Siu (2002) and Winefield et al. (2002) there is significant evidence to suggest that chronic and high levels of occupational stress, left

unchecked, are related to mental and physical wellbeing, job dissatisfaction, absenteeism, stress related injuries, turnover and the intention to quit. Research by Winefield et al. (2002) shows significant correlations between higher levels of psychological strain and incidences of self-reported stress-related health symptoms, such as sleeping difficulties, headaches and viral and cold infections. Furthermore, these symptoms are significantly associated with stress-related medical conditions reported by staff members, such as migraines, hypertension and coronary heart disease. One of the most damaging effects of occupational stress in the United States of America (USA) and the United Kingdom (UK) is its impact on the economy due to absenteeism and other stress related illnesses (Siu, 2002). Lu (1999) estimate that occupational stress causes half of absenteeism, 40% of turnover and 5% of total loss of productivity.

Tytherleigh (2002) conducted a study on occupational stress in higher education institutions in the UK in which she tested work relations, work-life balance, overload, job security, control, resources and communication, job satisfaction overall, and pay and benefits as potential sources of stress. It was discovered that the highest levels of strain were caused by *work relationships, job security* and *resources and communication.*

As has been mentioned, in terms of a transactional perspective stress arises when the individual appraises the demands of a particular encounter. It is also argued that "stress is individually defined; one person's stress can be another's excitement or energiser." Furthermore, Siu (2002) argues that it is of utmost importance to identify potential occupational stressors as well as variables which have beneficial consequences for both employees and their organisations. Therefore, it is important to examine the possibility that certain variables might contribute to burnout which might also affect life satisfaction.

Maslach, Schaufeli, and Leiter (2001) identify task characteristics as the most important causes of burnout. Maslach et al. (2001) also divide job characteristics into job demands and lack of resources. Task characteristics can be defined as the specific tasks that make up an individual's job, and these are also referred to as "task content factors" (Cooper et al., 2001). The Job Demand-Resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) proposes that burnout follows two processes. In the first process job demands lead to exhaustion, and in the second process a lack of resources leads to withdrawal, and eventually disengagement. Job demands refer to those physical, social or organisational aspects of the

job that require sustained physical or mental energy (Demerouti et al., 2001). Workload is a stressor for many workers. Overload as well as underload of work can cause ill-health (both psychological and physical ill-health). Job resources refer to those physical, psychological, social or organisational aspects of the job that may be functional in achieving work goals, reduce job demands at the associated physiological and psychological costs and stimulate personal growth and development (Demerouti et al., 2001).

Satisfaction is a state of mind, an evaluative appraisal of something (Saris, Veenhoven, Scherpenzeel, & Bunting, 1996, p. 11). Therefore, as Diener, Emmons, Larsen, and Griffin (1985) and Pavot, Diener, Colvin, and Sandvik (1991) rightly argue, life satisfaction is a cognitive-judgemental process within the individual. Furthermore, appraisals of life satisfaction are based on a comparison of an individual self-established standard which is not externally imposed (Diener et al., 1985; Pavot et al., 1991). According to Saris et al. (1996) life satisfaction can be seen as the degree to which a person positively evaluates the overall quality of his/her life as a whole. For these reasons life satisfaction is defined as "a global evaluation by the person of his or her life" (Diener et al., 1985, p. 71; Pavot et al., 1991, p. 150). In other words, this has to do with how much the person likes the life he/she leads (Saris et al., 1996).

Saris et al. (1996) and Pavot et al. (1991) argue that the evaluation of life involves all the relevant criteria in the mind of the individual (that is, religion, love life, health, wealth, how well expectations are likely to be met). However, it is unlikely that individuals assign the same weight to each domain. Individuals might therefore be satisfied with most domains in their life, and still be dissatisfied overall, because of the impact of one specific domain. As Saris et al. (1996, p. 17) point out, "there may be too much excitement in life, and too few other qualities." According to Pavot et al. (1991), the opposite is also true: one can be satisfied notwithstanding the fact that he/she is unhappy with a particular domain.

Appraisals of life can concern different periods of time (Saris et al., 1996; Pavot, Diener, & Suh, 1998). This involves the matters of how life has been, what it is like now and how it will probably be like in the future. A temporal focus is important in the study of life satisfaction when it comes to global evaluation (Pavot et al., 1998). For example, a positive future outlook can have implications for how well an individual might cope with current situations. Researchers have reasoned that such an optimistic outlook can also hamper present

stressors, because of the fact that the individual will better cope with current stressful life situations (Pavot et al., 1998). If this is true, then one can argue that an individual with a negative future outlook will have difficulties to cope with current stressful work or life situations. In the light of this argument, it is reasonable to argue that satisfaction with life will moderate stress. For example, a tertiary administrator might have a high level of satisfaction with his/her past and present, but might anticipate lower life satisfaction in the future, because of health concerns, for instance.

The impact of stress on life satisfaction has been studied by a number of researchers (Simons, Aysan, Thompson, Hamarat, & Steele, 2002). Only one study, that of Chiu, Man and Thayer (1998), was found to suggest that life satisfaction is a predictor of stress.

This background makes it clear that occupational stressors as well as variables such as life satisfaction might be related to burnout of support staff in higher education institutions. However, no studies including these factors in a model for support staff in higher education institutions in South Africa are available in existent literature. Therefore, the first research problem that comes into focus here is that there is a lack of a model of burnout among support staff in higher education institutions in South Africa. Limited information is available regarding the relationships between job demands, job resources, burnout, ill-health and life satisfaction of support staff in a higher education institution.

1.2 RESEARCH OBJECTIVES

1.2.1 General objective

The general objective of this research is to determine the relationship between job demands, job resources, burnout, ill-health and life satisfaction.

1.2.2 Specific objectives

- To investigate the relationship between job demands, job resources, burnout and ill-health and life satisfaction among support staff in higher education institutions.

- To determine the best predictors of burnout and life satisfaction among support staff of higher education institutions.

1.3 RESEARCH METHOD

1.3.1 Literature review

The literature review focuses on job demands, job resources, burnout, health and life satisfaction.

1.3.2 Empirical study

1.3.2.1 Research design

A cross-sectional design with a survey as technique of data collection is used to reach the objectives of this research. Cross-sectional designs are used to examine groups of subjects in various stages of development simultaneously, while the survey describes a technique of data collection in which questionnaires are used to gather data about an identified population. This design will be well suited to the descriptive and predictive functions associated with correlation research in which relationships between variables are examined (Shaughnessy & Zechmeister, 1997).

1.3.2.2 Participants

The total available population of support staff at a higher education institution ($N = 600$) was used to participate in the study. The sample consisted of the staff members who had responded to the questionnaires ($n = 334$).

1.3.2.3 Measuring instrument

The *Job Demands-Resources Scale* (JDRS) is used to measure job demands and job resources for employees. The JDRS comprises 48 items and the questions are rated on a 4-point scale ranging from 1 (*never*) to 4 (*always*). The dimensions of the JDRS include pace and amount of work, mental load, emotional load, variety in work, opportunities to learn, independence in

work, relationships with colleagues, relationships with immediate supervisors, ambiguities about work, information, communication, participation, contact possibilities, uncertainty about the future, remuneration and career possibilities. Jackson and Rothmann (2005) find that seven factors of the JDRS are reliable according to their alpha coefficients. These are: organisational support (0,88), growth opportunities (0,80), overload (0,75), job insecurity (0,90), relationship with superiors (0,76), control (0,71) and rewards (0,78). Rothmann, Strydom, and Mostert (2006) also find reliable alpha coefficients for the JDRS that vary between 0,76 to 0,92 in a South African sample.

The *Maslach Burnout Inventory-General Survey* (MBI-GS) Maslach, Jackson, and Leiter, (1996) is used to measure burnout. The MBI-GS has three subscales: Exhaustion (five items; for example, "I feel used up at the end of the workday"), Cynicism (five items; for example, "I have become less enthusiastic about my work") and Professional Efficacy (six items; for example, "In my opinion, I am good at my job"). However, only the Exhaustion and Cynicism sub-scales are used for the purposes of this study. Internal consistencies (Cronbach coefficient alphas) reported by Schaufeli et al. (1996) vary 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 are as follows: 0,65 (Exhaustion), 0,60 (Cynicism and 0,67 (Professional Efficacy) (Schaufeli et al., 1996). All items are scored on a 7-point frequency-rating scale ranging from 0 (*never*) to 6 (*daily*). Storm (2002) confirms the 3-factor structure of the MBI-GS in a sample of 2396 members of the South African Police Service (SAPS). The following Cronbach alpha coefficients have been obtained for the two sub-scales of the MBI-GS: Exhaustion, 0,88 and Cynicism, 0,79 (Storm, 2002).

The Health Questionnaire which forms part of the ASSET Organisational Stress Screening tool (Cooper & Cartwright, 1994) is used to measure physical and psychological ill-health. The questionnaire assesses the respondent's level of health. The questions are rated on a four-point scale ranging from 1 (*never*) to 4 (*often*). It consists of 19 items arranged on two subscales: Physical ill-health (for example, "lack of appetite or over-eating") and Psychological unwell-being (for example, "panic or anxiety attacks"). According to the Asset model and the large body of research on which it is based, poor employee health can be indicative of excessive workplace pressure and stress that is experienced. Thus, poor health is an outcome of stress, and this can be used to ascertain if workplace pressures have positive and motivating or negative and damaging effects. However, it must be noted that poor health

may not necessarily be indicative of workplace stress. Individuals may, for example, be unwell, because they choose to not lead a healthy lifestyle, or may be unaware of how to do so. Stressors outside the work place may also impact upon a person's health. Although validity for the Asset still needs to be completed, Johnson and Cooper (2003) report good convergent validity for the scale.

The Satisfaction with Life Scale (SWLS) is used to measure satisfaction with life. The SWLS is a five-item instrument which was developed by Diener et al. (1985) to measure global cognitive judgements of one's life (for example, "in most ways my life is close to my ideal"). According to Diener et al. (1985) the SWLS is designed with the idea that one should ask respondents about the overall judgement of their life in order to measure the concept of life satisfaction. Participants are asked to indicate their degree of agreement or disagreement on a seven-point Likert scale varying from 1 (*strongly disagree*) to 7 (*strongly agree*). Scores on the SWLS range from 5 to 35, with higher scores indicating greater life satisfaction. Diener et al. (1985) report a two-month test-retest correlation coefficient of 0,82 and a Cronbach's alpha coefficient of 0,87. The inter-item correlation matrix was factor analyzed, using principal axis factor analysis. According to the eigenvalues a single factor emerged, accounting for 66% of the variance (Diener et al., 1985).

1.3.2.4 Statistical analysis

The SPSS program (SPSS, 2005) and the AMOS programme (Arbuckle, 1997) is used to carry out statistical analyses. Cronbach alpha coefficients are used to assess the internal consistency of the measuring instruments (Clark & Watson, 1995). Descriptive statistics (such as means, standard deviations, range, skewness and kurtosis) and inferential statistics are used to analyse the data. Pearson and Spearman correlation coefficients are computed to determine the relationships between variables. A cut-off point of $p = 0,05$ is set for the statistical significance of the results. Effect sizes (Cohen, 1988) are used to decide on the practical significance of the findings. A cut-off point of 0,30 (medium effect, Cohen, 1988) is set for the practical significance of correlation coefficients.

Multiple regression analysis is used to investigate whether job demands and job resources predict burnout, whether burnout predicts ill-health and whether burnout and ill-health predict life satisfaction. The dimensions of burnout (such as Exhaustion) are first entered as

dependent variable and job demands (for example, Overload) as an independent variable. Secondly, job resources are entered into the analysis as independent variables, and the dimensions of burnout are entered as dependent variables to investigate the effect that job resources have on burnout.

1.4. DIVISION OF CHAPTERS

Chapter 1 Introduction, problem statement and objectives

Chapter 2 Research Article

Chapter 3 Conclusions, limitations and recommendations

1.5 CHAPTER SUMMARY

This chapter provided a detailed motivation for the research and discussed the methodology that will be used. 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 embodies a research article.

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CHAPTER 2

RESEARCH ARTICLE

JOB DEMANDS, JOB RESOURCES, BURNOUT, HEALTH AND LIFE SATISFACTION OF SUPPORT STAFF IN A HIGHER EDUCATION INSTITUTION

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ABSTRACT

The objective of this study was to investigate the relationship between job demands, job resources, burnout, ill-health and life satisfaction of support staff in a higher education institution in South Africa. A cross-sectional design was used. The study population (N=334) consisted of support staff members of a higher education institution in the North West Province. The Job Demands-Resources Scale, The Maslach Burnout Inventory – General Survey, the Health subscale of the ASSET, and The Satisfaction with Life Scale were used as measuring instruments. The results showed that overload is associated with high exhaustion and cynicism. Growth Opportunities were negatively related to exhaustion and cynicism. Exhaustion was related to health problems. Psychological ill-health and cynicism predicted low life satisfaction.

OPSOMMING

Die doel van hierdie studie was om die verband tussen werkseise en hulpbronne, uitbranding, gesondheid en lewenstevredenheid van ondersteuningspersoneel in 'n hoër opvoedkundige instelling in Suid-Afrika te ondersoek. 'n Dwarssnee opname-ontwerp is gebruik. Die studiepopulasie (N=334) het bestaan uit ondersteuningspersoneel van 'n hoër opvoedkundige instelling in die Noordwes-provinsie. Die Werkseise-hulpbronne- skaal, die Maslach-uitbrandingsvraelys – Algemene Opname, die Gesondheid-subskaal van die ASSET en die Lewenstevredenheidsvraelys is afgeneem. Die resultate het aangetoon dat oorlading verband hou met hoë vlakke van uitputting en sinisme. Groeigeleenthede het negatief verband gehou met uitputting en sinisme. Uitputting het 'n verband getoon met gesondheidsprobleme. Swak psigologiese gesondheid en sinisme het lae lewenstevredenheid voorspel.

Higher education institutions perform a critical role in the creation of knowledge combined with education and training. Globally these institutions are experiencing great changes that challenge their mandates, traditional practices, authority and organisational structures (Doyle & Hind, 1998; Hugo, 1998; Nixon, Marks, Rowland, & Walker, 2001). Higher education institutions are faced with an overload of demands, but are ill-equipped to meet them, since they suffer from an undersupply of resources (Viljoen & Rothmann, 2002). To adapt to the changing circumstances and to maintain the desire for excellence is a challenge for staff at higher education institutions (Davis, 1996). These changes and demands contribute to the evidence that higher education institutions are now characterised by high levels of stress (Winefield, Gillespie, Stough, Dua, & Hapuararchchi, 2002).

Higher education institutions as working organisations distinguish between academic staff engaged in teaching and research and non-academic administrative, support staff. The latter have different and unique jobs and supervisory structures, and thus also different employee problems and concerns, than the academic staff.

Banata and Kuh (1998) stress the importance of support staff emphasising that the objectives for student development can only be reached by means of the cooperation of support staff with whom students spend the majority of their time. Gillespie, Walsh, Winefield, Dua and Stough (2001) also indicates the important role of support staff in the creation and development of knowledge and innovation in higher educational institutions. Hittman (1993) describes support staff as the key performers in establishing service quality at a higher education institution. Although their importance is clearly limited, research has focussed on the stress and burnout of support staff at higher education institutions (Pitman, 2000).

The nature of the support staffs' work is continuous and demanding (Waugh, 2002). Support personnel must deal with the dilemmas inherent in simultaneously administering, supervising instruction, being accessible and delegating and accepting responsibility. In order to carry out the job of support staff successfully multiple personal and professional qualities seem to be needed.

According to Smewing and Cox (1998), different members of support staff are experiencing a diversity of problems. Support staff are subjected to more pressure, since the passing on of duties from senior staff means an increase in their duties and the number of people they

assist. It culminates in problems with workflow, deadlines and conflicting pressures. The use of new technology without the necessary training confounds the situation further, and the people they work for often do not understand the complexity of the tasks involved which leads to a lack of support. With this in mind it is understandable that in resent studies of support staff in higher education institutions the following key factors have been identified: work overload, time constraints, lack of promotion opportunities, inadequate recognition, inadequate salary, changing of job roles, inadequate management, inadequate resources and funding and demanding interaction with students (Armour, Caffarella, Fuhrmann, & Wergin, 1987; Dua, 1994; Gillespie et al., 2001; Winefield & Jarrett, 2001).

In recent studies, support staff indicate that occupational stress impacts on them professionally and personally (Gillespie et al., 2001). It has been shown that employees in almost any type of job can develop burnout: support staff in higher education institutions are at risk as well (Schaufeli & Enzmann, 1998). Maslach, Schaufeli, and Leiter (2001) describe burnout as a long-term stress reaction. Schaufeli and Enzmann (1998) find that burnout develops in response to job stressors, and this implies increasing job demands and depleting job resources or the complete lack of them. Burnout develops in three stages: the first stage is characterised by an imbalance between resources and demands that eventually leads to feelings of exhaustion. The second stage is a set of negative, apathetic or overly disconnected attitudes that develop, and which is described as cynicism. The third stage results in reduced professional efficacy in which the person feels incompetent and ineffective in achieving his/her goals or providing a service. Many studies have shown that occupational stressors can result in mental, physical and behavioural stress reactions, such as burnout, depression and psychosomatic diseases (Houkes, Janssen, de Jonge, & Hijhuis, 2001).

Findings of Winefield, et al. (2002) have shown significant correlations between higher levels of psychological strain and incidences of self-reported stress-related health symptoms. The link between unmanaged stress and the negative impact on health and wellbeing is demonstrated well in stress research, and it is also linked to severe physical consequences, some of which can be fatal (Winefield & Jarrett, 2001). Furthermore, it has been shown that the health of an individual is an essential dynamic that influences the life satisfaction of the individual (Atchley, 1994; Krause, 1987). How this all culminates into negative effects is that work conditions influence life satisfaction by impairing the health of the individual.

Burnout can be measured in terms of the direct and indirect costs in both humanistic and financial terms. This is reason for concern for higher education institutions, because according to Cooper and Cartwright (1994) healthy institutions are those that are successful in maintaining support staff characterised by good physical and psychological ill-health. The effectiveness of the modern university as a human organisation depends fundamentally on the effectiveness of its individual staff members (Davis, 1996).

The objective of this study is to determine the relationships between job demands, job resources, burnout, ill-health and life satisfaction of support staff in a higher education institution.

Burnout

Burnout is a negative work-related psychological state that is primarily characterised by mental exhaustion (Schaufeli, 2003). Burnout is a result of continued involvement pertaining to situations that are demanding. Maslach et al. (2001) describe burnout as a syndrome consisting of three dimensions: feelings of emotional exhaustion, depersonalisation (cynicism) and reduced personal accomplishment. The three original burnout dimensions has been broadened and redefined after the introduction of the General Survey (MBI-GS) (Maslach, Jackson, & Leiter, 1996). The three redefined concept are exhaustion, cynicism, and professional efficacy.

In order to understand burnout it is necessary to discuss the dimensions of burnout. Exhaustion refers to the depletion or draining of emotional resources and feelings of being overextended. Exhaustion is a necessary, but not sufficient, criterion for burnout (Maslach, et al., 2001). Cynicism indicates that the employee is incapable of performing, because all energy has been drained. It further indicates that the employee is no longer willing to perform, because of an increase of intolerance to any effort (Schaufeli, 2003). Mental distancing – also described as the psychological withdrawal from a task can be seen as an adaptive mechanism to cope with excessive job demands and subsequent feelings of exhaustion (Maslach et al., 2001). It can be argued therefore that cynicism develops in response to exhaustion. Professional efficacy, the third component of burnout, refers to the employee's perceived ability to meet the job demands, and to satisfy essential elements of performance. Reduced professional efficacy results in the tendency to evaluate oneself

negatively, particularly in regard to one's work. Lee and Ashforth (1996) indicate that professional efficacy is the weakest burnout dimension, since it does not have significant relationships with the other variables of burnout. Professional efficacy seems to develop independently and in parallel.

In using the adapted version of the MBI, burnout has been conceptualised as exhaustion, mental distance (cynicism and depersonalisation) and reduced professional efficacy (Jackson & Rothmann, 2005). According to Schaufeli (2003), burnout incorporates the following three dimensions: Exhaustion and mental distancing refer to the incapability of a person to perform, because of the depletion of all energy. Mental distancing refers to the unwillingness of a person to perform, because of an increased intolerance of making an effort. Professional efficacy refers to feelings of insufficiency, incompetence, lack of achievement and feelings of unproductiveness.

In understanding the concepts of burnout it is also important to be aware of the symptoms that individuals who are diagnosed with burnout experience. The following symptoms are primarily associated with burnout: anxiety, aggression, increased tension, restlessness, chronic fatigue, headaches, insomnia, difficulty with complex tasks and loss of motivation (Schaufeli & Enzmann, 1998). Burnout is therefore bad for the individual, but burnout of the individual also takes its toll on the organisation, resulting in poor productivity and increased absenteeism, both of which have negative effects on the turnover of the organisation.

According to Schaufeli (2003), burnout is a complex, multi-causal process that involves various factors at different levels of aggregation. Burnout can be ascribed to organisational factors, occupational attitudes and personality characteristics. Various factors have been linked to burnout in existing empirical research (Schaufeli & Enzmann, 1998). Every occupation seems to have its own specific factors for burnout.

Job demands and job resources

Maslach et al. (2001) identify task characteristics as the most important cause of burnout. Job characteristics are the specific tasks that make up the job of an individual, and these are also known as task content factors (Cooper, Dewe, & O'Driscoll, 2001). According to Schaufeli and Bakker (2002), any occupation can be viewed from a stress perspective consisting of two

elements: job demands and job resources. The Job Demand-Resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) proposes that burnout follows two processes. In the first process job demands lead to exhaustion and in the second process a lack of resources leads to withdrawal, and eventually disengagement. This model assumes that burnout develops irrespective of the type of occupation, in cases in which job demands are high and resources limited. These negative working conditions lead to energy depletion, and undermine employees' motivation.

Job demands are the physical, psychological, social or organisational aspects of the job that require sustained physical and/or psychological (that is, cognitive or emotional) effort. As a consequence, they are associated with physiological and psychological costs such as work overload, personal conflicts and emotional demands such as demanding academic staff. Job resources refer to the physical, psychological, social or organisational aspects of the job that are necessary to (1) achieve work goals, (2) reduce job demands and lessen physiological and psychological costs and (3) stimulate personal growth and development (Demerouti et al., 2001). Resources may be located at the organisational level (for example, in terms of salary and growth opportunities), at the interpersonal or social level (for example, in terms of supervisor support), at the organisation of work level (for example, in terms of role clarity) or the level of the task (for example, performance feedback and autonomy).

Ill-Health

Burnout as a result of the presence of demands and absence of resources can lead to various negative outcomes: physical illness, staff turnover and absenteeism (Maslach, Jackson & Leiter, 1996). Support staff that experience burnout experience 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 (Maslach & Jackson, 1984). Physical health problems associated with burnout have been identified as headaches and migraines, sleep disorders, back and neck pain, constant muscle pain and weight loss or gain (Gillespie, et al., 2001). The predominant psychological health problem that is associated with burnout is anxiety in the form of anxiety disorders (Sharpley, Reynolds, & Acosta, 1996).

Life satisfaction

Satisfaction is a state of mind, an evaluative appraisal of something (Saris, Veenhoven, Scherpenzeel, & Bunting, 1996). Life satisfaction can then be seen as a cognitive-judgemental process by the individual (Diener, Emmons, Larsen, & Griffin, 1985). An Individual's perception of their own well-being has a direct relation on how well they perceive themselves to be.

According to Saris et al. (1996) and Rice (1994), life satisfaction can be seen as the degree to which a person positively evaluates the overall quality of his/her life as a whole. Saris et al. (1996) and Pavot, Diener, Colvin, and Syndvik (1991) argue that the evaluation of life involves all the relevant criteria in the mind of the individual (that is, religion, love life, health, wealth and how well expectations are likely to be met). It is important to note that individuals will differ in terms of the importance that each criterion will hold for them.

According to Rice (1994), life satisfaction can be defined as the degree in which the experience of an individual's life satisfies that individual's physical and psychological wants and needs. Rice (1994) developed a model suggesting the influence of work conditions on life satisfaction by changing characteristics of the individual or the environment.

Demerouti, Bakker, Nachreiner, and Schaufeli, (2000) find that burnout mediates the effects of working conditions (that is, job demands and job resources) on life satisfaction. Reduced levels of life satisfaction could then be contributed to the high demands that led to burnout. Work conditions influence life satisfaction by the impairment of health. Atchley (1994) and Krause (1987) find that the satisfaction that an individual experiences from his/her health is a central factor that influences life satisfaction.

Time is of importance when it comes to considering life satisfaction (Pavot, Diener, & Suh, 1998). How an individual experiences and evaluates his/her life today, yesterday and tomorrow can be very different either in terms of positive and negative outlook, and this has an impact on the life satisfaction of the individual at different times of his/her life.

It can be concluded that support staff in higher education institutions are vulnerable to the adverse effects of burnout. This is largely so, since the recent dramatic increase in workload

and the concomitant decrease in job insecurity as well as poor management, certain task characteristics, the lack of resources and increased job demands have placed support staff under increasing pressure. The relationship of burnout and job characteristics is of crucial importance when it comes to considering the health and life satisfaction of support staff, as well as the effectiveness of universities to deliver the teaching and research programmes in accordance with which they are increasingly evaluated.

METHOD

Research design

A survey has been utilised to obtain the objectives of this research. The specific design is a cross-sectional design in which a sample is drawn from a population at a particular moment in time (Shaughnessy & Zechmeister, 1997).

Participants

The participants were the total available population of support staff in higher education institutions (N = 600). The sample consists of the staff members who responded to the questionnaires (n = 334). Table 1 shows the characteristics of participants.

Table 1

Characteristics of the Participants (N = 334)

Item	Category	Percentage
Campus	Potchefstroom	87,43
	Mmabatho	12,57
Gender	Male	30,18
	Female	69,82
Marital status	Single	14,71
	Engaged	6,31
	Married	64,26
	Divorced	12,91
	Separated	0,90
	Remarried	0,90
Home language	Afrikaans	69,07
	English	3,30
	Sepedi	0,60
	Sesotho	5,41
	Setswana	18,62
	isiZulu	0,30
	isiNdebele	0,60
	isiXhosa	2,10
Age	19-29	16,30
	30-39	26,62
	40-49	27,88
	50-59	24,43
	60-67	4,71
Education	Grade 12	42,94
	3-year degree	18,71
	4-year degree	23,62
	5- to 7-year degree	0,92
	Master's degree	9,51
	Doctoral degree	3,99

Table 1 shows that more than two-thirds of the sample are female (69,82%). Most of the participants are married (64,26%). The home language of most of the participants is Afrikaans (69,07%). Nearly half (42,94%) of the sample only completed their studies to the level of Grade 12.

Measuring instruments

The *Job Demands-Resources Scale* (JDRS),developed by Barkhuizen, Rothmann and Tytherleigh (2004) was used to measure job demands and job resources for employees. The JDRS comprises 48 items and the questions are rated on a 4-point scale ranging from 1 (*never*) to 4 (*always*). The dimensions of the JDRS include pace and amount of work, mental load, emotional load, variety in work, opportunities to learn, independence in work, relationships with colleagues, relationships with immediate supervisors, ambiguities about work, information, communication, participation, contact possibilities, uncertainty about the future, remuneration and career possibilities. Jackson and Rothmann (2005) find that seven factors of the JDRS are reliable according to their alpha coefficients. These are as follows: organisational support (0,88), growth opportunities (0,80), overload (0,75), job insecurity (0,90), relationship with superiors (0,76), control (0,71) and rewards (0,78). Rothmann, Strydom, and Mostert (2006) also showed reliable alpha coefficients for the JDRS that vary between 0,76 to 0,92 in a South African sample.

The *Maslach Burnout Inventory-General Survey* (MBI-GS) (Maslach et al., 1996) was used to measure burnout. The MBI-GS has three subscales: Exhaustion (five items; for example, "I feel used up at the end of the workday"), Cynicism (five items; for example, "I have become less enthusiastic about my work") and Professional Efficacy (six items; for example, "In my opinion, I am good at my job"). However, only the Exhaustion and Cynicism sub-scales were used for the purposes of this study. Internal consistencies (Cronbach coefficient alphas) reported by Schaufeli, Van Diederendonck, and Van Gorp, (1996) vary from 0,87 to 0,89 for Exhaustion, 0,73 to 0,84 for Cynicism. Test-retest reliabilities after one year are as follows: 0,65 (Exhaustion), 0,60 (Cynicism and 0,67 (Professional Efficacy) (Schaufeli et al., 1996). All items are scored on a 7-point frequency-rating scale ranging from 0 (*never*), to 6 (*daily*). Storm (2002) confirmed the 3-factor structure of the MBI-GS in a sample of 2396 members of the South African Police Service (SAPS). The following Cronbach alpha coefficients have been obtained for the two sub-scales of the MBI-GS: Exhaustion, 0,88 and Cynicism, 0,79 (Storm, 2002). The default model revealed a good fit between the theoretical and empirical models (χ^2 =3,17; *df*=10; *p*=0,00). The fit statistics of Model 1 indicates a good fit with the NFI, TLI and CFI values are all above 0,90 and the RMSEA value is 0,00.

The Health Questionnaire which forms part of the ASSET Organisational Stress Screening tool (Cooper & Cartwright, 1994) was used to measure physical and psychological ill-health. The questionnaire assesses the respondent's level of health. The questions are rated on a four-point scale ranging from 1 (*never*) to 4 (*often*). It consists of 19 items arranged on two subscales: Physical ill-health (for example, "lack of appetite or over-eating") and Psychological unwell-being (for example, "panic or anxiety attacks"). According to the Asset model and the large body of research on which it is based, poor employee health can be indicative of excessive workplace pressure and stress that is experienced. Thus, poor health is an outcome of stress, and this can be used to ascertain if workplace pressures have positive and motivating or negative and damaging effects. However, it must be noted that poor health may not necessarily be indicative of workplace stress. Individuals may, for example, be unwell, because they choose to not lead a healthy lifestyle, or may be unaware of how to do so. Stressors outside the work place may also impact upon a person's health. Although validity for the Asset still needs to be completed, Johnson and Cooper (2003) report good convergent validity for the scale. The hypothesised model shows a good fit (χ^2 =307,28; *df*=115; *p*=0,00). NFI, TLI and CFI values close to 0,90 and a RMSEA value of 0,07 are an indication of success in confirming the hypothesised model.

The Satisfaction with Life Scale (SWLS) was used to measure satisfaction with life. The SWLS is a five-item instrument which was developed by Diener et al. (1985) to measure global cognitive judgements of one's life (for example, "in most ways my life is close to my ideal"). According to Diener et al. (1985) the SWLS is designed with the idea that one should ask respondents about the overall judgement of their life in order to measure the concept of life satisfaction. Participants are asked to indicate their degree of agreement or disagreement on a seven-point Likert scale varying from 1 (*strongly disagree*) to 7 (*strongly agree*). Scores on the SWLS range from 5 to 35, with higher scores indicating greater life satisfaction. Diener et al. (1985) report a two-month test-retest correlation coefficient of 0,82 and a Cronbach's alpha coefficient of 0,87. They factor analyse the inter-item correlation matrix using principal-axis factor analysis. According to the eigenvalues a single factor emerges, accounting for 66% of the variance (Diener et al., 1985). The statistically significant χ^2 value of 33,69 ($df = 5$, $p = 0,00$) indicated a good overall fit of the originally hypothesised model. All the other fit statistics indicated an excellent fit of the measurement model to the data.

Statistical analysis

The statistical analysis was carried out with the help of the SPSS-program (SPSS Inc., 2003) and the AMOS programme (Arbuckle, 1997). Cronbach alpha coefficients were used to assess the reliability 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.

Multiple regression analysis was used to determine whether job demands and job resources predict burnout, whether burnout predicts ill-health and whether burnout and ill-health predict life satisfaction. Exhaustion (a dimension of burnout) was first entered as dependent variable and job demands (that is, Overload) as an independent variable. Secondly, job resources were entered into the analysis as independent variables and the dimensions of burnout as dependent variables, thus to investigate the effect that job resources have on burnout.

RESULTS

The descriptive statistics and alpha coefficients of the scales are reported in Table 2.

Table 2

Descriptive Statistics and Alpha Coefficients of the Measuring Instruments

Item	Mean	*SD*	Skewness	Kurtosis	α
MBI-GS					
Exhaustion	12,00	7,41	0,33	-0,57	0,84
Cynicism	7,20	5,38	0,48	-0,42	0,74
JDRS					
Overload	24,10	5,18	-0,15	-0,24	0,79
Growth Opportunities	24,14	5,80	-0,10	-0,72	0,84
Social Support	18,88	3,10	-0,43	-0,01	0,69
Organisational Support	44,13	9,30	-0,36	-0,56	0.91
Advancement	11.56	3,53	0,84	0,68	0.76
Job Insecurity	7,62	3,11	0,12	-1,30	0,91
Asset					
Physical Ill-Health	13,83	4,14	0,02	-0,44	0,74
Psychological Ill-Health	22,10	7,08	0,41	-0,23	0,89
SWLS					
Life Satisfaction	18,79	6,61	-0,64	-0,28	0,87

Table 2 shows that Cronbach alpha coefficients varying from 0,69 to 0,91were obtained for the scales. These alpha values are highly acceptable with a view to the guideline of 0,70 (Nunnally & Bernstein, 1994). It is evident from Table 2 that the scores on the various measuring instruments are relatively normally distributed, with low skewness and kurtosis. In conclusion, it can be said that all instruments show sufficient reliability to be used for subsequent analysis.

Table 3 gives the correlation coefficients between job demands, job resources, burnout, ill-health and life satisfaction.

Table 3

Correlations between Burnout, Job Demands, Job Resources, Health and Life Satisfaction

Item		1	2	3	4	5	6	7	8	9	10
1.	Exhaustion	-									
2.	Cynicism	0,50*++	-								
3.	Overload	0,40*+	0,10	-							
4.	Growth Opportunities	-0,21*	-0,50*++	0,17	-						
5.	Social Support	-0,24*	-0,16	-0,15	0,27*	-					
6.	Organisational Support	-0,32*+	-0,39*+	-0,15	0,55*++	0,52*++	-				
7.	Advancement	-0,17	-0,21*	-0,06	0,38*+	0,17	0,33*+	-			
8.	Job Insecurity	-0,04	0,08	0,01	-0,06	-0,08	-0,12	-0,08	-		
9.	Physical Ill-Health	0,49*+	0,26*	0,24*	-0,12	-0,23*	-0,27*	-0,16	0,08	-	
10.	Psychological Ill-Health	0,60*++	0,36*+	0,25*	0,15	-0,22*	-0,31*+	-0,15	0,03	0,63*++	-
11.	Life Satisfaction	-0,27*	-0,27*	0,03	0,34*+	0,06	0,30*+	0,38*+	-0,06	-0,26*	-0,30*+

* Statistically significant: $p \leq 0,05$
+Practically significant: $r > 0,30$ (medium effect)
++Practically significant $r > 0,50$ (large effect)

Careful scrutiny of Table 3 indicates that Exhaustion relates positively to Cynicism and Psychological Ill-Health (both are practically significant with large effect). Exhaustion shows statistically significant positive correlations with Overload and Physical Ill-Health (both are practically significant with medium effect) and statistically significant negative correlations with Organisational Support (practically significant with medium effect). Exhaustion also shows statistically significant negative correlations with Growth Opportunities, Social Support and Life Satisfaction.

Cynicism shows a statistically significant negative correlation (practically significant with large effect) with Growth Opportunities. Cynicism also shows statistically significant positive correlation with Psychological Ill-Health (practically significant with medium effect) and a statistically significant negative correlation with Organisational Support. Cynicism also shows statistically significant negative correlations with Advancement and Life Satisfaction.

The results of multiple regression analyses can be seen in Table 4 with Exhaustion and Cynicism (measured by the MBI-GS) as the dependent variables and Job demands and Job resources (measured by the JDRS) as independent variables.

Table 4

Regression Analysis with Exhaustion and Cynicism as Dependent Variables

Model		Unstandardised Coefficients		Standardised Coefficients	*t*	*p*	*F*	*R*	R^2	ΔR^2
		B	SE	Beta						
Exhaustion										
1							0,00*	0,40	0,16	0,16*
	(Constant)	-1,76	1,77		-0,99	0,32				
	Overload	0,57	0,07	0,40	7,95	0,00*				
2							0,00*	0,51	0,26	0,10*
	(Constant)	13,33	3,33		4,01	0,00*				
	Overload	0,58	0,07	0,40	7,95	0,00*				
	Organisational Support	-0,10	0,05	-0,12	-1,81	0,07				
	Growth Opportunities	-0,25	0,08	-0,19	-3,10	0,00*				
	Social Support	-0,15	0,13	-0,06	-1,12	0,26				
	Advancement	-0,06	0,11	-0,03	-0,59	0,55				
	Insecurity	-0,20	0,11	0,08	-1,76	0,08				
Cynicism										
1							0,00*	0,52	0,27	0,27*
	(Constant)	18,99	1,93		9,88	0,00*				
	Organisational Support	-0,10	0,04	-0,18	-2,74	0,01*				
	Growth Opportunities	-0,38	0,05	-0,41	-6,95	0,00*				
	Social Support	0,08	0,09	0,05	0,82	0,41				
	Advancement	-0,01	0,08	-0,01	-0,17	0,87				
	Insecurity	0,07	0,08	0,04	0,81	0,42				
2							0,00*	0,54	0,29	0,03*
	(Constant)	13,95	2,36		5,90	0,00*				
	Organisational Support	-0,07	0,04	-0,13	-1,92	0,06				
	Growth Opportunities	-0,44	0,06	-0,48	-7,85	0,00*				
	Social Support	0,11	0,09	0,06	1,14	0,26				
	Advancement	0,01	0,08	0,01	0,15	0,88				
	Insecurity	0,07	0,08	0,04	0,86	0,39				
	Overload	0,18	0,05	0,18	3,56	0,00*				

* $p < 0,05$

Table 4 shows that 16% of the variance in Exhaustion (as has been measured by the MBI-GS) is predicted by Overload. The regression coefficient of one job demand, namely Overload, is statistically significant (β= 0,40). Table 4 also indicates that the standardised regression coefficient of Growth Opportunities (β= -0,19) is moderate. Support staff in a higher

education institution seems to be more exhausted when they experience overload and few growth opportunities (that is, variety in the job, opportunities to learn and autonomy). Organisational support, social support, advancement and job insecurity do not contribute significantly to exhaustion when they are entered with growth opportunities. There is a statistically significant change in R^2 when job resources are entered into the regression analysis.

According to Table 4 a total of 27% of the variance in Cynicism (as has been measured by the MBI-GS) is predicted by low job resources. The regression coefficients of two job resources, namely Growth Opportunities (β= -0,41) and Organisational Support (β= -0,18), are statistically significant. The standardised regression coefficient for Growth Opportunities is moderate, while the coefficient of Organisational Support is relatively low. Support staff in a higher education institution seem to experience less cynicism when they perceive growth opportunities (that is, variety in the job, opportunities to learn and autonomy), and when they experience organisational support. Social Support, Advancement, and Job Insecurity do not contribute significantly to Cynicism when entered with Organisational Support and Growth Opportunities. Furthermore, Overload contributes significantly to Exhaustion. There is a statistically significant change in R^2 when Overload is entered into the regression analysis.

The results of the multiple regression analysis can be seen in Table 5 with Physical Ill-Health and Psychological Ill-Health (measured by the subscale of the ASSET) as the dependent variables and Exhaustion and Cynicism (measured by the MBI-GS) as independent variables.

Table 5

Regression Analysis with Physical Ill-Health and Psychological Ill-Health as Dependent Variables

Model	Unstandardised Coefficients		Standardised Coefficients	*t*	*p*	*F*	*R*	R^2	ΔR^2
	B	SE	Beta						
Physical Ill-Health									
1						0,00*	0,49	0,24	0,24
(Constant)	10,49	0,40		26,50	0,00*				
Exhaustion	0,27	0,03	0,48	8,61	0,00*				
Cynicism	0,02	0,04	0,02	0,43	0,67				
Psychological Ill-Health									
1						0,00*	0,61	0,37	0,37
(Constant)	14,92	0,62		24,12	0,00*				
Exhaustion	0,54	0,05	0,56	11,13	0,00*				
Cynicism	0,10	0,07	0,07	1,49	0,14				

$p < 0,05$

Table 5 shows that 24% of the variance in Physical Ill-Health (as has been measured by the ASSET) is predicted by Exhaustion. The standardised regression coefficient of Exhaustion is statistically significant ($\beta = 0,48$) which indicates a moderate effect. Support staff in a higher education institution seem to experience physical ill-health when they are exhausted. Cynicism does not contribute significantly to Physical Ill-Health when entered with Exhaustion. There is a statistically significant change in R^2 when Exhaustion is entered into the regression analysis.

Table 5 shows further that 37% of the variance in Psychological Ill-Health (as has been measured by the subscale of ASSET) is predicted by Exhaustion. The standardised regression coefficient of Exhaustion is statistically significant ($\beta = 0,56$) which indicates a strong effect. Support staff in a higher education institution seem to experience psychological ill-health when they are exhausted. Cynicism does not contribute significantly to Psychological Ill-Health when it is entered with Exhaustion. There was a statistically significant change in R^2 when Exhaustion is entered into the regression analysis.

The results of the multiple regression analysis can be seen in Table 6 with Life satisfaction (measured by the SWLS) as the dependent variables and Exhaustion, Cynicism (measured by the MBI-GS), Physical Ill-Health and Psychological Ill-Health (measured by the subscale of the ASSET) as independent variables.

Table 6

Regression Analysis with Life satisfaction as Dependent Variable

Model		Unstandardised Coefficients		Standardised Coefficients	*T*	*p*	*F*	*R*	R^2	ΔR^2
		B	SE	Beta						
1							0,00*	0,31	0,09	0,09
	(Constant)	22,29	0,70		32,31	0,00*				
	Exhaustion	-0,16	0,05	-0,18	-2,90	0,00*				
	Cynicism	-0,23	0,07	-0,18	-3,02	0,00*				
2							0,00*	0,36	0,13	0,03
	(Constant)	26,15	1,29		20,22	0,00*				
	Exhaustion	-0,04	0,06	-0,04	-0,57	0,57				
	Cynicism	-0,21	0,07	-0,17	-2,82	0,01*				
	Physical Ill-Health	-0,16	0,11	-0,10	-1,53	0,13				
	Psychological Ill-Health	-0,14	0,07	-0,15	-2,07	0,04*				
3							0,00*	0,40	0,16	0,03
	(Constant)	17,87	2,64		6,77	0,00*				
	Exhaustion	-0,04	0,06	-0,05	-0,67	0,50				
	Cynicism	-0,11	0,08	-0,09	-1,40	0,16				
	Physical Ill-Health	0,15	0,11	-0,09	-1,39	0,12				
	Psychological Ill-Health	-0,13	0,07	-0,14	-1,97	0,05				

Table 6 demonstrates that after step 1 a total of 9% of the variance in Life Satisfaction (as has been measured by the SWLS) is predicted by Exhaustion and Cynicism. The standardised regression coefficient of both Exhaustion (β= -0,18) and Cynicism (β= -0,18) are statistically significant. When support staff in a higher education institutions experience exhaustion and cynicism they will experience less life satisfaction.

It shows further that after step 2 a total of 13% of the variance in Life Satisfaction (as has been measured by the SWLS) is predicted by Cynicism and Psychological Ill-Health. The standardised regression coefficients of Cynicism (β= -0,17) and Psychological Ill-Health (β= -0,15) are statistically significant. Support staff in a higher education institution experience

less life satisfaction when they experience cynicism and psychological ill-health. Exhaustion and Physical Ill-Health do not contribute significantly to Life Satisfaction when it is entered with Cynicism and Psychological Ill-Health in step 2.

It shows, moreover, that after step 3 a total of 16% of the variance in Life Satisfaction (as has been measured by the SWLS) is predicted by Psychological Ill-Health. The standardised regression coefficient of Psychological Ill-Health (β= -0,14) is statistically significant which indicates a moderate effect. Support staff in a higher education institution experience less Life Satisfaction when they experience Psychological Ill-Health. Exhaustion, Cynicism and Physical Ill-Health do not contribute significantly to Life Satisfaction when they are entered with Psychological Ill-Health in step 3.

DISCUSSION

The objective of this study has been to investigate the relationship between job demands, job resources, burnout, health and life satisfaction among support staff of a higher education institution in the North West Province.

The analysis of Pearson correlations in this study indicated that exhaustion was positively related to job demands (overload). Exhaustion and cynicism showed negative correlations with job resources, growth opportunities and organisational support. Exhaustion and cynicism showed a positive correlation with psychological ill-health and life satisfaction. Exhaustion also showed a correlation with physical ill-health.

Job demands (overload) related positively to physical and psychological ill-health, whereas job resources, social support and organisational support correlated negatively with physical and psychological ill-health. Job resources, growth opportunities, organisational support and advancement all correlated positively with life satisfaction. Both physical and psychological ill-health related negatively with life satisfaction.

These results demonstrated that support staff that experience overload will be exhausted, and that this will have a negative impact on the physical and psychological health of the

individual, while these physical and psychological health problems will also negatively impact the life satisfaction of support staff.

The regression analysis demonstrated that exhaustion and cynicism, as dependent variables, correlate positively with job demands (overload). Both exhaustion and cynicism related negatively to job resources (and growth opportunities). The burnout dimension of exhaustion related positively to physical and psychological health problems. Psychological ill-health related negatively to life satisfaction

The results showed that work overload and the lack of growth opportunities lead to higher levels of exhaustion and cynicism. This finding supports the JD-R model's energetic process which states that job demands and lack of job resources cause a depletion of the employees' physical and mental energy, resulting in exhaustion (Demerouti et al., 2001). Cynicism can emanate from the high levels of exhaustion that will contribute to support staffs' feelings of detachment and callousness about their jobs (Schwab, Jackson, & Schuler, 1986).

The regression analysis also indicated that exhaustion relates to physical and psychological ill-health. This indicates that support staff suffering high levels of exhaustion would develop physical and psychological health problems. This confirms previous findings (Kahill, 1988; Lee & Ashforth, 1990; Maslach, 1982)

In addition, the results showed that if support staff experience health problems, especially psychological ill-health, their life satisfaction will be lowered. These results support findings of Demerouti et al. (2000), namely that life satisfaction relates inversely to negative outcomes of health.

It may be concluded that support staff in a higher education institution will experience exhaustion and cynicism, because of the job demand (overload) and the lack of job resources (growth opportunities). The exhausted support staff are likely to experience physical and psychological ill–health, because of the exhaustion they experience. Predominantly because of psychological ill-health support staff will experience less life satisfaction. The results of this study give evidence of the relationship between job demands, job resources, burnout, health and life satisfaction. The results also indicate the best predictor of burnout of support

staff in a higher education institution to be overload and lack of growth opportunities, while the best predictor of life satisfaction is psychological ill-health.

RECOMMENDATIONS

Higher education institutions should recognise the serious and pervasive nature of burnout, and the consequences that it represents. Since it has been determined that burnout among support staff at a higher education institutions originates from job demands (overload) and lack of growth opportunities, it can be recommended that interventions should be designed to address and assist support staff to have less job demands and more growth opportunities within the institutions.

Interventions should also be put in place for regular and early detection of exhaustion among support staff, since this will also be an indication of burnout that already exists among them. This will assist the higher education institution to develop interventions to give the help that is necessary, and in this way move towards preventing physical and psychological ill-health that result from burnout. Ultimately, it will become increasingly important for higher education institutions to create a culture of well being from within the organisation in order to sustain growth and development in the long term.

Research should also be conducted to evaluate the effectiveness of any and all interventions to reduce burnout. Future studies should make use of larger and more representative samples.

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CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

This chapter discusses the conclusions that can be reached based on the research objectives. It focuses further on the limitations of the study as well as recommendations for future research.

3.1 CONCLUSIONS

In this section the focus is on conclusions based on the specific theoretical objectives and the results of the empirical research.

3.1.1 Conclusions in terms of specific theoretical objectives

A study has been undertaken of existent relevant literature in the field to conceptualise burnout, job characteristics, health and life satisfaction. The following conclusions can be made in terms of the theoretical objectives.

Burnout is the serious result of relentlessly negative, job-related strain that is conceptualised as a pathogenic psychosomatic condition in reaction to persistent interpersonal work related stress. Burnout consists of three dimensions: exhaustion, cynicism and professional efficacy. Exhaustion, the most important dimension of burnout, can be described as feelings of being overextended and exhausted. Cynicism can be described as the interpersonal dimension of burnout, and it comprises negative, callous or excessively detached feelings in response to various aspects of the job. Professional efficacy, the weakest burnout dimension, can be described as the negative evaluation of an individual by himself/herself in which he/she sees himself/herself as ineffective and incompetent in their jobs and when it comes to fulfilling job responsibilities.

The work milieu of individuals can be categorised in terms of two fundamentals, consisting of job demands and job resources. Job demands can be described as tasks of which completion is compulsory, and this also includes the physical, social or organisational aspects of the job that necessitate continuous physical and mental effort. Job resources can be described as the physical, psychological, social or organisational job aspects that are essential

for accomplishing work goals, for reducing job demands and psychological costs as well as towards inspiring personal growth and development. Job demands and job resources serve as possible organisational stressors, and an imbalance between these two elements in particular increased job demands and reduced job resources can result in burnout.

Ill-health in relation to burnout of an individual comprises two aspects: physical ill-health which consists of the individual experiencing stress related to bodily problems, and psychological ill-health that consists of the individual experiencing stress related psychosomatic problems.

Life satisfaction is a subjective cognitive process that occurs within the individual to establish how well they perceive their entire life to be.

3.1.2 Conclusions in terms of specific empirical objectives

The following conclusions are drawn in terms of the research objectives:

The first objective of this study has been to investigate the relationship between job demands, job resources, burnout, health and life satisfaction.

The results of the Pearson correlations and the results of the multiple regression analysis support each other. The relationship between burnout and task characteristics can be described as follows: exhaustion has a positive correlation with job demand and overload, while overload also predicts the most variance for exhaustion and cynicism.

Exhaustion and cynicism showed negative correlations with the job resources (growth opportunities and organisational support). Growth opportunities account for most of the variance predicted for exhaustion and cynicism. Organisational support also contribute to the variance predicted for cynicism. The job resources that best contribute to the relationship between burnout and job resources thus are growth opportunities and organisational support.

This finding supports the JD-R model's notion of an energetic process which states that job demands and lack of job resources cause a depletion of the employees' physical and mental energy, resulting in exhaustion (Demerouti, Bakker, Nachreiner & Schaufeli, 2001).

Cynicism can emanate from the high levels of exhaustion that will contribute to support staff feeling detached and callous about their job (Schwab, Jackson, & Schuler, 1986).

The support staff at a higher education institution experience exhaustion and cynicism, because they are overloaded with work. This combined with having limited growth opportunities and a lack of organisational support results in exhaustion and cynicism.

The research also clearly shows a relationship between burnout and health. Both burnout factors (exhaustion and cynicism) show a positive correlation with psychological ill-health. However, exhaustion accounts for most of the variance predicted for physical and psychological health. The support staff at a higher education institution can experience ill-health physically, but predominantly ill-health psychologically, because they are exhausted, and they experience cynicism towards their work. This confirms existing findings that support the recognition that staff who experience high levels of workload are likely to develop high levels of burnout which, in turn, will lead to ill-health (Kahill, 1988; Lee & Ashforth, 1990; Maslach, 1982).

The relationship between burnout and life satisfaction can be indicated in the negative correlations that both exhaustion and cynicism show with life satisfaction. However, physical and more predominantly, psychological, health has a negative correlation with life satisfaction. The multiple regression analysis also supports the correlation with psychological health which accounts for most of the variance predicted for life satisfaction. This means that the life satisfaction that support staff experiences relates to burnout, but that there is a stronger relationship between the life satisfaction of support staff at a higher education institution and health, in particular psychological ill-health. These results support the findings of Demerouti, Bakker, Nachreiner & Schaufeli (2000): that life satisfaction is inversely related to negative outcomes of health.

Both the Pearson correlations and the multiple regression analysis support the findings of the research with similar results. Thus it may be concluded on the basis of the findings that support staff in a higher education institution will experience exhaustion and cynicism because of job demand (overload) and the lack of the job resources (growth opportunities and social support). The exhausted support staff are likely to experience physical ill-health, psychological ill-health, because of the exhaustion they experience. Primarily because of

psychological ill-health support staff will experience less life satisfaction. These results confirm the relationship between task characteristics, burnout, health and life satisfaction.

The second objective of this study has been to determine the best predictors of burnout and life satisfaction among support staff of a higher education institution in the North West Province.

In this respect exhaustion shows a positive correlation with job demand and overload, while overload also predicts the most variance for exhaustion and cynicism. This implies that the best predictor of exhaustion and cynicism is overload. Exhaustion and cynicism show negative correlations with job resources (growth opportunities and organisational support). Growth opportunities account for most of the variance predicted for exhaustion and cynicism. Organisational support also contributes to the variance predicted for cynicism. The job resources that are the best predictors of exhaustion and cynicism in support staff are thus growth opportunities and organisational support. The support staff at a higher education institution experience exhaustion and cynicism, because they are overloaded with work, combined with limited growth opportunities and a lack of organisational support. The researched determines that the best predictors of burnout among the staff is increased job demand, work overload and the lack of the job resources (growth opportunities and organisational support). Findings of Maslach, Schaufeli & Leiter (2001) indicate that task characteristics are the most important cause of burnout, support this.

Physical ill-health, and more predominantly psychological ill-health, shows a negative correlation with life satisfaction. The multiple regression analysis also supports the correlation with psychological health which accounts for most of the variance predicted for life satisfaction. The support staff will experience more life satisfaction in proportion to the extent in which they experience good health. However, they will experience less life satisfaction as soon as they experience psychological health problems. This entails that the best predictor of life satisfaction for the purpose of supporting the staff will be health, and psychological ill-health in particular. The findings of Atchley (1994) and Krause (1987) support these findings, since they indicate that satisfaction with one's health is a central factor that influences life satisfaction.

It can be concluded from these overall that the best predictor of burnout of support staff in a higher education institution will be an increase in the workload combined with a lack of growth opportunities and little social support. The best predictor of life satisfaction for these staff members is psychological ill-health.

3.2 LIMITATIONS

A limitation of the study is the small sample size that was used and researched. According to Kerlinger and Lee (2001) the largest possible sample should always be used. The smaller the sample size, the greater the error.

The specific research design (cross-sectional) is another limitation, since it is not possible to determine the causality of relationships by using a cross-sectional design.

The language of the measuring instruments also contributes to the limitations of the study. The majority of the respondents in this study are Afrikaans-speaking (69,07%) and Setswana-speaking (18,62%). Only the English version of the measuring instruments was used, and this served as a language barrier to respondents

3.3 RECOMMENDATIONS

This section provides recommendations for the organisations and for future research.

3.3.1 Recommendations for the organisation

The organisation should create a culture of individual as well as organisational well-being: an environment that promotes healthy life style behaviour.

Interventions and rewards can be designed to address the total well being of the individual. Interventions can focus on providing support staff with coping strategies in order to help them deal more effectively with their stress.

Interventions can also be made by focussing on the identified sources that contribute to burnout, such as job demands (overload). This can assist the organisation in designing

interventions, in determining overload, in identifying support staff who experience overload as well as in identifying resources to help support staff prevent and deal with overload.

Limited growth opportunities for support staff within the organisation have also been identified as a source of burnout among them. The organisation will find it necessary to design interventions that address this by creating more growth opportunities for them.

It is important to create a culture of well-being within higher education institutions. This can have its origin as part of an induction process in which every new employee is educated on coping strategies, and the early indicators of burnout. Workshops and team building experiences can also be designed to inform current support staff about these matters.

Enforcing this as a set of organisational values will not only contribute to healthy support staff, but will in addition create an institution that strives towards life satisfaction.

3.3.2 Recommendations for future research

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

- It should focus more extensively on causal relationships between burnout, task characteristics, ill-health and life satisfaction.

- Larger diverse sample sizes should be included in studies, thus to overcome possible errors.

- Translating the measuring instruments into the 11 official languages recognised by the South African constitution will help to overcome the language barriers within the multicultural context of South Africa.

- It is also recommended that research should be conducted before and after stress management interventions to determine their effects on burnout. The effectiveness of an intervention programme to reduce burnout can be determined in this way.

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