WORK-RELATED WELL-BEING IN SECTOR EDUCATION TRAINING AUTHORITIES

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REMARKS

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 mini-dissertation. This is in line with the policy of the Programme in Industrial Psychology of the North-West University (Potchefstroom Campus) to use APA style in all scientific documents as of January 1999.

- This mini-dissertation is submitted in the format of one research article. The name of the study leader appears on the research article as it was submitted for publication in a national journal.

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SUMMARY

Subject: Work-related well-being in Sector Education Training Authorities

Key terms: Burnout, work engagement, work wellness, job demands, job resources, sense of coherence

A growing economy demands a skilled workforce, and the reality of the situation in South Africa is that, due to former apartheid policies and job reservation, there are large numbers of unemployed people with little hope of employment in the formal sector because they lack skills and experience. The National Skills Development and the Skills Development Levy Act gave rise to the development of the National Skills Development Strategy (NSDS). The NSDS is now entering its second five-year cycle with the scoreboard reflecting both gains and challenges for Sector Education Training Authorities (SETAs) as the primary delivery institutions of the NSDS.

The objective of this study was to investigate the relationship between job demands and job resources and the work wellness of employees in SETAs, using a cross-sectional survey design. The survey consisted of 159 SETA employees in South Africa. The Maslach Burnout Inventory - General Survey, the Utrecht Work engagement Scale, the ASSET (An Organizational Stress Screening Evaluation Tool) and the Orientation to Life Questionnaire, were administered. Descriptive statistics, exploratory factor analyses, Pearson correlations and structural equation modelling were used to analyse the data.

The results of this study confirmed the construct validity and reliability of the scales which were employed to measure work-related well-being. Furthermore, the results showed that overload predict exhaustion. Cynicism was best predicted by a lack of resources (specifically growth opportunities and lack of organisational support) and a weak sense of coherence. Vigour and dedication were predicted by growth opportunities, organisational support and a strong sense of coherence. Exhaustion predicted physical ill-health, while both exhaustion and cynicism contributed to psychological ill-health. Affective organisational commitment was predicted by vigour and dedication, while behavioural organisational commitment was predicted by high vigour and low exhaustion.

Recommendations for SETAs and future research were made.

OPSOMMING

Onderwerp: Werksverwante welstand in Sektore Opleidings- en Ontwikkelingsowerhede in Suid-Afrika.

Sleutelterme: Uitbranding, werksbegeestering, werkwelstand, werkseise, werkshulpbronne, koherensiesin.

Positiewe groei in die Suid-Afrikaanse ekonomie noodsaak 'n opgeleide, gekwalifiseerde arbeidsmag. Die realiteit van die situasie in Suid-Afrika is dat apartheid en die werksreserveringsbeleid van die verlede groot hoeveelhede mense gelaat het met min of geen hoop op werk binne die formele ekonomie as gevolg van 'n tekort aan vaardighede en ondervinding. Dit het tot gevolg gehad die instelling van die Vaardigheidsontwikkeling en die Vaardigheidontwikkelingsheffing-Wet, wat op sy beurt die ontwikkeling van die Nasionale Vaardigheidsontwikkelingstrategie (NSDS) tot gevolg gehad het. Die NSDS gaan nou sy tweede vyf-jaar siklus binne, en die telkaart reflekteer suksesse asook uitdagings vir die Sektor Opleidings- en Ontwikkelingsowerhede (SOOOe), die primêre implementerings-instellings vir die NSDS.

Die doel van hierdie studie was om die verwantskap tussen werkseise, werkshulpbronne en werkswelstand van werknemers by SOOOe te bestudeer. 'n Dwarssnee opname-ontwerp is gebruik. Die beskikbaarheidsteekproef het bestaan uit 159 SOOO-werknemers in Suid-Afrika. Die Maslach Uitbrandingsvraelys – Algemene Opname, die Utrecht Werks-begeesteringskaal, die ASSET en die Lewensoriëntasievraelys is afgeneem. Beskrywende statistiek, verkennende faktoranalise, Pearson-korrelasies en strukturele vergelykings-modellering is gebruik om data te analiseer.

Die resultate van hierdie studie het die konstrukgeldigheid en betroubaarheid van die skale wat gebruik is om werksverwante welstand te meet, bevestig. Verder het die resultate aangetoon dat uitputting deur oorlading voorspel word. Sinisme is die beste voorspel deur 'n gebrek aan hulpbronne (spesifiek groeigeleenthede en organisasie-ondersteuning) en 'n swak koherensiesin. Energie en toewyding is voorspel deur groeigeleenthede, organisasie-ondersteuning en 'n sterk koherensiesin. Uitputting het fisieke ongesondheid voorspel, terwyl beide uitputting en sinisme tot psigologiese ongesondheid bygedra het. Affektiewe

organisasieverbondenheid is voorspel deur energie en toewyding, terwyl organisasie-verbondenheid op gedragsvlak voorspel is deur hoë energie en lae uitputting.

Aanbevelings vir SOOOe, asook vir toekomstige navorsing, word aan die hand gedoen.

CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION

In this mini-dissertation the work-related well-being of employees in Sector Education Training Authorities is investigated.

In Chapter 1, the problem statement, research objectives, and research methodology employed will be presented. This chapter starts off by describing the problem and gives an overview of previous research on burnout, engagement, job demands, job resources, and work wellness. The relevant literature is considered in conjunction with this research project and its specific research objectives. A discussion of the research method follows, with details regarding the empirical study, research design, participants, measuring instruments and statistical analyses. It concludes with an overview of the chapters that comprise this mini-dissertation.

1.2 PROBLEM STATEMENT

The National Skills Development Strategy (NSDS) was developed from the need to address the imbalances between skills required for the development of a successful, growing economy that promotes job growth and skills South Africa currently has available. The overwhelming number of, especially, black people who are illiterate and unskilled are a result of the former apartheid and job reservation policies in South Africa. The Department of Labour initiated the broadening of access to adult basic education and training in an effort to address the shortage in adult basic skills and education. By placing unemployed and employed young people into learnerships, the Government aims to equip South Africans with the necessary skills and relevant experience to find permanent employment. These steps were identified as key objectives in achieving equity and empowering those groups previously marginalized by the apartheid policies (Special Project Reporters, 2005b).

The National Skills Development Strategy, a product of the Skills Development Act, gave rise to the Sector Education and Training Authorities (SETAs). The SETAs are the implementing agencies of the skills development strategy. All SETAs operate on objectives as set in the NSDS by the Department of Labour. These objectives, together with success

indicators, include commitments outlined in a memorandum of understanding with the Department of Labour and focus on employees enrolling, completing, and continuing their development through structured learning, starting off with level one qualifications. SETA objectives include assisting new entrants into employment through learnerships. In 2005, according to the Department of Labour, most of these targets were met (Special Project Reporters, 2005b).

While there were specific successes, the SETAs have not been an overwhelming success. The National Skills Development Strategy (NSDS), underpinned by the Skills Development Act 1998, is now entering its second five-year cycle (2005-2010). The NSDS has left in its wake some interesting debris and casualties such as a reduction of the number in SETAs from the inaugural 25 to 22. Headlines regularly appeared in the newspapers detailing the woes of mismanaged SETAs. In 2003 the media reported that "the disgraceful SETA show" consist of five effectively operating SETAs and 20 underperforming SETAs (Anonymous, 2003). This resulted in the amendment of the Skills Development Act to allow government to play a more active role in the affairs of SETAs.

Problems identified within the SETAs can be summarised under three headings, i.e. lack of proper governance, poor management and ineffective strategic planning (Anonymous, 2003). This culminates in various stressors for both SETA employees and stakeholders, including patterns of grant claims, under-spending, the limited role of trade unions and employers, as well as the use of learnerships as cheap labour (Special Project Reporters, 2005a). Other challenges include high levels of interference from governing boards in operational matters, high levels of political interference in the day-to-day running of the SETAs through their constituent bodies representative of both employers and unions, and high turnover of staff resulting in SETA staff members migrating from one SETA to another for various reasons.

The above-mentioned problems are but some of the challenges with which SETA employees and stakeholders are faced with in the challenge of upgrading skills in the South African workforce. If real results in the struggle on unemployment, illiteracy and the low skills level of the South African workforce are to be achieved through the implementation of the NSDS as a broad human resource development intervention, SETAs need to function effectively and efficiently in the challenging environment of skills development. It is essential for SETAs to function and perform against set objectives in the spirit of skills development towards a better

life for all. The Skills Development Strategy, as a national priority, featured prominently at the Growth and Development Summit in 2003, hosted by President Thabo Mbeki in Pretoria (Special Project Reporters, 2005b). At this summit, constituencies undertook to take active steps to address some of the problems identified within SETAs as a means of accelerating the process of reversing the skills shortage through broad economic transformation initiatives. "As we have inaugurated a new chapter of the NSDS in 2005, government remains vociferous in its call for more commitment and redoubled efforts from all role-players to ensure that the skills revolution remains truly within the governments economic transformation agenda. "We hope thereby to remove the vestiges of apartheid for all by all" (Minister of Labour, Membathisi Mdaladlana, as quoted by Special Project Reporters, 2005b). Statements such as these, together with increased public demand and dissatisfaction on skills delivery, increased private and public institution participation in skills development. Increased involvement from organised labour has upped the stakes for SETAs to achieve and even to over-achieve on set objectives. The enormity of the challenges facing SETAs is placing an ever-increasing expectation on their human resources.

This study is conducted from the point of reference that a SETA can only be as good as the people working for, and leading, the SETA; in other words its holistic human resources components (including people, policies and interventions). The work-related well-being of SETA employees is investigated in this study in an effort to validate previous findings on work wellness as well as providing SETAs with strategic information for the holistic planning, implementing, developing, and management of their human resources as a fundamental first step in achieving sustainable delivery of skills as per the demand expressed in South Africa. The study focuses on the relationship between burnout as experienced by SETA employees, work engagement as experienced by SETA employees, job demands with which SETA employees are faced, job resources to which SETA employees have access, ill-health as reported by SETA employees, and SETA employees being committed to the SETA of their employ.

Burnout, as experienced by SETA employees, is one of the focus areas of this study. According to Maslach and Jackson (1986), burnout includes the components of emotional exhaustion, depersonalisation, and reduced personal accomplishment. In the early days of burnout research, it was believed that this state only existed in employees working in the human services. Burnout, however, has recently been expanded toward all types of

professions and occupational groups; the study will aim to include SETA employees in South Africa in this list. By means of the Maslach Burnout Inventory-General Survey (MBI-GS; Schaufeli, Leiter, Maslach & Jackson, 1996), burnout can be studied in all types of professions and in all occupational groups. It is also possible to make comparisons among these groups. Burnout can be defined as a syndrome of exhaustion, cynicism and reduced professional efficacy (Maslach et al., 2001). One can argue that burnout will have a negative effect on SETA employees' performance culminating in lower levels of skills development and in higher levels of unemployment. Holistic human resource and organisational development interventions should be aimed at reducing levels of burnout within SETAs. At the moment there is no available research on the levels of burnout within SETAs on which to base interventions. This poses a problem for human resources specialists responsible for strategic direction within SETAs. This study will provide at least some information on which to base these interventions.

Research shows that even when exposed to high job demands and working long hours, some individuals do not show symptoms of burnout (Schaufeli & Bakker, 2001). Instead, it seems as if these individuals find pleasure in dealing with the challenges. From a positive psychology perspective (Seligman & Csikszentmihalyi, 2000), such individuals could be described as being engaged in their work. According to Kelloway and Barling (1991), the positive psychology paradigm helps to understand the relationship between work, and more specifically goal-directed, structured activity, and well-being. Nelson and Simmons (2003) have reported that meaningful work leads to eustress, which can promote engagement even in challenging conditions. The focus on engagement as the positive direct opposite of burnout promises to yield new perspectives on interventions in order to promote healthy perceptions, beliefs, and physical well-being (Salovey, Rothman, Detweiler & Steward, 2000) and to alleviate burnout (Maslach et al., 2001). Relevant information and understanding of the relationship between work and engagement can hold great value for the planning of holistic human resource strategies within SETAs. SETA-specific information is not currently available and this study will provide such information.

Exhaustion (low energy) and cynicism (poor identification) are the main features of burnout that are assessed by the MBI (Schaufeli, 2003), while the positive aspects of vigour (high energy) and dedication (strong identification) are measured by means of the Utrecht Work Engagement Scale (Schaufeli, Salanova, González-Romá & Bakker, 2002). Encouraging

psychometric results have been reported in past studies with the use of the Utrecht Work engagement Scale (Schaufeli, Martínez, Pinto, Salanova & Bakker, 2002; Schaufeli, Salanova et al., 2002).

The Job Demand-Resources (JD-R) model assumes that two underlying psychological processes play a role in burnout. The first process is an effort-driven process in which excessive job demands lead to exhaustion, and the second process is a motivation-driven process in which lack of resources leads to disengagement (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). The Comprehensive Burnout and Engagement (COBE) model, as developed by Schaufeli and Bakker (2004), extended the JD-R model by adding engagement, health impairment, and organisational withdrawal to the JD-R model.

The COBE model also assumes two job-related psychological processes. The first process, an energetic process, links job demands with health problems via burnout. The second process, a motivational process, links job resources via work engagement with organisational outcomes. Job resources may play either an extrinsic motivational role (by being instrumental in achieving work goals), or they may play an intrinsic motivational role (by fostering the employee's growth, learning and development). The model was confirmed in an empirical study in the Netherlands conducted by Schaufeli and Bakker (2004). Job demands were associated with exhaustion, whereas job resources were associated with work engagement. Burnout was related to health problems and turnover intentions, and burnout mediated the relationship between job demands and health problems, while work engagement mediated the relationship between job resources and turnover intentions. Being in possession of current SETA-specific information on the relationship between job demands, job resources (organisational and personal) and the path to burnout and engagement is crucial in the planning and implementation of strategic human resource interventions within SETAs. The present study aims at providing such information.

Employees with a strong sense of coherence might experience less job stress. Antonovsky (1987) defines sense of coherence as a relatively stable dispositional orientation. A strong sense of coherence might assist SETA employees in understanding stressors and perceiving them as being manageable and meaningful. One can then argue that a weak sense of coherence will lead to more perceived job stress, which, in turn, could lead to burnout of SETA employees. Information on sense of coherence and its influence as a personal job

resource can aid in the fit between a job and an employee which, in turn, will have a positive effect on work engagement.

Research evidence consistently links occupational stress with physical and psychological ill-health. Heart disease, ulcers, some forms of cancer, allergies, migraine, back problems, depression, and an increased frequency of minor ailments, such as colds and flu, have been associated with stress and burnout (Ho, 1997; Ryff & Singer, 1998; Sethi & Schuler, 1990). According to Maslach et al. (2001), perceived stressors lead to emotional reactions, which, in turn, lead to ill-health. Barkhuizen, Rothmann and Tytherleigh (2004) reported that exhaustion was related to health problems in their study. Sick leave, as an extreme measure of ill-health within SETAs, can possibly be reduced through the better understanding of the relationship between ill-health and exhaustion. This study aims at providing such information.

According to Robbins (1998), organisational commitment can be defined as a state in which an employee identifies with an organisation and its goals; he or she is willing to exert effort on behalf of the organisation, and wishes to maintain his or her membership of the organisation. Cartwright and Cooper (2002) differentiated between two aspects of organisational commitment, namely commitment of the individual towards the organisation (i.e. the extent to which employees feel trusted and respected by the organisation), and commitment of the organisation towards the individual (i.e., the extent to which employees are loyal and dedicated towards the organisation). Schaufeli, Taris, Le Blanc, Peeters and De Jong (2001) after conducting interviews with engaged workers, concluded that employees committed to their organisations have values and norms which are in line with those of their organisation. Aktouf (1992) reported that disengagement, on the other hand, leads to a lack of organisational commitment.

It can be argued that committed and engaged SETA employees will tend to perform better at their task than those who do not share in the values of a better life for all, resulting in better individual performance, lower levels of unemployment and higher skills levels.

1.3 RESEARCH OBJECTIVES

The objectives of this study are:

- To assess the validity and internal consistency of the constructs in the measurement model, including work-related well-being (burnout and work engagement), job characteristics, sense of coherence, ill-health and organisational commitment.
- To study the relationship between burnout and work engagement, job demands, job resources, sense of coherence, ill-health and organisational commitment.

1.4 RESEARCH METHOD

1.4.1 Literature review

The literature review focuses on previous research on burnout, work engagement, job demands, job resources and organisational commitment. An overview is given of the conceptualisation of these constructs in the literature and on the findings in terms of work-related wellness. The reader should note that a literature study is conducted for the purposes of the research article.

1.4.2 Research design

A cross-sectional survey design whereby a sample is drawn from a population at one time is used.

1.4.3 Participants

A total number of 159 employees, from six SETAs, are included in the study.

1.4.4 Measuring battery

An adapted version of the *Maslach Burnout Inventory-General Survey* (MBI-GS; Maslach et al., 1996) is used to measure burnout. The following subscales of the MBI-GS are used: exhaustion (e.g., "I feel used up at the end of the workday"), and cynicism (e.g., "I have become less enthusiastic about my work"). All items are scored on a seven-point frequency rating scale ranging from 0 (*never*) to 6 (*daily*). A total of 13 items loaded significantly on two scales: exhaustion (5 items) and cynicism (8 items). Jackson (2004) confirmed the construct equivalence and construct validity of these scales for educators in South Africa. The

internal consistencies (Cronbach's alpha coefficients), reported by Schaufeli et al. (1996), varied from 0,87 to 0,89 for exhaustion and from 0,73 to 0,84 for cynicism. Test-retest reliabilities after one year were 0,65 (exhaustion), and 0,60 (cynicism). Storm and Rothmann (2003a) found support for the construct validity of the MBI-GS.

The *Utrecht Work Engagement Scale* (UWES) was developed by Schaufeli, Salanova et al. (2002) as a measure of engagement. For the purpose of this study only two of the three subscales of the UWES are used, namely vigour (6 items; e.g. "I am bursting with energy in my work"), and dedication (5 items; e.g. "I find my work full of meaning and purpose"). The items are scored on a frequency rating scale varying from 0 (*never*) to 6 (*daily*). The alpha coefficients for the subscales varied between 0,68 and 0,91 (Schaufeli et al., 2002). Studies making use of confirmative factor analysis demonstrated the factorial validity of the UWES (Schaufeli & Bakker, 2004; Schaufeli, Salanova et al., 2002). In a South African study, Storm and Rothmann (2003b) obtained acceptable alpha coefficients for the two subscales (0,78 for Vigour and 0,89 for dedication). Naudé (2003), in a study working with a sample of emergency workers in South Africa, found values of 0,70 for vigour and 0,83 for dedication. Jackson (2004) reported that the UWES shows construct equivalence and construct validity for educators in South Africa.

The *Job Demands-Resources Scale* (JDRS) was developed to measure job demands and job resources. The JDRS consists of 48 items which are rated on a scale ranging from 1 (*never*) to 4 (*always*). Three items per dimension are included in the questionnaire for the following dimensions of the JDRS: 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, participation, contact possibilities, remuneration, and career possibilities. The above-mentioned dimensions have been chosen based on literature referring to organisational causes of burnout and work engagement (Frey, Jonas & Greitemeyer, 2003; Schaufeli & Enzmann, 1998).

The *Health Subscales of the ASSET* (which refers to An Organizational Stress Screening Evaluation Tool; Cartwright & Cooper, 2002) are used to measure physical and psychological ill-health. The Health Subscales of the ASSET consist of 19 items arranged on two subscales, namely physical health and psychological well-being. The subscales are scored on a scale varying from 1 (*never*) to 4 (*often*). All items on the physical health

subscale relate to physical symptoms of stress. The items listed on the psychological well-being subscale are symptoms of stress-induced mental ill-health. Johnson and Cooper (2003) found a Guttman split-half reliability coefficient of 0,74 and 0,91 respectively for the physical and psychological Health subscales. Research also showed that the psychological well-being subscale has good convergent validity with the General Health Questionnaire, a widely used measure of psychiatric disorders (Goldberg & Williams, 1988).

The *Organization Commitment Subscale of the ASSET* (Cartwright & Cooper, 2002) is used to measure an individual's attitude toward his or her organisation. The scale includes questions relating to perceived levels of commitment to the organisation which are scored on a scale varying from 1 (*strongly disagree*) to 6 (*strongly agree*) and consists of seven items. Examples of items are "I feel valued and trusted by the organisation" and "I am proud of this organisation". Johnson and Cooper (2003) found a Guttman split-half reliability coefficient of 0,74 for this scale.

The *Orientation to Life Questionnaire* (OLQ; Antonovsky, 1987) is used to measure the participants' sense of coherence. The OLQ consists of 29 items. Antonovsky (1993) reported Cronbach alpha coefficients of the OLQ in 29 research studies varying from 0,85 to 0,91. Antonovsky also found test-retest reliability coefficients between 0,41 and 0,97. Rothmann (2002) reported an acceptable alpha coefficient of 0,89 for the OLQ (in accordance with the findings of Nunnally & Bernstein, 1994). In terms of the construct validity of the OLQ, a negative relationship was found to exist between OLQ and experienced stress and that the OLQ correlates negatively with the "State-Trait Anxiety Inventory-Trait" and the "Beck Depression Inventory" (Frenz, Carey & Jorgensen, 1993).

A biographical questionnaire is also administered. Participants are given the option of providing their names and contact details in the case of feedback. Other information that will be gathered includes the specific SETA, position, education, gender, marital status and language.

1.4.5 Statistical analysis

Firstly, descriptive statistics (e.g., means and standard deviations) are used to explore the data. Cronbach's alpha coefficients are computed to assess the reliability of the constructs which are measured in this study. Secondly, eigenvalues and scree plots are studied to determine the number of factors involved. As part of the second step, a principal components analysis with a direct oblimin rotation is conducted if factors are related, or a principal component analysis with a varimax rotation is used if the obtained factors are not related (Tabachnick & Fidell, 2001).

To specify the relationship between the variables, Pearson product-moment correlation coefficients are employed. In terms of statistical significance, the value is set at a 95% confidence interval level ($p \leq 0,05$). Effect sizes (Steyn, 1999) are used to decide on the practical significance of the findings. A medium effect cut-off point according to Cohen (1988) was set at 0,30 for the practical significance of correlation coefficients.

Structural equation modelling as implemented in Amos (Arbuckle, 1999) is used to test the construct validity of the measuring instruments using the maximum likelihood method. One of the fit indices produced by the Amos program is the Chi-square statistic (χ^2); the χ^2 is the test of absolute fit of the model, and the χ^2 value is sensitive to sample size. Therefore, additional goodness-of-fit indices i.e. Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI), the Normed Fit Index (NFI), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI) and the Root Means Square Error of Approximation (RMSEA) are used in this study.

1.5 CHAPTER DIVISION

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

Chapter 1: Introduction
Chapter 2: Research article
Chapter 3: Conclusions

1.6 CHAPTER SUMMARY

Chapter 1 focused on the problem statement, objectives and research method employed in this study. This was followed by a division of the chapters.

Chapter 2 focuses on the research article.

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CHAPTER 2

RESEARCH ARTICLE

WORK-RELATED WELL-BEING IN SECTOR EDUCATION TRAINING AUTHORITIES

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ABSTRACT

The objective of this study was to investigate the relationship between job demands, job resources, sense of coherence, and work-related well-being of employees at Sector Education Training Authorities (SETA). The sample consisted of 159 SETA employees in South Africa. The Maslach Burnout Inventory - General Survey, the Utrecht Work Engagement Scale, the Orientation to Life Questionnaire, the Job Demands-Resources Scale, the Health and Organisational Commitment Subscales of the ASSET were administered. The results showed that overload predict exhaustion. Cynicism was predicted by limited growth opportunities and organisational support, and a weak sense of coherence. Vigour and dedication were predicted by growth opportunities, organisational support and a strong sense of coherence. Exhaustion predicted physical ill-health, while both exhaustion and cynicism contributed to psychological ill-health. Affective organisational commitment was predicted by vigour and dedication.

OPSOMMING

Die doelstelling van hierdie studie was om die verband tussen werkseise, werkshulpbronne, koherensiesin en werksverwante welstand van werknemers van Sektorale Onderwys en Onderrigowerhede (SOOOe) in Suid-Afrika te bepaal. 'n Beskikbaarheidsteekproef van SOOO-werknemers is gebruik (N = 159). Die Maslach Uitbrandingsvraelys – Algemene Opname, die Utrecht Werksbegeesteringskaal, die Gesondheid- en Organisasieverbondenheid-subskale van die ASSET en die Lewensoriëntasievraelys is afgeneem. Die resultate het aangetoon dat uitputting deur oorlading voorspel word. Sinisme is voorspel deur gebrekkige groeigeleenthede en organisasie-ondersteuning, asook 'n swak koherensiesin. Energie en toewyding is voorspel deur groeigeleenthede, organisasie-ondersteuning en 'n sterk koherensiesin. Uitputting het fisieke ongesondheid voorspel, terwyl beide uitputting en sinisme tot psigologiese ongesondheid bygedra het. Affektiewe organisasieverbondenheid is voorspel deur energie en toewyding.

The South African National Skills Development Strategy (NSDS) was developed from the need to address the imbalances between skills required for the development of a successful, growing economy that promotes job growth, and skills currently available in South Africa. The overwhelming number of especially black people who are illiterate and unskilled is a result of the former apartheid and job reservation policies in South Africa. The Department of Labour initiated the broadening of access to adult basic education and training in an effort to address the shortage in adult basic skills and education. By placing unemployed and employed young people into learnerships, the Government aims to equip South Africans with the necessary skills and relevant experience to find permanent employment. These steps were identified as key objectives in achieving equity and empowering those groups previously marginalised by the apartheid policies (Special Project Reporters, 2005b).

The National Skills Development Strategy, a product of the Skills Development Act, gave rise to the Sector Education and Training Authorities (SETAs). SETAs are the implementing agencies of the skills development strategy. While there were specific successes, the SETAs have not been an overwhelming success. The National Skills Development Strategy (NSDS), underpinned by the Skills Development Act 1998, is now entering its second five-year cycle (2005-2010). The NSDS has left in its wake some interesting debris and casualties such as the reduction in SETA numbers from the inaugural 25 to 22. Problems identified within the SETAs can be summarised under three headings, namely lack of proper governance, poor management and ineffective strategic planning (Anonymous, 2003). The problems as summarised under the three headings culminates in various stressors for both SETA employees and stakeholders.

If real results in the struggle on unemployment, illiteracy and the low skills level of the South African workforce are to be achieved through the implementation of the NSDS as a broad human resource development intervention, SETAs need to function effectively and efficiently in the challenging environment of skills development. It is essential for SETAs to function and perform against set objectives in the spirit of skills development and a better life for all. Increased public demand and dissatisfaction on skills delivery, increased private and public institution participation in skills development and increased involvement from organised labour has increased the necessity for SETAs to achieve and over-achieve on set objectives. The enormity of challenges facing SETAs is placing an ever-increasing expectation on the human resources of SETAs.

The work-related well-being of SETA employees is investigated in this study in an effort to validate previous findings on work wellness as well as providing SETAs with strategic information for the holistic planning, implementing, developing, and management of their human resources as a fundamental first step in achieving sustainable delivery of skills as per the demand expressed in South Africa.

The objective of this study was to investigate the relationship between job demands, job resources, sense of coherence, and work-related well-being of employees at SETAs in South Africa.

Burnout and work engagement

According to Maslach and Jackson (1986), burnout can be defined as encompassing the components of emotional exhaustion, depersonalisation, and reduced personal accomplishment. In the early days of burnout research, it was believed that burnout only exists in employees working in the human services. Burnout, however, has recently been expanded toward all types of professions and occupational groups, and this study aims to include SETA employees in the list. By means of the Maslach Burnout Inventory - General Survey (MBI-GS; Schaufeli, Leiter, Maslach & Jackson, 1996), it is possible to study burnout in all types of professions and in all occupational groups. It is also possible to make comparisons among these groups. Burnout can be defined as a syndrome of exhaustion, cynicism, and reduced professional efficacy (Maslach et al., 2001). At present there are no available research results on the levels of burnout within SETAs on which to base holistic interventions. This poses a problem for human resources specialists responsible for strategic direction within SETAs. This study aims at providing at least some information on burnout that is SETA specific.

An employee's inability to perform assigned tasks can be described as exhaustion. Exhaustion refers to a state where all energy has been drained, whereas cynicism refers to an employee's unwillingness to perform because of an increased prejudice towards any effort. Cynicism can be viewed from the perspective that an employee is applying an adaptive mechanism to cope with excessive job demands and the resulting feelings of exhaustion (Maslach, Schaufeli & Leiter, 2001). Schaufeli (2003) reports that when coping as a strategy becomes routine it disrupts satisfactory task performance and becomes dysfunctional. In turn,

this state leads to an increase in job demands and exhaustion which makes the crippling circle complete. Incapability and unwillingness to perform are considered as two voices in the same choir (Schaufeli, 2003). Empirical findings showed the central role of exhaustion (inability to perform) and mental distancing (unwillingness to perform) as opposed to the third component, namely lack of professional efficiency in work-related well-being.

Research shows that even when exposed to high job demands and long work hours, some individuals do not show symptoms of burnout (Schaufeli & Bakker, 2001). Instead, it seems as if they find pleasure in dealing with these challenges. From a positive perspective (Seligman & Csikszentmihalyi, 2000), such individuals could be perceived as being engaged in their work. According to Kelloway and Barling (1991), the positive psychology paradigm helps us to understand the relationship between work, and more specifically goal-directed, structured activity and well-being. Nelson and Simmons (2003) report that meaningful work leads to eustress, which can promote engagement even in challenging conditions. The focus on engagement as the positive direct opposite to burnout promises to yield new perspectives on interventions to promote healthy perceptions, beliefs and physical well-being (Salovey, Rothman, Detweiler & Steward, 2000) and to alleviate burnout (Maslach et al., 2001). Relevant information and understanding of the relationship between work and engagement can prove valuable for the planning of holistic human resource strategies within SETAs. This SETA specific information is not currently available, and this study aims to provide at least some information on work engagement that is SETA specific.

Exhaustion (low energy) and cynicism (poor identification) are the main features of burnout which are assessed by the MBI (Schaufeli, 2003), while the positive aspects of vigour (high energy) and dedication (strong identification) are measured by means of the Utrecht Work engagement Scale (Schaufeli, Salanova, González-Romá & Bakker, 2002). Encouraging psychometric results have been reported with the use of the Utrecht Work engagement Scale (Schaufeli, Martínez, Pinto, Salanova & Bakker, 2002; Schaufeli, Salanova et al., 2002).

Job demands and job resources

The Job Demand-Resources (JD-R) model assumes that two underlying psychological processes play a role in burnout. The first being an effort-driven process in which excessive job demands lead to exhaustion, and the second a motivation-driven process in which lack of

resources leads to disengagement (Demerouti, Bakker, Nachreiner & Schaufeli, 2001). The Comprehensive Burnout and Engagement (COBE) model as developed by Schaufeli and Bakker (2004) extended the JD-R model by adding engagement, health impairment, and organisational withdrawal to the JD-R model.

The COBE model also assumes two job-related psychological processes. The first process, an energetic process, links job demands with health problems via burnout. The second process, a motivational process, links job resources via work engagement with organisational outcomes. Job resources may play either an extrinsic motivational role (by being instrumental in achieving work goals), or they may play an intrinsic motivational role (by fostering the employee's growth, learning and development). The model was confirmed in an empirical study in the Netherlands conducted by Schaufeli and Bakker (2004). Job demands were associated with exhaustion, whereas job resources were associated with work engagement. Burnout was related to health problems and turnover intentions, and it mediated the relationship between job demands and health problems, while work engagement mediated the relationship between job resources and turnover intentions. There is no current SETA-specific research information available on the relationship between job demands, job resources (organisational and personal) and the path to burnout and engagement.

Job demands are defined as those inherent tasks that have to be performed by the occupant of a position. These inherent job tasks can include physical, social and organisational dimensions of the job. Performing these tasks may require sustained physical and mental effort. Quantitative job demands refer to the amount of work required in relation to the time available, while qualitative workload involves employees' emotional reactions to their jobs (Cooper, Dewe & O'Driscoll, 2001). Job resources can be defined as those physical, psychological, social or organisational aspects of the job that may be purposeful in achieving work goals, reducing job demands and stimulating personal growth and development (Demerouti et al., 2001). Job resources, such as diversity, autonomy, opportunities for learning and growth, opportunities to participate, role clarity, effective and constructive communication, advancement, remuneration and good relationships with supervisors and colleagues create psychological meaningfulness and safety for employees which are needed for an employee to be engaged in his or her job (Frey, Jonas & Greitemeyer, 2003; May, Gilson & Harter, 2004).

Sense of coherence

Employees with a strong sense of coherence might experience less job stress according to Antonovsky (1987). Antonovsky defined sense of coherence as a relatively stable dispositional orientation. A strong sense of coherence might assist employees in understanding stressors and perceive them as being manageable and meaningful. It can then be argued that a weak sense of coherence will lead to more perceived job stress, which in turn, could lead to burnout of employees. Information on sense of coherence and its influence as a personal job resource can aid in the fit between a job and an employee, which in turn, will have a positive effect on work engagement.

Antonovsky (1987) reported that each person's sense of coherence, or sense of well-being, requires certain inherent fundamentals for coping successfully which are, in turn, represented by the concepts of comprehensibility, manageability and meaningfulness. *Comprehensibility* refers to the extent to which people find or structure their world to be understandable, meaningful, orderly and consistent instead of disordered, random and unpredictable. Individuals with high levels of coherence perceive their world as comprehensible and making sense on a cognitive level. *Manageability* refers to the extent to which people experience events in life as situations that are endurable or manageable and can even be seen as new challenges. Individuals with high levels of coherence feel they have the resources to meet the demands, or feel that they know where to obtain help. *Meaningfulness* refers to the extent to which one feels that life makes sense on an emotional and not just a cognitive level, and that life's challenges are worthy of commitment.

Amirkhan and Greaves (2003) studied three mechanisms that could underlie the health-promoting benefits of sense of coherence, namely perceptual, cognitive and behavioural mechanisms. Amirkhan and Greaves showed that a strong sense of coherence impacts on perception, such that individuals with a strong orientation were likely to view a larger number of life events as having coherence. This perceptual process seems to be subtle: it influences the individuals' perceptions of stressful events, but it does so without their conscious awareness. Evidence of a behavioural influence was also obtained: individuals with a strong sense of coherence used more instrumental and fewer avoidant responses to cope with stressors in their lives (Amirkhan & Greaves, 2003). As far as the cognitive dimension is concerned, sense of coherence does not appear to influence individuals' attributions, i.e.

individuals with a strong sense of coherence (compared with those with a weak sense of coherence) did not make a difference to the individuals' attributions (Amirkhan & Greaves, 2003).

Ill-health

Research evidence consistently links occupational stress with physical and psychological ill-health. Heart disease, ulcers, some forms of cancer, allergies, migraine, back problems, depression, and an increased frequency of minor ailments, such as colds and flu, have been associated with stress and burnout (Ho, 1997; Ryff & Singer, 1998; Sethi & Schuler, 1990). According to Maslach et al. (2001), perceived stressors lead to emotional reactions, which, in turn, lead to ill-health. Barkhuizen, Rothmann and Tytherleigh (2003) reported that exhaustion was related to health problems. Sick leave, as an extreme measure of ill-health within SETAs, can possibly be reduced through the understanding the relationship between ill-health and exhaustion.

Organisational commitment

According to Robbins (1998) organisational commitment can be defined as a state in which an employee identifies with an organisation and its goals, he or she is willing to exert effort on behalf of the organisation and wishes to maintain his or her membership of the organisation. According to Cartwright and Cooper (2002), one can differentiate between two aspects of organisational commitment, namely commitment of the individual towards the organisation (i.e. the extent to which employees feel trusted and respected by the organisation), and commitment of the organisation towards the individual (i.e. the extent to which employees are loyal and dedicated towards the organisation). Schaufeli, Taris, Le Blanc, Peeters and De Jong (2001), after conducting interviews with engaged workers, concluded that employees committed to their organisations have values and norms which are in line with those of their organisation. Aktouf (1992) reported that disengagement, on the other hand, leads to a lack of organisational commitment. One can argue that committed and engaged SETA employees will tend to perform better at their task than those who do not share in the values of a better life for all, which will result in better individual performance, culminating in lower levels of unemployment and higher skills levels.

METHOD

Research design

A cross-sectional survey design whereby a sample was drawn from a population (N = 159) at one time was used.

Participants

The study population consisted of employees from six different SETAs in South Africa. Descriptive information of the sample of SETA employees is given in Table 1.

Table 1

Characteristics of SETA Employees in the Sample

Item	Category	Frequency	Percentage
Province	Gauteng	130,00	81,70
	Western Cape	8	5,03
SETA	MERSETA (Manufacturing, Engineering and Related Services)	56	35,20
	HWSETA (Health and Welfare)	33	20,08
	CHIETA (Chemical)	19	11,90
	FOODBEV (Food and Beverages)	12	7,50
	FASSET (Financial and Accounting)	11	6,90
	TETA (Transport)	5	3,10
Education	Grade 12	67	44,40
	Three year degree	51	33,80
	Four year degree	24	15,90
	Five to seven year degree	5	3,30
	Masters degree	4	2,60
Gender	Male	55	34,6
	Female	104	65,4
Marital status	Single	62	39,70
	Engaged	5	3,20
	Married	73	46,80
	Separated/Divorce/Death	16	10,30
Language	English	60	38,00
	Isizulu	25	15,80
	Afrikaans	24	15,20
	IsiXhosa	14	8,90

The sample consisted mainly of female, English speaking employees, working in SETAs in the Gauteng Province. A total of 46% of the participants are married. Table 1 shows that

more than a third of the participants are in possession of a three-year degree. A total of 38% of the participants were English Speaking, 15,8% were Isizulu speaking, while 15,2% spoke Afrikaans. The majority of the group (57,9%) was in the employ of their SETA for less than two years and 71,7% of the participants had been in their current positions for less then a year.

Measuring battery

An adapted version of the *Maslach Burnout Inventory-General Survey* (MBI-GS; Maslach et al., 1996) was used to measure burnout. The following subscales of the MBI-GS were used: exhaustion (e.g., "I feel used up at the end of the workday"), and cynicism (e.g., "I have become less enthusiastic about my work"). All items are scored on a seven-point frequency rating scale ranging from 0 (*never*) to 6 (*daily*). A total of 13 items loaded significantly on two scales: exhaustion (5 items) and cynicism (8 items). Jackson (2004) confirmed the construct equivalence and construct validity of these scales for educators in South Africa. The internal consistencies (Cronbach's alpha coefficients) reported by Schaufeli et al. (1996) varied from 0,87 to 0,89 for exhaustion and from 0,73 to 0,84 for cynicism. Test-retest reliabilities after one year were 0,65 (exhaustion), and 0,60 (cynicism). Storm and Rothmann (2003a) found support for the construct validity of the MBI-GS.

The *Utrecht Work Engagement Scale* (UWES) was developed by Schaufeli, Salanova et al. (2002) as a measure of engagement. For the purpose of this study only two of the three subscales of the UWES were used, namely vigour (6 items; e.g. "I am bursting with energy in my work"), and dedication (5 items; e.g. "I find my work full of meaning and purpose"). The items are scored on a frequency rating scale varying from 0 (*never*) to 6 (*daily*). The alpha coefficients for the subscales varied between 0,68 and 0,91 (Schaufeli et al., 2002). Studies making use of confirmative factor analysis demonstrated the factorial validity of the UWES (Schaufeli & Bakker, 2004; Schaufeli, Salanova et al., 2002). In a South African study, Storm and Rothmann (2003b) obtained acceptable alpha coefficients for the two subscales (0,78 for vigour and 0,89 for dedication). Naudé (2003), in a study working with a sample of emergency workers in South Africa, found values of 0,70 for vigour and 0,83 for dedication. Jackson (2004) reported that the UWES shows construct equivalence and construct validity for educators in South Africa.

The *Job Demands-Resources Scale* (JDRS) was developed to measure job demands and job resources. The JDRS consists of 48 items which are rated on a scale ranging from 1 (*never*) to 4 (*always*). Strydom and Rothmann (in press) studied the construct validity, construct equivalence and reliability of the JDRS. They found that the JDRS measures five factors. *Overload* refers to pace and amount of work, mental load and emotional load. *Growth Opportunities* refers to having enough variety, opportunities to learn and independence in the job. *Organisational Support* measures the relationship with supervisors and colleagues, flow of information, communication, role clarity and participation in decision-making. *Advancement* refers to remuneration, career possibilities and training opportunities. *Job Insecurity* refers to uncertainty about the future. Strydom and Rothmann (in press) found the following reliabilities for the factors.: Overload (α = 0,76), Growth Opportunities (α = 0,86), Organisational Support (α = 0,92), Advancement (α = 0,83), and Job Insecurity (α = 0,89). All factors showed acceptable equivalence for different occupations/organisations.

The *Health subscales of the ASSET* (which refers to An Organizational Stress Screening Evaluation Tool; Cartwright & Cooper, 2002) was used to measure physical and psychological ill-health. The Health subscales of the ASSET consist of 19 items arranged on two subscales, namely physical health and psychological well-being. The questionnaire is scored on a scale varying from 1 (*never*) to 4 (*often*). All items on the physical health subscale relate to physical symptoms of stress. The items listed on the psychological well-being subscale are symptoms of stress-induced mental ill-health. Johnson and Cooper (2003) found a Guttman split-half reliability coefficient of 0,74 and 0,91 respectively for the physical and psychological health subscales. Research also showed that the psychological well-being subscale has good convergent validity with the General Health Questionnaire, widely used measure of psychiatric disorders (Goldberg & Williams, 1988).

The *Organisational Commitment Subscale of the ASSET* (Cartwright & Cooper, 2002) is used to measure an individual's attitude toward his or her organisation. The scale includes questions relating to perceived levels of commitment to the organisation which are scored on a scale varying from 1 (*strongly disagree*) to 6 (*strongly agree*) and consists of seven items. Examples of items are "I feel valued and trusted by the organisation" and "I am proud of this organisation". Johnson and Cooper (2003) found a Guttman split-half reliability coefficient of 0,74 for this scale.

The *Orientation to Life Questionnaire* (OLQ; Antonovsky, 1987) was used to measure the participants' sense of coherence. The OLQ consists of 29 items. Antonovsky (1993) reported Cronbach alpha coefficients of the OLQ in 29 research studies varying from 0,85 to 0,91 Antonovsky also found test-retest reliability coefficients between 0,41 and 0,97. Rothmann (2002) reported an acceptable alpha coefficient of 0,89 for the OLQ (in accordance with findings of Nunnally & Bernstein, 1994). In terms of the construct validity of the OLQ, a negative relationship was found to exist between OLQ and experienced stress and that the OLQ correlates negatively with the "State-Trait Anxiety Inventory-Trait" and the "Beck Depression Inventory" (Frenz, Carey, & Jorgensen, 1993).

A biographical questionnaire was also administered. Participants were given the option of providing their names and contact details in the case of feedback. Other information gathered included the specific SETA, position, education, gender, marital status and language.

Statistical analysis

Firstly, descriptive statistics (e.g., means, and standard deviations) were used to explore the data. Secondly eigenvalues and scree plots were studied to determine the number of factors involved. As part of the second step, a principal components analysis with a direct Oblimin rotation was conducted if factors were related, or a principal component analysis with a Varimax rotation was used if the obtained factors were not related (Tabachnick & Fidell, 2001). Cronbach's alpha coefficients were then computed to assess the reliability of the constructs which are measured in this study.

To specify the relationship between the variables, Pearson product-moment correlation coefficients were employed. In terms of statistical significance, it was decided to set the value at a 95% confidence interval level ($p \leq 0,05$). Effect sizes (Steyn, 1999) were used to decide on the practical significance of the findings. A medium effect cut-off point according to Cohen (1988) was set at 0,30 for the practical significance of correlation coefficients.

Structural equation modelling as implemented in Amos (Arbuckle, 1999) was used to test the construct validity of the measuring instruments using the maximum likelihood method. One of the fit indices produced by the Amos program is the Chi-square statistic (χ^2); the χ^2 is the

test of absolute fit of the model, and the χ^2 value is sensitive to sample size. Therefore, additional goodness-of-fit indices i.e. Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI), the Normed Fit Index (NFI), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), and the Root Means Square Error of Approximation (RMSEA) have been used in this study.

RESULTS

Construct validity of the measuring instruments

Burnout and work engagement. A simple component analysis was conducted on two dimensions of burnout (i.e. exhaustion and cynicism), and work engagement (i.e. vigour and dedication). These factors represented the energy dimensions (ranging from exhaustion to vigour) and identification dimensions (ranging from cynicism to dedication) of wellness.

Two models of burnout, namely a one-factor model and a two-factor model were tested with SEM analysis. In the one-factor model, it was hypothesised that items measuring exhaustion and cynicism load on a single factor. The goodness-of-fit statistics for the one-factor model were as follows: $\chi^2 = 102{,}87$, $p < 0{,}01$; $\chi^2/df = 3{,}81$; GFI = 0,85; AGFI = 0,75; CFI = 0,79; NFI = 0,74; TLI = 0,72 and RMSEA = 0,13. In the two-factor model, it was hypothesised that exhaustion and cynicism are separate, but related dimensions of burnout. The goodness-of-fit statistics for the two-factor model were as follows: $\chi^2 = 46{,}16$, $p < 0{,}01$; $\chi^2/df = 1{,}78$; GFI = 0,94; AGFI = 0,90; CFI = 0,94; NFI = 0,88; TLI = 0,92 and RMSEA = 0,07. The above-mentioned statistics show that a two-factor model of burnout (compared to a one-factor model) fitted the data better.

Two models of work engagement were also tested, namely a one-factor model and a two-factor model. In the one-factor model, it was hypothesised that items measuring vigour and dedication load on a single factor. The following goodness-of-fit statistics were obtained for a one-factor model of work engagement: $\chi^2 = 93{,}88$, $p < 0{,}01$; $\chi^2/df = 2{,}67$; GFI =0,90; AGFI = 0,85; CFI = 0,88; NFI = 0,82; TLI = 0,84 and RMSEA = 0,10. In the two-factor model, it was hypothesised that vigour and dedication are separate, but related dimensions of work engagement. The goodness-of-fit statistics for the two-factor model are as follows: χ^2 =

73,62, $p < 0,01$; $\chi^2/df = 2,83$; GFI =0,91; AGFI = 0,85; CFI = 0,90; NFI = 0,85; TLI = 0,86 and RMSEA = 0,10. The above-mentioned statistics show that a two-factor model of work engagement (compared to a one-factor model) fitted the data better.

Ill-health. A simple principle component analysis that was carried out on the 19 items of the health subscales of the ASSET resulted in two factors, which explained 43,19% of the total variance. Next, a principle component analysis with a direct oblimin rotation was conducted on the 19 items. The two related factors ($r = 0,50$) which were extracted, were labelled Psychological ill-health (10 items explaining 34,94% of total variance), and physical ill-health (seven items explaining 8,26% of total variance).

Organisational Commitment. A comprehensive test of the hypothesised relationship between organisational commitment, affective commitment and behavioural commitment, was accomplished with structural equation modelling (SEM) methods as implemented by Amos (Arbuckle, 1999). A model, including hypothesised relationship between the dimensions of organisational commitment as mentioned above, was tested. The following goodness-of-fit statistics were obtained for the a one-factor model of organisational commitment: $\chi^2 = 75,85$, $p < 0,01$; $\chi^2/df = 2,81$; GFI =0,90; AGFI = 0,83; CFI = 0,93; NFI = 0,89; TLI = 0,90 and RMSEA = 0,11. However, the results showed that a two-factor model of organisational commitment fitted the data better: $\chi^2 = 42,32$, $p < 0,01$; $\chi^2/df = 1,72$; GFI = 0,94; AGFI = 0.90; CFI = 0,97; NFI = 0,94; TLI = 0,96 and RMSEA = 0,07.

Descriptive statistics, reliabilities and correlations

The descriptive statistics, reliability, and correlations for the factors of the measuring instruments for SETA employees are given in Table 2.

Table 2

Descriptive Statistics, Alpha Coefficients and Pearson Correlations between the Scales

Variable	Mean	*SD*	Sten	α	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Exhaustion	12,16	6,25	5,51	0,76	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Cynicism	4,92	4,80	4,06	0,75	0,44*+	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Vigour	18,87	3,75	6,54	0,62	-0,30*+	-0,48*+	-	-	-	-	-	-	-	-	-	-	-	-
4. Dedication	24,84	5,40	6,61	0,82	-0,21*	-0,56*++	0,62*++	-	-	-	-	-	-	-	-	-	-	-
5. Overload	25,80	4,61	6,18	0,79	0,38*+	0,08*	-0,12*	0,12*	-	-	-	-	-	-	-	-	-	-
6. Growth opportunities	26,86	5,10	6,36	0,81	-0,17*	-0,35*+	0,42*+	0,55*++	0,30*+	-	-	-	-	-	-	-	-	-
7. Organisational support	45,49	9,04	6,69	0,92	-0,27*	-0,36*+	0,31*+	0,32*+	0,07*	0,56*++	-	-	-	-	-	-	-	-
8. Social support	19,20	3,10	6,83	0,70	-0,25*	-0,21*	0,18*	0,17*	-0,00	0,38*+	0,62*++	-	-	-	-	-	-	-
9. Job insecurity	7,26	3,03	7,28	0,88	0,06*	0,03	0,02	-0,03	-0,12*	-0,12*	-0,23*	-0,25*	-	-	-	-	-	-
10. Advancement	13,96	4,35	4,78	0,82	0,27*	-0,09*	0,17*	0,19*	-0,20*	0,35*+	0,32*+	0,16*	0,13*	-	-	-	-	-
11. Sense of coherence	143,08	19,40	6,44	0,84	0,27*	-0,36*+	0,42*+	0,41*+	-0,00	0,31*+	0,31*+	0,30*+	-0,14*	0,17*	-	-	-	-
12. Psychological ill-health	19,38	5,66	5,62	0,88	0,57*++	0,47*+	-0,31*+	-0,25*	0,27*	-0,37*+	-0,37*+	-0,34*+	-0,06*	-0,14*	-0,48*+	-	-	-
13. Physical ill-health	13,69	4,07	4,34	0,76	0,47*+	0,31*+	-0,25*	-0,12*	0,35*+	-0,23*	-0,23*	-0,24*	0,11*	-0,10*	-0,33*+	0,62*++	-	-
14. Affective commitment	23,05	4,57	6,50	0,81	0,29*	-0,37*+	0,41*+	0,41*+	-0,17*	0,38*+	0,38*+	0,24*	-0,05*	0,41*+	0,32*+	-0,28*	-0,21*	-
15. Behavioural commitment	19,78	3,30	6,76	0,76	0,31*+	-0,34*+	0,38*+	0,34*+	-0,14*	0,24*	0,24*	0,13*	-0,21*	0,32*+	0,21*	-0,21*	-0,21*	0,70*++

* $p < 0,05$

+ $r > 0,30$ - practically significant (medium effect)

++ $r > 0,50$ - practically significant (large effect)

Analysis of Table 2 revealed that acceptable alpha coefficients ranging from 0,70 to 0,92, were obtained for the scales with the exception of vigour that reported an alpha coefficient of 0,62. The alpha coefficients of the scales compared favourably with the guideline of $\alpha > 0,70$ (Nunnally & Bernstein, 1994),

Table 2 shows the stens of the different variables relatively to South African norms. It is evident from Table 2 that participants perceived. Advancement to be below average compared to the norm. Job insecurity seems to be above average compared to the South African norm. Not shown in Table 2 are the percentages of employees who experience low, moderate or high levels of exhaustion, cynicism, vigour and dedication. Compared to a national norm (Rothmann, 2005), 21,5%, 51,9% and 26,6% of the employees displayed low, moderate and high levels of exhaustion, while 46,9%, 39,9% and 13,3% showed low, moderate and high levels of cynicism respectively. Furthermore, 21,6%, 37,4% and 41% of the employees displayed low, moderate and high levels of vigour, while 21,9%, 34,8% and 43,2% showed low, moderate and high levels of dedication respectively.

Table 2 shows a statistically and practically significant correlation (of medium effect) between exhaustion and cynicism. Exhaustion correlates statistically significantly with physical ill-health (medium effect) and psychological ill-health (large effect). Cynicism is also statistically and practically significantly related to physical and psychological ill-health (both medium effects). Exhaustion is statistically and practically significantly related to overload and behavioural commitment (medium effect).

Cynicism is statistically and practically significantly negatively related to dedication (large effect), growth opportunities, organisational support, sense of coherence, affective commitment, and behavioural commitment (all medium effects). Exhaustion and cynicism are statistically and practically significantly negatively related to vigour (medium effects). Vigour is statistically and practically significantly related to dedication and dedication to growth opportunities with large effect.

Vigour and dedication are statistically and practically significantly related to organisational support, sense of coherence, affective commitment and behavioural commitment (all medium effects). Vigour is negatively related to psychological ill-health (medium effect).

The results of a multiple regression analysis with exhaustion and cynicism as dependent variables are reported in Table 3.

Table 3 shows that overload explained 10% of the variance in exhaustion. The lack of job resources, i.e. growth opportunities, organisational support, social support, job insecurity and advancement in the presence of overload explained another 16% of the variance in exhaustion, with a lack of organisational support the most significant of these job resources. However, none of the regression coefficients of job resources were statistically significant at $p < 0,05$. Table 3 shows that the lack of job resources in the presence of overload explains 26% of the variance in exhaustion. In addition, Table 3 shows that a sense of coherence did not add statistically significantly to the explanation of exhaustion.

The results of the multiple regression analysis with cynicism as dependent variable are shown in Table 3. It is clear from Table 3 that a lack of job resources explained 20% of the variance in cynicism. Only two categories of job resources added statistically significantly to the percentage of variance explained, namely growth opportunities and organisational support. No statistically significant increase in R^2 realised when overload was added to the prediction. However, when sense of coherence was entered in the third step, R^2 increased statistically significantly ($\Delta R^2 = 6\%$). Therefore, a lack of growth opportunities, a lack of organisational support and a weak sense of coherence contributed to cynicism in this study.

Table 3

Multiple Regression Analyses 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	(Constant)	0,29	3,33		0,09	0,93	13,30*	0,32	0,10	0,10*
	Overload	0,46	0,13	0,32	3,65	0,00*				
2	(Constant)	19,96	5,44		3,67	0,00	6,65*	0,51	0,26	0,16*
	Overload	0,48	0,13	0,33	3,72	0,00*				
	Growth Opportunities	-0,80	0,14	-0,06	-0,58	0,56				
	Organisational support	-0,14	0,09	-0,20	-1,68	0,10				
	Social support	-0,39	0,22	-0,18	-1,78	0,08				
	Job insecurity	-0,25	0,18	-0,12	-1,41	0,16				
	Advancement	-0,15	0,14	-0,10	-1,07	0,29				
3	(Constant)	24,49	6,23		3,93	0,00	6,07*	0,52	0,27	0,01
	Overload	0,46	0,13	0,32	3,52	0,00*				
	Growth Opportunities	-0,31	0,14	-0,30	-0,22	0,83				
	Organisational support	-0,14	0,09	-0,19	-1,63	0,11				
	Social support	-0,35	0,22	-0,16	-1,59	0,12				
	Job insecurity	-0,28	0,18	-0,13	-1,56	0,12				
	Advancement	-0,15	0,14	-0,10	-1,08	0,28				
	Sense of coherence	-0,04	0,03	-0,13	-1,47	0,14				
Cynicism										
1	(Constant)	17,33	3,51		4,94	0,00	5,70*	0,45	0,20	0,20*
	Growth Opportunities	-0,29	0,10	-0,31	-2,86	0,01*				
	Organisational support	-0,14	0,07	-0,25	-2,11	0,04*				
	Social support	0,01	0,17	0,01	0,05	0,96				
	Job insecurity	-0,17	0,14	-0,11	-1,24	0,22				
	Advancement	0,18	0,10	0,17	1,81	0,07				
2	(Constant)	13,72	4,19		3,27	0,00	5,21*	0,46	0,22	0,01
	Growth Opportunities	-0,34	0,11	-0,36	-3,24	0,00*				
	Organisational support	-0,14	0,07	-0,25	-2,10	0,04*				
	Social support	0,2	0,17	0,01	0,10	0,93				
	Job insecurity	-0,16	0,14	-0,10	-1,13	0,26				
	Advancement	0,23	0,10	0,21	2,21	0,03*				
	Overload	0,16	0,10	0,14	1,56	0,12				
3	(Constant)	21,26	4,63		4,60	0,00	6,40*	0,53	0,28	0,06*
	Growth Opportunities	-0,26	0,10	-0,28	-2,50	0,01*				
	Organisational support	-0,13	0,06	-0,23	-2,05	0,04*				
	Social support	0,09	0,17	0,05	0,52	0,61				
	Job insecurity	-0,20	0,13	-0,13	-1,50	0,14				
	Advancement	0,23	0,10	0,21	2,29	0,02*				
	Overload	0,12	0,10	0,11	1,19	0,24				
	Sense of coherence	-0,07	0,21	-0,29	-3,30	0,00*				

* $p < 0,05$

The results of a multiple regression analysis with vigour and dedication as dependent variables and job demands, job resources and sense of coherence as independent variables are reported in Table 4.

Table 4 shows that job resources predicted 24% and 38% of the variance in vigour and dedication respectively. However, only the regression coefficient of growth opportunities was statistically significant in the case of both dependent variables. No statistically significant increase was reported in the total variance explained for both vigour and dedication when overload was added to the model. When sense of coherence was added to the model, a statistically significant increase in R^2 was again observed (ΔR^2 = 7% and 6% in vigour and dedication respectively). Therefore, vigour and dedication are best predicted by growth opportunities in the job (variety, learning opportunities and autonomy), and a strong sense of coherence.

Table 4

Multiple Regression Analyses with Vigour and Dedication as Dependent Variables

Model		Unstandardised Coefficients		Standardised Coefficients	*t*	*p*	*F*	*R*	R^2	ΔR^2
		B	SE	Beta						
Vigour										
1	(Constant)	7,42	2,79		2,66	0,01	7,38*	0,49	0,24	0,24*
	Growth Opportunities	0,32	0,08	0,42	4,03	0,00*				
	Organisational support	0,08	0,05	0,17	1,47	0,14				
	Social support	-0,07	0,14	-0,05	-0,51	0,61				
	Job insecurity	0,13	0,11	0,10	1,15	0,25				
	Advancement	-0,04	0,08	-0,05	-0,56	0,58				
2	(Constant)	1,095	3,31		3,30	0,00	6,91*	0,52	0,27	0,03
	Growth	0,37	0,08	0,49	4,48	0,00*				
	Organisational support	0,08	0,05	0,17	1,45	0,15				
	Social support	-0,08	0,14	-0,06	-0,57	0,57				
	Job insecurity	0,11	0,11	0,09	1,03	0,31				
	Advancement	-0,09	0,08	-0,11	-1,13	0,26				
	Overload	-0,15	0,08	-0,17	-1,92	0,06				
3	(Constant)	4,52	3,63		1,25	0,22	8,37*	0,58	0,34	0,07*
	Growth	0,31	0,08	0,40	3,74	0,00				
	Organisational support	0,07	0,05	0,15	1,38	0,17				
	Social support	-0,14	0,13	-0,10	-1,05	0,30				
	Job insecurity	0,15	0,11	0,12	1,43	0,16				
	Advancement	-0,09	0,08	-0,10	1,17	0,25				
	Overload	-0,12	0,08	-0,13	1,55	0,12				
	Sense of coherence	0,06	0,02	0,30	3,58	0,00*				
Dedication										
1	(Constant)	840	3,63		2,32	0,02	13,89*	0,61	0,38	0,38*
	Growth Opportunities	0,67	0,10	0,61	6,51	0,00*				
	Organisational support	0,04	0,07	0,06	0,57	0,57				
	Social support	-0,20	0,18	-0,10	-1,13	0,26				
	Job insecurity	0,06	0,14	0,03	0,42	0,68				
	Advancement	-0,01	0,10	-0,01	-0,13	0,89				
2	(Constant)	8,07	4,37		1,84	0,07	11,48*	0,61	0,38	0,00
	Growth Opportunities	0,67	0,11	0,61	6,06	0,00*				
	Organisational support	0,04	0,07	0,06	0,57	0,57				
	Social support	-0,20	0,18	-0,10	-1,12	0,27				
	Job insecurity	0,06	0,15	0,03	0,42	0,67				
	Advancement	-0,01	0,11	-0,01	-0,09	0,93				
	Overload	0,01	0,11	0,01	0,14	0,89				
3	(Constant)	-0,04	4,81		-0,01	0,99	12,41*	0,66	0,44	0,06*
	Growth Opportunities	0,58	0,11	0,53	5,36	0,00*				
	Organisational support	0,03	0,07	0,05	0,46	0,65				
	Social support	-0,27	0,17	-0,14	-1,59	0,11				
	Job insecurity	0,11	0,14	0,06	0,78	0,44				
	Advancement	-0,01	0,10	-0,01	-0,07	0,94				
	Overload	0,06	0,10	0,05	0,57	0,57				
	Sense of coherence	0,08	0,02	0,30	3,40	0,00*				

* $p < 0,05$

The results of a multiple regression analysis with physical and psychological ill-health as dependent variables and exhaustion, cynicism, vigour and dedication as independent variables are reported in Table 5.

Table 5

Multiple Regression Analyses with Physical 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	(Constant)	10,55	2,30		4,60	0,00	11,81*	0,50	0,25	0,25*
	Exhaustion	0,24	0,05	0,38	4,64	0,00*				
	Cynicism	0,14	0,09	0,16	1,57	0,12				
	Vigour	-0,18	0,11	-0,16	-1,66	0,10				
	Dedication	0,12	0,08	0,16	1,46	0,15				
Psychological ill-health										
1	(Constant)	14,75	2,77		5,33	0,00	23,08*	0,62	0,39	0,39*
	Exhaustion	0,39	0,07	0,43	5,94	0,00*				
	Cynicism	0,32	0,10	0,27	3,07	0,00*				
	Vigour	-0,16	0,13	-0,11	-1,27	0,21				
	Dedication	0,06	0,10	0,06	0,63	0,53				

* $p < 0,05$

Table 5 contains the results of the multiple regression analysis with physical and psychological ill-health as dependent variables. The results show that exhaustion, cynicism, vigour and dedication explain 25% of the variance in physical ill-health of SETA employees. However, only the regression coefficient of exhaustion was statistically significant.

Exhaustion, cynicism, vigour, and dedication explained 39% of the variance in psychological ill-health. However, only the regression coefficients of exhaustion and cynicism were statistically significant ($p < 0,01$). These results show that SETA employees suffering from high levels of exhaustion and cynicism are more likely to experience physical and psychological ill-health.

The results of a multiple regression analysis with affective and behavioural commitment as dependent variables and exhaustion, cynicism, vigour and dedication as independent variables are reported in Table 6.

Table 6

Multiple Regression Analyses with Affective and Behavioural Commitment as Dependent Variables

Model		Unstandardised Coefficients		Standardised Coefficients	*t*	*p*	*F*	*R*	R^2	ΔR^2
		B	SE	Beta						
Affective commitment										
1	(Constant)	11,89	1,78		6,69	0,00	20,53*	0,46	0,21	0,21*
	Vigour	0,32	0,11	0,26	2,85	0,01*				
	Dedication	0,21	0,08	0,25	2,72	0,01*				
2	(Constant)	16,10	2,45		6,56	0,00	12,31	0,49	0,24	0,03
	Vigour	0,24	0,11	0,20	2,16	0,03*				
	Dedication	0,17	0,08	0,20	1,99	0,05*				
	Exhaustion	0,10	0,06	-0,14	-1,75	0,08				
	Cynicism	0,10	0,09	-0,11	-1,16	0,25				
Behavioural commitment										
1	(Constant)	12,68	1,32		9,61	0,00	14,94*	0,40	0,16	0,16*
	Vigour	0,25	0,08	0,28	3,00	0,00*				
	Dedication	0,10	0,06	0,16	1,72	0,09				
2	(Constant)	16,04	1,81		8,86	0,00	10,08*	0,46	0,21	0,05*
	Vigour	0,19	0,08	0,21	2,24	0,03*				
	Dedication	0,07	0,06	0,11	1,14	0,26				
	Exhaustion	-0,10	0,04	-0,19	-2,30	0,02*				
	Cynicism	-0,06	0,07	-0,09	-0,96	0,34				

* $p < 0,05$

Table 6 shows that vigour and dedication explain 21% of variance in affective commitment. The prediction of variance in affective commitment did not increase significantly when exhaustion and cynicism were entered into the regression equation. Table 6 also shows that vigour and exhaustion explain 21% of the variance in behavioural commitment.

DISCUSSION

The objective of this study was to investigate the relationship between job demands, job resources, sense of coherence, ill-health, organisational commitment, and well-being in SETA employees in South Africa using a cross-sectional survey design. The sample consisted of 159 SETA employees in South Africa.

The results of this study confirmed the two-factor structure of burnout as well as work engagement. Burnout consisted of two factors, namely incapability (exhaustion) and

unwillingness (cynicism) to perform. Work engagement also consisted of two factors, namely capability (vigour) and willingness (dedication) to perform. These factors probably represent the energy and identification dimensions of work-related well-being (Schaufeli & Bakker, 2004). Low levels of burnout were related to high levels of engagement. Therefore, the findings of Schaufeli, Martinez, Pinto, Salanova, and Bakker (2002) showing that burnout and engagement are related, but distinct concepts, were confirmed in this study.

Exploratory factor analysis showed that ill-health consists of physical and psychological ill-health. Physical (ill) health refers to physical symptoms of stress (e.g., sleep loss, headaches). Psychological (ill) health refers to psychological symptoms of stress (e.g., constant tiredness and constant irritability). Organisational commitment also consisted of two factors, namely affective commitment and behavioural commitment. Affective commitment refers to loyalty and dedicated to the organisation, while behavioural commitment refers to the willingness to perform tasks which are not part of the job descriptions of employees.

Compared to a national norm (Rothmann, 2005), 21,5%, 51,9% and 26,6% of the employees displayed low, moderate and high levels of exhaustion, while 46,9%, 39,9% and 13,3% showed low, moderate and high levels of cynicism respectively. Furthermore, 21,6%, 37,4% and 41% of the employees displayed low, moderate and high levels of vigour, while 21,9%, 34,8% and 43,2% showed low, moderate and high levels of dedication respectively. The results also showed that job insecurity and a lack of advancement were problem areas in SETAs.

The results of this study confirmed that overload was primarily related to exhaustion. Multiple regression analysis showed that overload (i.e. pace and amount of work, mental load and emotional load) was the best predictor of exhaustion, while it did not play a significant role in cynicism, vigour, and/or dedication. Furthermore, as expected, exhaustion contributed to both physical and psychological ill-health in this study (see also Demerouti et al., 2001; Schaufeli & Bakker, 2004). Exhaustion was only related to one aspect of organisational commitment of SETA employees, namely behavioural commitment. It seems that employees who were less exhausted were more willing to perform tasks which did not form part of their job descriptions.

Cynicism was exclusively predicted by resources in this study. First, a lack of growth opportunities in the job (variety, opportunities to learn and independence in the job), and a lack of organisational support (the relationship with supervisors and colleagues, flow of information, communication, role clarity and participation in decision-making) predicted cynicism. Second, it was evident that poor advancement (remuneration, career possibilities and training opportunities) contributed to cynicism when overload was entered into the regression equation. Third, a sense of coherence (as a personal resource) had a main effect on cynicism. More specifically the results showed that a strong sense of coherence contributed to lower cynicism. It seems from the results of this study that cynicism only contributed to psychological ill-health (i.e., constant tiredness and constant irritability).

Work engagement (including vigour and dedication) was exclusively predicted by growth opportunities in the job and a strong sense of coherence. Therefore, employees who perceived that they have variety, opportunities to learn and independence in their jobs, and who experienced stimuli as comprehensible, manageable and meaningful, showed higher levels of vigour and dedication at work. Work engagement, in turn, strongly predicted affective organisational commitment of employees. This finding confirms the results of Schaufeli and Bakker (2004). Also, vigour seems to contribute to behavioural commitment of employees.

In support of the COBE model (Schaufeli & Bakker, 2004), the results of this study showed that high job demands (overload), a lack of job resources (growth opportunities and organisational support), and a weak sense of coherence predicted high levels of burnout (exhaustion and cynicism). Burnout (consisting of exhaustion and cynicism) was negatively related to work engagement (consisting of vigour and dedication). High levels of exhaustion and cynicism predicted high levels of physical and psychological ill-health via burnout. On the positive side of wellness, high levels of job resources (specifically growth opportunities) predicted high levels of work engagement (vigour and dedication). High levels of work engagement predicted high levels of organisational commitment.

It seems that a weak sense of coherence contributed to work-related (un)well-being in various ways in this study. First, a weak sense of coherence predicted high levels of cynicism. Second a strong sense of coherence predicted high levels of work engagement. This finding supports the findings of previous studies on sense of coherence (e.g. Basson & Rothmann, 2002; Levert et al., 2000; Rothmann, 2004; Wissing, De Waal & De Beer, 1992). These studies

have reported significant negative correlations between burnout and sense of coherence. It is possible that sense of coherence contributes to psychological meaningfulness, which may assist employees to ward-off of burnout, and to strengthen engagement inclinations (May et al., 2004). In line with the findings of Amirkhan and Greaves (2003), a strong sense of coherence impacts on perception, such that individuals with a strong orientation were likely to view a larger number of life events as having coherence. Furthermore, it might contribute towards more instrumental and fewer avoidant responses by employees to cope with stressors in their lives.

The present study has certain limitations. The research was a cross-sectional survey design. As a result no causal inferences could be drawn. Another limitation of this study is that measurement of this model's variables was based solely on self-reports. Therefore, at least part of the common variance of the measures could be attributed to method variance as shown by Schaufeli, Maslach and Marek (1993).

RECOMMENDATIONS

In order to improve levels of work-related well-being of employees, SETAs should design and implement organisational development interventions at systems level to prevent an excess of job demands (overload). These interventions can include the redesign of organograms, work flow, job descriptions, the development of performance models and performance agreements. Although it is important to assist individual SETA employees whose psychological well-being is affected by their work by means of interventions such as counseling, primary and secondary interventions, in addition to tertiary interventions, should also be implemented. The intention must be to reduce the levels of job demands and increase levels of job resources within SETAs. Since job demands and a lack of job resources play a central role in burnout, it is necessary to implement preventative SETA-based solutions to tackle the problem of high levels of job demands and the lack of job resources available to individuals in the employ of SETAs.

Organisations can contribute to the development of employees' sense of coherence by providing information in a consistent, structured, ordered and understandable format. Employees should further be able to identify their roles within the greater whole and, as such, the comprehensibility component of sense of coherence will be enhanced. In order for

employees to perceive that work expectations are manageable and within their, or other people's power, employers should ensure that employees are equipped with the necessary knowledge, skills, material, instruments and other resources, and that a balance in the load of tasks to be handled exists. Employees should also be given the opportunity to perform work that requires thought and independent judgement.

Employees will regard their work as meaningful when a degree of independence and freedom of choice in the performance of their tasks is allowed. Participation in decision-making will enhance the employees' feeling of membership and contribute to the meaningfulness component of sense of coherence. Moreover, the employee should have the freedom to disagree with his/her supervisor, to be able to discuss what to do with his/her supervisor (rather than to be told what to do), and to act autonomously (without being supervised too closely).

Future studies should test the relationships between job demands, job resources, sense of coherence, burnout, work engagement, ill health and organisational commitment in longitudinal research designs. Training and development programmes that are directed at developing healthy attributions, and constructive coping should be investigated. Lastly, intervention research is needed to investigate how work-related well-being of employees could be promoted.

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CHAPTER 3

CONCLUSIONS

CHAPTER 3: CONCLUSIONS

In this chapter the conclusions based upon results of the empirical studies of the research article will be presented. Conclusions are drawn in relation to the research objectives. Limitations of the study are discussed. Finally, recommendations for the SETAs are made and recommendations for future research are presented.

3.1 CONCLUSIONS

The first objective of this study was to assess the validity and reliability of the constructs in the measurement model, including work-related well-being (burnout and work engagement), job characteristics, sense of coherence, ill-health and organisational commitment. A two-factor structure for the MBI-GS (exhaustion and cynicism) as well as a two-factor structure for the UWES (vigour and dedication), the *Health subscales of the ASSET* (physical and psychological ill-health) and the *Organization Commitment Subscale of the ASSET* (affective and behavioural commitment) was obtained. These results show that the constructs of the measuring model used in the SETAs are valid and consistent.

Cronbach alpha coefficients varying from 0,70 to 0,92 were obtained, except for vigour (0,62). These alpha coefficients compare reasonably well with the guideline reported by Nunnally and Bernstein (1994), of 0,70 (0,55 in basic research), demonstrating that a large portion of the variance is explained by the constructs (internal consistency of the constructs). Most of the scales of the measuring instruments had relatively normal distributions, with low skewness and kurtosis. These results show that the constructs of the measuring model used in the SETAs are valid and consistent.

In this study, SETA employees perceived advancement to be relatively low on average compared to the norm. Job insecurity was high compared to the South African norm. Compared to a national norm, 21,5%, 51,9% and 26,6% of the employees displayed low, moderate and high levels of exhaustion, while 46,9%, 39,9% and 13,3% showed low, moderate and high levels of cynicism respectively. Furthermore, 21,6%, 37,4% and 41% of the employees displayed low, moderate and high levels of vigour, while 21,9%, 34,8% and 43,2% showed low, moderate and high levels of dedication respectively.

The second research objective aimed to provide SETAs with industry-specific information on the relationship between burnout and work engagement, job demands, and job resources, sense of coherence, ill-health and organisational commitment.

The results of this study confirmed that overload was primarily related to exhaustion. Overload (i.e., pace and amount of work, mental load and emotional load) was the best predictor of exhaustion, while it did not play a significant role in cynicism, vigour, and/or dedication. Furthermore, as expected, exhaustion contributed to both physical and psychological ill-health in this study. Exhaustion was only related to one aspect of organisational commitment of SETA employees, namely behavioural commitment. It seems that employees who were less exhausted were more willing to perform tasks which did not form part of their job descriptions.

Cynicism was exclusively predicted by resources in this study. First, a lack of growth opportunities in the job, and a lack of organisational support predicted cynicism. Second, it was evident that poor advancement contributed to cynicism when overload was entered into the regression equation. Third, a sense of coherence (as a personal resource) had a main effect on cynicism. More specifically the results showed that a strong sense of coherence contributed to lower cynicism. It seems from the results of this study that cynicism only contributed to psychological ill-health (i.e., constant tiredness and constant irritability).

Work engagement (including vigour and dedication) was exclusively predicted by growth opportunities in the job and a strong sense of coherence. Therefore, employees who perceived that they have variety, opportunities to learn and independence in their jobs, and who experienced stimuli as comprehensible, manageable and meaningful, showed higher levels of vigour and dedication at work. Work engagement, in turn, strongly predicted affective organisational commitment of employees. Also, vigour seems to contribute to behavioural commitment of employees.

It seems that a weak sense of coherence contributed to work-related (un)well-being in various ways in this study. First, a weak sense of coherence predicted high levels of cynicism. Second a strong sense of coherence predicted high levels of work engagement. It is possible that sense of coherence contributes to psychological meaningfulness, which may assist employees to ward-off of burnout, and to strengthen engagement inclinations.

3.2 LIMITATIONS

The present study has certain limitations. The research was a cross-sectional survey design. As a result, no causal inferences could be drawn even though advanced analytical procedures such as structural equation modelling techniques were employed. One can deduce from the biographical questionnaire that successful longitudinal research within the SETAs would be very difficult due to the labour turnover within SETAs. This is a limitation for work-related well-being research in SETAs. Another limitation of this study is that measurement of this model's variables was based solely on self-reports. Therefore, at least part of the common variance of the measures could be attributed to method variance (Schaufeli, Maslach, & Marek, 1993). Thirdly, findings pertaining to vigour as a construct of work engagement cannot be generalised to all SETA employees in all SETAs, due to the sample size resulting in an alpha coefficient of 0,62. The limited understanding of sense of coherence as a factor influencing work-related well-being was a limitation in this study.

3.3 RECOMMENDATIONS

Recommendations for SETAs and future research are made in the following section.

3.3.1 Recommendations for SETAs

SETA management, as well as staff at different levels, should make a commitment to the support and development of its employees with a focus on individual growth and advancement of individuals. Although it is important to assist individual SETA employees whose psychological well-being is affected by their work by means of interventions such as counselling, primary and secondary interventions, in addition to tertiary interventions, should also be implemented.

Senior management should design and implement strategies to support and develop employees in order to improve job resources in an effort to improve work wellness by means of decreasing the level of burnout and increasing the level of work engagement, and, in turn, improve the organisation's performance. This can only be achieved by focusing on decreasing overload as job demand and increasing organisational support, growth

opportunities and advancement, as well as the development of a strong sense of coherence in SETA employees. These interventions can include the redesign of organisational structures, work flow, job descriptions, the development of performance models and performance agreements.

Managers should be able to describe specific actions that they have taken and are currently taking to reduce overload and to support and develop employees. Employees must perceive these efforts implemented by management as a genuine effort to develop and support them, not only in the execution of their tasks, but also as a means of developing them in order for them to advance in their careers and achieve personal excellence. Strategies should include encouraging and rewarding employees for developing themselves, supporting other employees, and constructive career planning. It is crucial that strategies include information communicated regularly on the contribution of individual SETA employees towards organisational goals pertaining to matters such as unemployment and addressing the skills shortage in South Africa in order for employees to see the meaning and realize the importance of their jobs. Employees should be able to explain how they contribute to achieving the SETAs' aims and objectives. In so doing, the comprehensibility component of sense of coherence will be improved. SETAs could manage the behaviour of employees with a weak sense of coherence by giving information in a constant, structured, ordered, and understandable format. Training and development programmes that are directed at developing sense of coherence should be compiled and evaluated.

3.2.2 Recommendations for future research

It is necessary to unpack sense of coherence as an underlying variable to refine the model of work wellness. Future research should investigate the causal relationships between sense of coherence, job demands and job resources.

Future studies should make use of a more appropriate design (e.g. a longitudinal or experimental design) to investigate causal relationships between job demands, job resources, sense of coherence, burnout, engagement, ill-health and organisational commitment. In order to improve the reliability of constructs in the measurement model, future research should make use of larger and more representative samples and adequate statistical techniques (e.g.,

structural equation modelling). Future studies can validate findings pertaining to vigour for all SETA employees.

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