THE RELATIONSHIP BETWEEN JOB CHARACTERISTICS, WORK WELLNESS AND WORK-RELATED FLOW OF CALL CENTRE AGENTS IN AN INSURANCE COMPANY

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REMARKS

The reader is reminded of the following:

- The editorial style as well as the reference used in this mini-dissertation follow the format prescribed by the Publication Manual (5th edition) of the American Psychological association (APA). This practice is in line with the policy of the Programme in Industrial Psychology of the North-West University (Potchefstroom) to use APA in all scientific documents as from January 1999.

- The mini-dissertation is submitted in the form of a research article. The editorial style specified by the South African Journal of Industrial Psychology (which agrees largely with the APA style) is used, but the APA guidelines were followed in the constructing tables.

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ABSTRACT

Title: The relationship between Job Characteristics, Work Wellness and Work-Related Flow of Call Centre Agents in an Insurance Company

Key terms: Call centres, job demands, job resources, burnout, work engagement, work-related flow

The technological era in which modern day organisations function, attempting to make every aspect of service more efficient and customer friendly, has cultivated a need within organisations to invent new ways of service. Call centres are one way in which organisations are trying to improve their customer service. For this reason, telephone call centres are one of the fastest growing segments of the service sector. The growth in call centres is attributable to the benefits that they offer organisations. Call centres can improve service and retain customers, increase sales and/or revenue and reduce costs and/or improve efficiency. For this reason, organisations are placing an increasing emphasis on the role of call centres regarding the competitiveness of the company and increased pressure on call centre agents. Research indicated that there are certain stressors in the call centre industry. This is emphasised by the high turnover rate and by high absenteeism levels in call centres. Although some studies seem to suggest that working in call centres can be interesting, overall it seems that working in call centres is a stressful experience.

The objective of this research was to investigate the relationship between job characteristics, work wellness and work-related flow of call centre agents in an insurance company. A cross-sectional design was used with an availability sample (N = 176). A self-constructed instrument (JDRS) was used to measure the unique job demands and job resources in the insurance industry. Along with the JDRS, the Oldenburg Burnout Inventory, the Utrecht Work Engagement Scale and the Work-Related Flow Scale were used as measuring instruments.

Results showed that the unique job demands in a call centre are pressure, working conditions, workload, and job security. The unique job resources are supervision, resources availability, task freedom, pay and benefits, opportunity for growth, and support. Work wellness was found to comprise burnout, work engagement and work-related flow. Multiple regression analysis showed that 6% of the variance in Mental Distance was predicted by Job Demands, with Working Conditions being the only significant predictor. Within Exhaustion, 11% of the variance explained was predicted by Job Demands, with Job Security and Working Conditions being the

only significant predictors. No statistically significant predictions were obtained for Work Engagement and Work-Related Flow (i.e. Absorption and Flow).

Recommendations were made for future research.

OPSOMMING

Titel: Die verhouding tussen Werkeienskappe, Werkwelstand en Werkverwante vloei van Telefoniesehulpsentrum-agente binne 'n Versekeringsfirma

Sleutelterme: Telefoniesehulpsentrums, werkeise, werkhulpbronne, uitbranding, werkbegeestering, werkverwante vloei

Die tegnologiese era waarin moderne organisasies funksioneer, in 'n poging om elke aspek van diens meer effektief en kliënte vriendelik te maak, het 'n vraag laat ontstaan binne organisasies om nuwe maniere van diens te ontwikkel. Telefoniesehulpsentrums is een van die maniere waarop organisasies poog om hul kliëntediens te verbeter. Om hierdie rede is telefoniesehulpsentrums een van die snel groeiende sektore van die dienssektor. Die groei van telefoniesehulpsentrums word toegeskryf aan die voordele wat dit aan organisasies bied. Telefoniesehulpsentrums kan die diens en behoud van kliënte verbeter, dit verhoog verkope en/of winste en verminder kostes en/of verbeter effektiwiteit. Vir die rede plaas organisasies toenemende klem op die rol van telefoniesehulpsentrums ten opsigte van die mededingendheid van die organisasie en toenemende druk op telefoniesehulpsentrum-agente. Navorsing het daarop gedui dat daar sekere stressore in die telefoniesehulpsentrumbedryf is. Hierdie aspek word meer beklemtoon deur die hoë vlak van arbeidsomset en hoë afwesigheidsvlakke in die telefonieshulpsentrums. Alhoewel sommige studies aandui dat dit interessant kan wees om in telefoniesehulpsentrums te werk, dui die meerderheid aan dat dit 'n spanningsvolle ervaring is om in 'n telefoniesehulpsentrum te werk.

Die doelwit van hierdie navorsing was om ondersoek in te stel na die verhouding tussen werkeienskappe, werkwelstand en werkverwante vloei van telefoniesehulpsentrum-agente binne 'n versekeringsfirma. 'n Dwarsdeursnee-ontwerp met 'n beskikbaarheidsteekproef (N = 176) is gebruik. 'n Selfsaamgestelde vraelys (JDRS) is gebruik om die unieke werkeise en werkhulpbronne in die versekeringsbedryf te meet. Benewens die JDRS is die Oldenburg-uitbrandingsvraelys, die Utrecht Werkbegeesteringskaal en die Werkverwante Vloei-skaal as metingsinstrumente gebruik.

Die resultate het getoon dat die volgende unieke werkeise in 'n telefoniesehulpsentrum druk, werksomgewing, werklading en werksekuriteit is. Die unieke werkhulpbronne is toesighouding, beskikbaarheid van hulpbronne, taakvryheid, salaris en voordele, geleenthede vir groei, en

ondersteuning. Werkwelstand bestaan uit uitbranding, werkbegeestering en werkverwante vloei. Meervoudige regressie-analises het getoon dat 6% van die variansie in Psigiese Afstand voorspel is deur Werkeises, met Werkskondisies as die enigste betekenisvolle voorspeller. Binne Uitputting is 11% van die variansie voorspel deur Werkeise, met Werksekuriteit en Werkskondisies as die enigste betekenisvolle voorspellers. Geen statisties betekenisvolle voorspellers is verkry ten opsigte van Werkbegeestering en Werkverwante Vloei (d.i. Absorpsie en Vloei) nie.

Aanbevelings is gemaak vir toekomstige navorsing.

CHAPTER 1

INTRODUCTION

This mini-dissertation focuses on the relationship between job characteristics, work wellness, and work-related flow of call centre agents in an insurance company.

Chapter 1 contains the problem statement, research objectives and research methodology employed. This chapter starts out with a problem statement, giving an overview of previously related research conducted specifically on job characteristics, work wellness, and work-related flow of call centre agents in the insurance industry, linking it with this research project and its research objectives. A discussion of the paradigm perspective and research method follows, with details regarding the empirical study, research design, participants, measuring instruments and statistical analysis. It concludes with a chapter summary giving an overview of the chapters that comprise this mini-dissertation.

1.1 PROBLEM STATEMENT

The world of business in the 21st century is characterised by competitiveness, benchmarking, technological innovation, time-saving procedures and efficiency (Tuck, 2004/2005). As a result, modern-day organisations need to function at an optimal level (Dundu, 2004/2005), along with an emphasis on customer service in order to ensure increased levels of efficiency. With the 21st century demands on organisations to increase their level of customer satisfaction, the core directive in organisations has shifted from an agrarian period, with seasonal growth as the focus, to present times where the customer has become the focus (Holgate, 1999). This is even more relevant as the modern-day customer is more informed with regard to his or her needs and rights as a client (Tuck, 2004/2005).

Customer service was initially an unheard of profession, with the overall focus on production and manufacturing processes (Els & De Villiers, 2003). Since then, quality customer service has become a critical and competitive factor and the fulcrum of businesses worldwide for satisfying the growing need to improve responsiveness and deliver high quality service (Els & De Villiers, 2003). No prospering seems possible without customers (Zapf, Isic, Bechtoldt, & Blau, 2003). Customers are of prominent importance for service-oriented economies worldwide. The technological era in which modern-day organisations function, with an emphasis on efficient

service and customer friendliness, has cultivated a need within organisations to invent new ways of service (Zapf, et al., 2003). Call centres are one way in which organisations are trying to improve their customer service (Els & De Villiers, 2003). Call centres have become the most popular service delivery option for organisations where high volumes and frequency of customer contacts are required (Els & De Villiers, 2003).

Call centres are tools for organising communication with customers with the help of telecommunication (Henn, Kruse, & Strawe, 1996). They are places where formal interactions and transactions such as information, service, support, sales, employee assistance, and emergency occur virtually (Read, 2005). Call centres handle a variety of tasks, which makes it possible to group call centre agents into two prominent dimensions, namely generalists and specialists (Read, 2005). *Generalist call centre agents* are characterised based on their level of training and their way of handling specific tasks (Read, 2005). They are strictly scripted, and they look up information in specialised databases. They rarely have the authority to act on requests outside of instructions given to them. On the other hand, *Specialist call centre agents* have the authority to make decisions; they are educated and have specialised training or licensing (Read, 2005). For the purpose of this research, the focus will be placed on both generalist and specialist call centre agents functioning as insurance call centre representatives.

For further clarification on the image and functioning of a modern-day call centre, it is important to focus on the variety of ways in which call centres make contact with their customers. For this purpose, Zapf, et al. (2003) state that the main task of call centre agents is to interact with customers by telephone, usually supported by computer systems. According to research, 95% of communication in call centres occurs over the phone, as it provides effective, low-cost, real-time, bidirectional communication between two or more parties (Read, 2005). Call centres may be either part of the organisation ('in-house' call centres) or be an external service ('service bureaux'), usually working on behalf of several organisations (Zapf, et al., 2003). Inbound, or in-house, call centres handle calls coming into the particular organisation for the purpose of sales and technical support (Els & De Villiers, 2003). Outbound, or service bureaux, are centres in which the agents are required to make outgoing calls to customers for the purpose of providing services such as direct sales, subscription offers and telemarketing (Els & De Villiers, 2003). For the purpose of this research, the focus will be placed on call centres executing a combination of these two types of interaction methods.

It becomes clear that with the help of call centres, organisations aim to demonstrate their customer orientation, and try to ensure their customers' satisfaction and commitment. From the organisations' point of view, the advantages are manifold. Seeing that sophisticated services may be rendered by phone, lower costs in the area of fieldwork have been identified as a worthwhile advantage (Henn, et al., 1996; Holman, 2003). On top of this, increased customer satisfaction has been identified as an advantage, seeing that call centres may be contacted seven days a week, twenty four hours a day (Henn, et al., 1996; Holman, 2003). Due to the ability of call centres to expand the organisation beyond the boundaries of location and its diversified use during quiet periods (such as marketing), call centres have been characterised as business endeavours that offer various advantages to success-driven organisations (Els & De Villiers, 2003).

In theory, a call centre is just an office equipped with telephones and computer systems, which hold no significance without the people that operate those phones and computers (Read, 2005). Organisations have identified the advantages of managing a call centre and thus place an extreme emphasis on the important role it plays in the competitive nature and success of the particular organisation. This all comes down to the customer service agent (CSA) and the demands that these high expectations make on him or her.

In order to be effective and efficient in this job, the CSA of a call centre sits at a table in front of a computer, wearing a headset for communicating with the customer; leaving his or her hands free in order to input data into the computer (Calvert, 2004). Depending on the business, a CSA talks to between 60 and 250 clients per 8-hour shift (Dieckhoff, Freigang-Bauer, Schröter, & Viereck, 2002; Henn, et al., 1996). The more customers talked to, the less time available for each of them, and the more routine (and boring) these conversations may become for the CSA. Studies conducted by Knights and McCabe (1998) suggest that most jobs in call centres can be characterised as unskilled work. This relates to an advanced form of Taylorism (Dieckhoff, et al., 2002). Taylorism relates to the relatively short-cycle routine interactions that CSAs have with their customers. These interactions are mostly controlled by automatic call distribution systems and supported by networked information technologies that allow little control over when to speak and whom to speak to (Holman, 2003). Apart from these regulative measures, it is still expected of CSAs to always be friendly (as if they are 'smiling') over the telephone (Holman, 2003; Schuler, 2000).

CSAs have low levels of job control (Richter & Schulze, 2001; Wieland, Metz, & Richter, 2001). In a study by Metz, Rothe, and Degener (2001) the poor decision latitude as well as the low

complexity and high division of the work of CSAs have been criticised. It appears that they continuously have to repeat the same activities, which scarcely leaves them an opportunity to make use of their professional know-how (Zapf, et al., 2003). Most call centre employees working in the front office do not even complete professional training for their telephone work (Baumgart, et al., 2002; Isic, Dormann, & Zapf, 1999). From the above, it is evident that there are certain stressors in the call centre industry. This is emphasised by the high turnover rate and by high absenteeism levels in call centres (Baumgart, et al., 2002; Deery, Iverson, & Walsh, 2002). Although some studies seem to suggest that working in call centres can be interesting (Batt, 2002), overall it seems that working in call centres is a stressful experience (Baumgart, et al., 2002; Deery, et al., 2002; Holman, 2002, 2003).

The main stressors that may affect employees within the call centre industry and have an impact on the performance of CSAs, seem to be the underutilisation of skills, the low level of job control, time demands, low level of work variation and challenges, a high level of supervisor monitoring and the lack of participation in decision making (Zapf, et al., 2003). Left unchecked, these stressors can result in negative feelings, which may ultimately have an impact on the overall work wellness of CSAs. The mentioned stressors are closely related to the job characteristics (i.e. job demands and job resources) as identified by Hackman and Oldham (1975). *Job demands* refer to those physical, psychological, social or organisational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort and that are therefore associated with certain physiological and/or psychological costs (Bakker, Demerouti, De Boer, & Schaufeli, 2003). Examples of job demands include high work pressure, role overload, poor environmental conditions, and problems related to reorganisation. *Job resources* on the other hand refer to those physical, psychological, social or organisational aspects of the job that (1) are functional in achieving work goals; (2) reduce job demands and the associated physiological and psychological costs; and/or (3) stimulate personal growth and development. Job demands evoke an energy depletion process, whereas job resources induce a motivational process (Bakker, et al., 2003).

Bakker, et al. (2003) proposes that work characteristics may evoke two different processes. First, high job demands may exhaust an employee's mental and physical resources and may result in health problems or burnout (Demerouti, Bakker, Nachreiner, & Schaufeli, 2000; Leiter, 1993). Second, lacking job resources is likely to cause failure and frustration, both of which are role players in the occurrence of burnout. Burnout can be viewed as a syndrome that consists of three dimensions, namely exhaustion, cynicism and lack of professional efficacy (Maslach, Jackson, & Leiter, 1996). *Emotional exhaustion* refers to the draining and depletion of emotional resources

and feelings of being overextended. *Cynicism* reflects in having a negative, cynical and callous attitude towards recipients and/or excessively detached responses to aspects of the job. *Lack of professional efficacy* implicates the tendency to evaluate aspects negatively with regard to competence and personal accomplishments at work.

For further clarification regarding burnout, research has indicated certain behavioural symptoms. These behavioural symptoms of burnout may include *physical* (e.g. headaches, nausea, restlessness, muscle pain), *cognitive* (e.g. poor concentration, forgetfulness, making mistakes in complex and multiple tasks), *affective* (e.g. helplessness, hopelessness, low spirits), *motivational* (e.g. lessened intrinsic motivation, initiative, enthusiasm), and *behavioural* (e.g. hyperactivity without knowing what to do about it, forgetfulness, impulsiveness without carefully considering alternatives, excessive consumption of stimulants such as coffee, tobacco, alcohol, drugs, under- and overeating, accident-proneness) aspects (Maslach, et al., 1996). Fryer, Poland, Bross, and Krugman (1988) suggest that burned-out workers show a lack of commitment, and are less capable of providing adequate services.

Chronic exhaustion – which is one of the dimensions of burnout – can lead people to distance themselves emotionally and cognitively from their work, so that they are less involved with, or responsive to, the needs of customers or the demands of the task. According to Maslach (1998), distancing is such an immediate reaction to exhaustion that a strong relationship from emotional exhaustion to depersonalisation is found consistently in burnout research. Furthermore, a work situation with chronic, overwhelming demands that contribute to emotional exhaustion or cynicism is likely to erode an individual's sense of accomplishment or effectiveness. Also, it is difficult to gain a sense of accomplishment when feeling exhausted and/or when helping people toward whom one has negative feelings (Schaufeli & Enzmann, 1998).

Because of the emergence of the positive psychology paradigm, positive aspects of health and wellbeing are becoming increasingly popular. One of these positive aspects of wellbeing is work engagement, which is considered the antipode of burnout (Schaufeli & Bakker, 2003). Work engagement is defined as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication and absorption, which are the positive poles of the burnout dimension (Schaufeli, Salanova, González-Romá, & Bakker, 2002). Furthermore, it is not a momentary and specific state, but a more persistent and pervasive affective-cognitive state, which is not focused on a particular object, event, individual or behaviour.

Vigour is characterised by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, not being easily fatigued and the ability to persist even in the face of difficulties. *Dedication* is characterised by deriving a sense of significance from one's work, by feeling enthusiastic, inspired and proud and by viewing it as a challenge. *Absorption* is characterised by being totally and happily immersed in one's work – to the extent that it is difficult to detach oneself from it. Absorption most likely plays a less central role in the engagement concept. Burnout and work engagement are independent states that, because of their antithetical nature, are negatively related (Schaufeli & Bakker, 2004). As burnout is a result of decreased psychological wellbeing and therefore has an impact on the work wellness of employees, it is expected that work engagement, as the opposite of burnout, will have a positive impact on the work wellness of employees.

As indicated, high job demands (i.e. work overload) may exhaust employee's mental and physical resources and may therefore lead to health problems or burnout (Demerouti, et al., 2000, Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Lee & Ashforth, 1996; Leiter, 1993), whereas job resources can result in goal accomplishment. Bakker (2004) found that when individuals are able to balance their job demands and job resources, they will be more open to positive experiences (such as flow) in the work situation. As a result, they will perform better. Bakker (2004) confirms that a complete form of flow appears particularly when there is a balance between job demands and job resources. This means that employees should experience flow particularly when their job demands match their professional skills.

Work-Related Flow can be defined as a process of optimal experience (Csikszentmihalyi, 1975, 1988, 1992, 1993, 1997) as the consequence of a situation wherein challenges faced by an individual equal his or her skills (Ellis, Voelkl, & Morris, 1994; Ghani & Deshpande, 1994). According to Bakker (2004), flow is a state where people are engaged in an activity with high involvement, concentration and enjoyment, and where they experience an intrinsic interest and a sense of time distortion. Bakker (2004) defines flow at work as a short-term peak experience that is characterised by absorption, work enjoyment, and intrinsic work motivation. Flow is achieved when all levels of consciousness are in harmony with each other (Csikszentmihalyi, 1975, 1988, 1993, 1997). Csikszentmihalyi and LeFevre (1989) have found that flow can be found more often at work than in leisure settings. The lower level of flow experienced during leisure time can be explained by the inability to organise one's psychic energy during unstructured free time, which may be due to the inability to create challenging situations that require skilled performance (Csikszentmihalyi & LeFevre, 1989).

There are several external factors that influence whether or not one will experience flow (Csikszentmihalyi, 1999, 2003). These factors include control, feedback, clear goals, and the fit between challenges and skills. In terms of job resources and flow at work, Bakker (2005) found that job resources (such as autonomy, social support, supervisory coaching, and performance feedback) are important antecedents of flow experiences. Within a South African study among employees working in the mining industry, it was found that the availability of job resources foster the experience of work-related flow (Le Roux, 2005). Studies have indicated that autonomy and opportunities for self-growth are particularly related to each of the three flow-components (Bakker, 2004). Studies conducted by Bakker, et al. (2003) have indicated that there is a relationship between Job Characteristics (i.e. job demands and job resources), Burnout and Work-Related Flow. However, to date, there have been no research efforts in South Africa regarding the possibility of a relationship between Job Characteristics, Work Wellness and Work-Related Flow. Therefore, the objective of this research is to identify the relationship between these constructs by focusing on people working within a South African call centre environment.

The following research questions emerge from the above-mentioned problem statement:

- How are job characteristics (i.e. job demands and job resources), work wellness (i.e. burnout and work engagement), and work-related flow conceptualised from the literature?
- What is the relationship between job characteristics (i.e. job demands and job resources), work wellness (i.e. burnout and work engagement), and work-related flow according to the literature?
- What is the relationship between job characteristics (i.e. job demands and job resources), work wellness (i.e. burnout and work engagement), and work-related flow in a sample of call centre representatives?
- What are the unique job demands and job resources experienced in a sample of call centre representatives?

1.2 RESEARCH OBJECTIVES

The research objectives are divided into a general objective and specific objectives.

1.2.1 General objective

The general objective of this research is to determine the relationship between Job Characteristics (i.e. job demands and job resources), Work Wellness (i.e. burnout and work engagement) and Work-Related Flow of call centre agents within an Insurance Company in South Africa.

1.2.2 Specific objectives

The specific objectives of this research are:

- To conceptualise job characteristics (i.e. job demands and job resources), work wellness (i.e. burnout and work engagement) and work-related flow from the literature.
- To determine the relationship between job characteristics (i.e. job demands and job resources), work wellness (i.e. burnout and work engagement) and work-related flow according to the literature.
- To determine the construct validity and internal consistency of the measuring instruments of job characteristics (i.e. job demands and job resources), work wellness (i.e. burnout and work engagement) and work-related flow
- To determine the relationship between job characteristics (i.e. job demands and job resources), work wellness (i.e. burnout and work engagement) and work-related flow in a sample of call centre representatives.
- To determine the unique job demands and job resources experienced in a sample of call centre representatives.
- To make recommendations for future research.

1.3. PARADIGM PERSPECTIVE OF THE RESEARCH

A certain paradigm perspective that includes the intellectual climate and the market of intellectual resources directs the research (Mouton & Marais, 1992).

1.3.1 Intellectual climate

The intellectual climate refers to the variety of non-epistemological value systems or beliefs that are underwritten in any particular period in a discipline. It is a collection of beliefs, values and assumptions that do not directly deal with the epistemological views of the scientific research

practice because in general it originates in a non-epistemological context (Mouton & Marais, 1992). This research falls within the margins of the behavioural sciences, and more specifically Industrial Psychology. Industrial Psychology refers to the scientific study of people within their work environment. This implies scientific observation, evaluation, optimal utilisation and influencing of normal and, to a lesser degree, deviant behaviour in interaction with the environment (physical, psychological, social and organisational) as manifested in the world of work (Muchinsky, Kriek, & Schreuder, 2002).

1.3.2 Discipline

Organisation Psychology and Occupational Health Psychology are the subordinate disciplines of Industrial Psychology. In this research, the focus will be on these two subordinate disciplines. Organisational Psychology is concerned with the organisation as a system involving individuals and groups, and the structure and dynamics of the organisation. The basic aims are fostering worker adjustment, satisfaction and productivity, as well as organisational efficiency (Bergh & Theron, 1999). According to literature, social support and job satisfaction are the two variables that are connected to organisational psychology (Bergh & Theron, 1999). Occupational Health Psychology is concerned with psychological factors that contribute to occupational health and wellbeing. It deals with psychological reactions to physical and non-physical work conditions, as well as behaviour that have implications for health (Spector, 2006).

1.3.3 Meta-theoretical assumptions

Five paradigms are relevant to this research. First, the literature review is done within the humanistic paradigm and systems theory, and second, the empirical study is done within the behaviouristic, positivistic and functionalistic paradigms.

1.3.3.1 Literature review

According to De Carvalho (1991), the *humanistic paradigm* is a school of thought that emphasises that people are free agents with the ability to make choices, who can be intentional and aware during their actions, who can be affected by their relationships with others, and who are more than the sum of their parts. This is considered an essential criterion for psychological health. Mc Geoch (1933) defines a system as the coherent and inclusive, yet flexible, organisation and interpretation of the facts and special theories of the subject.

Lundin (1996) defines a system as a set of objects together with relationships between the objects and between their attributes. *Systems theory* is one of the most powerful conceptual tools available for understanding the dynamics of organisations and organisational change (Lundin, 1996). Therefore, for the purpose of this particular research, the object will be the study population (human behaviour) in relationship with Job Characteristics (i.e. job demands and job resources), Work Wellness (i.e. burnout and work engagement), and Work-Related Flow.

1.3.3.2 Empirical study

According to the behaviouristic school of thought, an individual's achievements are limited only by the restrictions the environment places on him or her. For that reason, behaviourists rely on scientific and objective manipulation to assess the relationship between environmental events, which is, the stimuli and the organisms' responses to the particular stimuli (Hall & Lindzey, 1978). Thus, the *behaviouristic paradigm,* as explained by Skinner (1948), is based on the assumption that behaviour is determined by experiences, contingencies and reinforcements within the environment – and not by instinct or inherited traits.

The *positivistic paradigm* assumes that all known events have various properties that stand in different realities to each other, and the only "facts" are those properties and relations that can be observed and measured empirically (Johnson, 1975). This paradigm is based on the assumption that we can scientifically discover the rules governing social life. Ositivist ontology is defined as "to be perceived", and the relative epistemology is the correspondence theory of truth. That is, the criterion for judging a scientific theory is whether or not our knowledge claims *correspond* to what lends itself to our senses (Ardebili, 2001). Within this study, Job Demands, Job Resources, Burnout, Work Engagement and Work-Related Flow are the variables that stand in different realities to each other.

The *functionalistic paradigm* (quantitative approach) is concerned with understanding society (organisations) in a way that will generate useful empirical knowledge (Babbie, 1979). This paradigm is primarily regulative and pragmatic. Society has a concrete, real existence and a systematic character. It encourages an approach to social theory that focuses upon understanding the role human beings play in society. Plug, Louw, Gouws, and Meyer (1997) state that functionalism assumes that units of psychological phenomena can be explained in terms of relationships and that these explanations serve to enhance human adaptation and survival.

Through the functionalistic paradigm, the causes and effects of Burnout, Work Engagement and Work-Related Flow (human behaviour) will be emphasised.

1.3.4 Market of intellectual resources

The market of intellectual resources refers to the collection of beliefs that directly involves the epistemological status of scientific statements (Mouton & Marais, 1992). The two main types of epistemological beliefs are the theoretical beliefs and the methodological beliefs.

1.3.4.1 Theoretical beliefs

Theoretical beliefs can be described as all beliefs that can make testable judgments regarding social phenomena. These are all judgments concerning the 'what' and 'why' of human phenomena, and include all conceptual definitions, models as well as theories of the research (Mouton & Marais, 1992).

A. Conceptual definitions

The relevant conceptual definitions are given below:

Job demands refer to those physical, psychological, social or organisational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort and that are therefore associated with certain physiological and/or psychological costs (Bakker, et al., 2003). Job resources refer to those physical, psychological, social or organisational aspects of the job that (1) are functional in achieving work goals; (2) reduce job demands and the associated physiological and psychological costs; and/or (3) stimulate personal growth and development. Job demands evoke an energy depletion process, whereas job resources induce a motivational process (Bakker, et al., 2003).

Burnout can be viewed as a syndrome that consists of three dimensions, namely exhaustion, cynicism and lack of professional efficacy (Maslach, et al., 1996). *Emotional Exhaustion* refers to the draining and depletion of emotional resources and feelings of being overextended. *Cynicism* reflects in having a negative, cynical and callous attitude towards recipients and/or excessively detached responses to aspects of the job. *Lack of professional efficacy* implicates the tendency to evaluate aspects negatively with regard to competence and personal accomplishments at work.

Work engagement is defined as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication and absorption, which are the positive poles of the burnout dimension (Schaufeli, et al., 2002). Furthermore, it is not a momentary and specific state, but a more persistent and pervasive affective-cognitive state, which is not focused on a particular object, event, individual or behaviour.

Work-Related Flow can be defined as a process of optimal experience (Csikszentmihalyi, 1975, 1988, 1992, 1993, 1997) as the consequence of a situation wherein challenges faced by an individual equals his/her skills (Ellis, Voelkl & Morris, 1994; Ghani & Deshpande, 1994). According to Bakker (2004), flow is a state where people are engaged in an activity with high involvement, concentration and enjoyment, and where they experience an intrinsic interest and a sense of time distortion. Bakker (2004) defines flow at work as a short-term peak experience that is characterised by absorption, work enjoyment, and intrinsic work motivation.

B. Models and theories

The job demands-resources (JD-R) model (Bakker & Geurts, 2004) divides work characteristics into two broad categories, namely job demands and job resources. Examples of job demands are a high work pressure (i.e. high work pace and tight deadlines), high physical or emotional demands, and role conflicts that require sustained physical and/or mental effort. This is the reason why it is associated with certain physiological and/or psychological costs (Van Hooff, et al., 2005). Job resources, for example performance feedback, skill variety and autonomy may be located in the task itself, as well as in the context of the task, for instance, organisational resources (e.g. career opportunities, job security) and social resources (e.g. supervisor and co-worker support) (Bakker & Geurts, 2004).

The JD-R model suggests that employee health and psychological wellbeing are the products of two relatively independent processes (Bakker & Geurts, 2004). In the first process, work overload leads to long-term health problems (e.g. chronic fatigue, burnout). In the second process, the availability of job resources may help employees to cope with, learn from and grow from their demanding jobs. It may ultimately lead to motivation, feelings of accomplishment, and organisational commitment. Theoretically, the JD-R model can be considered an elaboration of the more classic demand-control (D-C) model (Bakker & Geurts, 2004), in which self-sufficiency can be considered a resource that make it possible for workers to cope with a lofty workload.

1.3.4.2 Methodological beliefs

Methodological beliefs can be defined as beliefs that can make pronouncements regarding the nature and structure of science and scientific research (Mouton & Marais, 1992).

The empirical study is presented within the positivistic and functionalistic frameworks. The root assumption of the positivistic framework, according to Neuman (1997), is that it is a point of departure. Neuman (1997) further states that positivism regards social science as an organised method for combing deductive logic with precise empirical observations of individual behaviour in an attempt to discover and confirm a set of probabilistic causal laws, which can be used to predict general patterns of human activity.

1.4. RESEARCH METHOD

The research method for the purpose of this mini-dissertation consists of a literature review and an empirical study. The results obtained from the research will be presented in an article format.

1.4.1 Literature review

The literature review focused on the relationship between Job Characteristics (i.e. job demands and job resources), Work Wellness (i.e. burnout and work engagement) and Work-Related Flow within an Insurance Call Centre in South Africa

1.4.2 Empirical study

The empirical study consisted of the research design, the participants, the measuring battery and the statistical analysis.

1.4.2.1. Research design

A cross-sectional design with a survey as the data collection technique was used to achieve the research objectives. Cross-sectional designs are used to examine groups of subjects in various stages of development simultaneously, while a survey is a data-collection technique in which questionnaires are used to gather data about an identified population (Burns & Grove, 1993). Information collected is used to describe the population at that point in time. This design can also

be used to assess interrelationships among variables within a population. According to Shaughnessy and Zechmeister (1997), this design is best suited to addressing the descriptive and predictive functions associated with the correlational design, whereby relationships between variables are examined.

1.4.2.2 Participants

The participants could be defined as an availability sample of employees working in different sectors in the insurance industry. A total population of 370 employees were targeted in different call centres. Only 176 responses were obtained of which 166 responses (94%) could be utilised. The study population consisted mainly of male (57,60%), English-speaking (52,70%) employees between the ages of 20 and 29 (68,6%). The majority of the sample had a grade 12 (Std. 10) (62,40%) qualification, and were working as Broker Sales Consultants (27,9%).

1.4.2.3 Measuring battery

Four questionnaires were administered in this study, namely the *Job Demands and Resources Scale* (JDRS) developed for the purpose of this study, the *Oldenburg Burnout Inventory* (OLBI) (Demerouti, Bakker, Vardakou, & Kantas, 2003), the *Utrecht Work Engagement Scale* (UWES) (Schaufeli, et al., 2003) and the *Work-Related Flow Scale* (WOLF) (Bakker, 2001).

A *biographical questionnaire* was developed to gather information about the demographical characteristics of the participants. Information gathered included age, gender, race, home language, education, marital status and years employed in current position.

The *Job Demands and Resources Scale* (JDRS) was developed for the purpose of this study to measure the unique job demands and job resources of employees in a call centre. Various demands and resources in call centres were identified through the use of focus groups. Based on the results, a unique job demands and resources scale was compiled. The items were measured on a four-point scale, ranging from 1 (*never*) to 4 (*always*). The internal consistency and construct validity of the scale were determined.

The *Oldenburg Burnout Inventory* (Demerouti, et al., 2003) was used to measure burnout. The OLBI consists of 15 items that produce two scores: Exhaustion (Ex) (eight items; e.g. "There are days when I feel tired before I arrive at work") and Disengagement (DE) (eight items; e.g. "I can

tolerate the pressure of my work very well"). The OLBI features questions designed to assess cognitive and physical components of exhaustion, and it reflects a conceptualisation of burnout that is not restricted to human service professions, but that can be applied to any occupational group (Demerouti, et al., 2001). Halbesleben and Demerouti (2005) reported that the internal consistency of the OLBI was acceptable, with all the Cronbach's Alpha coefficients being 0,70 and more. In a South African study done by Le Roux (2006) it was found that two factors could be extracted. These two factors were labelled Engagement and Disengagement. All the positive items and negative items clustered together and loaded on the two factors respectively. These factors showed internal consistency with Cronbach Alpha coefficients of 0,71 (engagement) and 0,82 (disengagement) (Le Roux, 2006).

The *Utrecht Work Engagement Scale* (UWES) (Schaufeli, et al., 2003) was used to measure the levels of work engagement of the participants. The UWES includes three dimensions, namely vigour, dedication and absorption, which is conceptually seen as the opposite of burnout and is scored on a seven-point frequency-rating scale, varying from 0 ("never") to 6 ("every day"). The questionnaire consists of 17 questions and includes questions such as "I am bursting with energy every day in my work"; "Time flies when I am at work" and "My job inspires me". The alpha coefficients for the three subscales varied between 0,80 and 0,91. The alpha coefficient could be improved (α varies between 0,78 and 0,89 for the three subscales) by eliminating a few items without substantially decreasing the scales' internal consistency. Storm and Rothmann (2003) obtained the following alpha coefficients for the UWES in a sample of 2 396 members of the South African Police Service: Vigour: 0,78; Dedication: 0,89; Absorption: 0,78. Coetzer (2004) obtained the following alpha coefficients in a sample of employees in an insurance company: Vigour (0,80); Dedication (0,87), and Absorption (0,69).

The *Work-Related Flow Scale* (WOLF) (Bakker, 2001) was used to assess flow at work. The WOLF includes 13 items measuring absorption (4 items), work enjoyment (4 items), and intrinsic work motivation (6 items). Examples are: "When I am working, I forget everything else around me" (absorption), "When I am working very intensely, I feel happy" (work enjoyment), and "I get my motivation from the work itself, and not from the rewards for it" (intrinsic work motivation). The participants were asked to indicate how often they had each of the experiences during the preceding week (0 = never, 6 = every day). Bakker (in press) found the following reliability results: Absorption (0,80); Work enjoyment (0,90); and Intrinsic Work Motivation (0,75). In a South African study among employees in the mining industry, Le Roux (2005) found

the following Cronbach alphas: Absorption (0,59), Work Enjoyment (0,84), and Intrinsic Work Motivation (0,71).

1.4.2.4 Statistical analysis

The statistical analysis was carried out with the help of the SPSS programme (SPSS Inc., 2003) and the AMOS programme (Arbuckle, 2003). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) were used to analyse the data. Cronbach alpha coefficients were used to assess the internal consistency, homogeneity and unidimensionality of the measuring instruments (Clark & Watson, 1995). Coefficient alpha contains important information regarding the proportion of variance of the items of a scale in terms of the total variance explained by the particular scale.

Pearson product-moment correlation coefficients were used to specify the relationship between the variables. 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 cut-off point of 0,30 (medium effect, Cohen, 1998) was set for the practical significance of correlation coefficients.

Covariance analysis or structural equation modelling (SEM) methods, as implemented by AMOS (Arbuckle, 2003), was used to construct and test a structural model of work wellness. Hypothesised relationships were tested for empirically for goodness-of-fit with the sample date. The χ^2 statistic and several other goodness-of-fit indices summarise the degree of correspondence between the implied and observed covariance matrices. However, because the χ^2 statistic equals $(N-1)F_{min}$ this value tends to be substantial when the model does not hold and the sample size is larger (Byrne, 2001). Researchers addressed the χ^2 limitation by developing goodness-of-fit indices that take a more pragmatic approach to the evaluation process.

A value < 2 for χ^2 / degrees of freedom ration (CMIN/df) (Wheaton, Muthén, Alwin, & Summers, 1977) indicates acceptable fit (Tabachnick & Fidell, 2001). The hypothesised relationships with the data will also be tested using the following goodness-of-fit statistics: Adjusted Goodness-of-Fit Index (AGFI), Parsimony Goodness-of-Fit Index (PGFI), Normed Fit Index (NFI), Comparative Fit Index (CFI), Tucker Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA).

A stepwise multiple regression analysis was conducted to determine the percentage of the variance in the dependent variables that is predicted by the independent variables. The effect size (which indicates practical significance) in the case of multiple regressions is given by the following formula (Steyn, 1999):

$$f^2 = R^2 / 1 - R^2$$

A cut-off point of 0,35 (large effect, Steyn, 1999) was set for the practical significance.

1.5 RESEARCH PROCEDURE

The measuring battery was compiled. A letter requesting and motivating the research was included. Ethical aspects regarding the research were discussed with the participants. The test battery was administered in groups at the different call centres on suitable dates.

1.6 DIVISION OF CHAPTERS

The chapters will be presented as follows in this mini-dissertation:

Chapter 1: Introduction
Chapter 2: Research article
Chapter 3: Conclusions, limitations and recommendations

1.7 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 that follow.

Chapter 2 will focus on the empirical study.

REFERENCES

Arbuckle, J.L. (2003). *AMOS 5.0. Update to the AMOS User's Guide.* Chicago, IL: Smallwaters Corporation.

Ardebili, M. H. (2001). *The Structure of Scientific Practice: A Meta-Critique of the Critical Realist Conception of Science and Resolution of the Problem of Relativism in Social Sciences.* Working Paper - Department of Economics and Social Science Consortium, University of Missouri – Kansas City, Fall.

Babbie, E. (1979). *The practice of social research.* (2nd ed.). Belmont: Wadsworth

Bakker, A. B. (in press). *Development and validation of the Work-Related Flow Inventory (WOLF).* Manuscript submitted for publication.

Bakker, A. B. (2001). *Questionnaire for the assessment of work-related flow: The WOLF.* Utrecht University, The Netherlands: Department of Social and Organizational Psychology.

Bakker, A. B. (2004). *Development and validation of the Work-Related Flow inventory (WOLF).* Utrecht University, Department of Social and Organizational Psychology, and Research Institute Psychology and Health, Utrecht, The Netherlands

Bakker, A. B. (2005). Flow among music teachers and their students: The crossover of peak experiences. *Journal of Vocational Behaviour, 66*, 26-44.

Bakker, A. B., Demerouti, E., De Boer, E., & Schaufeli, W. B. (2003). Job demands and job resources as predictors of absence duration and frequency. *Journal of Vocational Behavior, 62*, 341–356.

Bakker, A. B., & Geurts, S. A. E. (2004). Towards a dual-process model of work-home interference. *Work and Occupations, 31*, 345-366.

Batt, R. (2002). Managing customer services: Human resource practices, quit rates, and sales growth. *Academy of Management Journal.* 45, 587-597.

Baumgart, U., Debitz, U. L, Metz, A. M., Richter, P., Schulze, F., Timm, E., & Wieland, R. (2002). *CCall Report 11. Call Center auf dem arbeitspsychologischen Prufstand. Teil 2: Arbeitsgestaltung, Belatstung, Beanspruchüng & Ressourcen* [Call centre at the work psychology test bench. Part2: Job design, stressor, strain, and resources]. Hamburg: Verwaltungs-Berufsgenossenschaft.

Bergh, Z. C., & Theron, A. L. (1999). *Psychology in work context.* Johannesburg: International Thompson Publishing.

Burns, N., & Grove, S. K. (1993). *The practice of nursing research, conduct, critique, and utilization* (2nd ed.). Philadelphia: W.B. Saunders.

Byrne, B. M. (2001). *Structural equation modelling with AMOS: basic concepts, applications, and programming*. Mahwah, N.J.: Lawrence Erlbaum Associates.

Calvert, N. (2004). *Gower Handbook of Call and Contact Centre Management.* Aldershot, Hants, UK: Burlington.

Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment, 7*, 309-319.

Coetzer, W. J. (2004). *Burnout and Work Engagement of employees in an insurance company.* Unpublished doctoral thesis, North-West University, Potchefstroom.

Cohen, J. (1998). *Statistical power analysis of the behavioural sciences* (2nd ed.). Orlando, CA: Academic Press.

Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety: Experiencing flow in work and play.* San Francisco, CA: Jossey-Bass.

Csikszentmihalyi, M. (1988). The flow experience and its significance for human psychology. In M. Csikszentmihalyi, & I. S. Csikszentmihalyi (Eds.), *Optimal Experience: Psychological Studies of flow in Consciousness* (pp.15-35). New York: Cambridge University Press.

Csikszentmihalyi, M. (1992). Flow: *The psychology of happiness.* London: Rider.

Csikszentmihalayi, M. (1993). *The evolving self: A psychology for the third millennium.* New York: HaperCollins.

Csikszentmihalyi, M. (1997). *Finding flow: The psychology of engagement with everyday life.* New York: HarperCollins.

Csikszentmihalyi, M. (1999). If we are so rich, why aren't we happy? *American Psychologist, 54*, 821-827.

Csikszentmihalayi, M. (2003). *Good business: Leadership, flow and the making of meaning.* London: Hodder and Stoughton.

Csikszentmihalyi, M., & LeFevre, J. (1989). Optimal experience in work and leisure. *Journal of Personality and Social Psychology, 56*, 815-822.

De Carvalho, R. J. (1991). *The founders of humanistic psychology.* New York: Praeger.

Deery, S., Iverson, R., & Walsh, J. (2002). Work relationships in telephone call centres: Understanding emotional exhaustion and employee withdrawal. *Journal of Management Studies*, 39, 471-496.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2000). A model of burnout and life satisfaction among nurses. *Journal of Advanced Nursing, 32*, 454–46.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands–resources model of burnout. *Journal of Applied Psychology, 86*, 499–51.

Demerouti, E., Bakker, B., Vardakou, I., & Kantas, A. (2003). The convergent validity of two burnout instruments: A multitrait-multimethod analysis. *European Journal of Psychological Assessment, 18*(3), 296-3079.

Dieckhoff, K., Freigang-Bauer, I., Schröter, W., & Viereck, K. (2002). *CCall Report 1. Branchenbild Call Center* [Call centre branch overview]. Hamburg, Germany: Verwaltungs-Berufsgenossenschaft.

Dundu, N. (2004/2005). World Class Organisations: World class? Why not! *Human Capital Management Journal, 2*, 18-20.

Ellis, G. D., Voelkl, J. E., & Morris, C. (1994). Measurement and analyses issues with explanation of variance in daily experience using the flow model. *Journal of Leisure Research, 26*, 337-256.

Els, L., & De Villiers, P. (2003). *Call centre effectiveness*. Lynnwood Ridge: Amabhuku.

Fryer, G., Poland, J., Bross, D., & Krugman, R. (1988). The child protective service worker: A profile of needs, attitudes and utilization of professional resources. *Child Abuse and Neglect, 12*, 481-490.

Ghani, J. A., & Deshpande, S. P. (1994). Task characteristics and the experience of optimal flow in human-computer interaction. *The Journal of Psychology, 128*, 381-391.

Hackman, J. R., & Oldham, G. R. (1975). Development o f the Job Diagnostic Survey. *Journal of Applied Psychology, 60*(2), 159-170.

Halbesleben, J. R. B., & Demerouti, E. (2005). The construct validity of an alternative measure of burnout: Investigating the English translation of the Oldenburg Burnout Inventory. *Work and Stress, 19*(3), 208-220.

Hall, C. S., & Lindzey, G. (1978). *Theories of personality.* New York: John Wiley and Sons.

Henn, H., Kruse, P., & Strawe, O. (1996). *Handbuch Call Center-Management: das große Nachschlagewerk für alle, die professionell mit dem telefon arbeiten* [Handbook of call centre management: The great reference work for all who work professionally with the telephone]. Hannover, Germany: Telepublic Verlag.

Holgate, P. (1999). Telemarketing from call centres. In Els, L., & De Villiers, P. (2003). *Call centre effectiveness.* (1st ed). (pp 98). Lynnwood Ridge: Amabhuku.

Holman, D. J. (2003). Call centres. In D. J. Holman, T. D. Wall, C. W. Clegg, P. Sparrow, & A. Howard (Eds.), *The new workplace: A guide to the human impact of modern working practices.* Chichester, UK: Wiley.

Isic, A., Dormann, C., & Zapf, D. (1999). Belastungen und Ressourcen an Call Center-Arbeitsplätzen [Stressors and resources at call centre jobs]. *Zeitschrift fürArbetiswissenschaft,* 53, 202-208.

Johnson, J. M. (1975). *Doing filed research.* New York: The Free Press.

Knights, D., & McCabe, D. (1998). What happens when the phone goes wild? Staff, stress and spaces for escape in a BPR telephone banking call regime. *Journal of Management Studies,* 35, 163-194.

Le Roux, A. (2005). *Job demands, job resources and work-related flow of employees in the mining industry in South Africa.* Unpublished masters dissertation, North-West University, Potchefstroom Campus.

Le Roux, A. M. (2006). *The validation of two burnout measures in the South African earthmoving equipment industry.* Unpublished masters dissertation, North-West University, Potchefstroom Campus.

Lee, R. T., & Ashforth, B. E. (1996). A meta-analytical examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology,* 81, 123-133.

Leiter, M. P. (1993). Burnout as a developmental process: Consideration of models. In W. B. Schaufeli, C., Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 237–250). Washington, DC: Taylor and Francis.

Lundin, R. W. (1996). *Theories and systems of psychology* (5th ed.). Massachusetts, Toronto: D.C. Heath and Company.

Maslach, C. (1998). A multidimensional view of burnout. In C.L. Cooper (Ed.), *Theories of organizational stress* (pp. 68-85). Oxford, UK: Oxford University Press.

Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *Maslach Burnout Inventory manual* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

Mc Geoch, J. A. (1933). The Formal Criteria of a Systematic Psychology. *Psychological Review,* 40, 1-11.

Metz, A. M., Rothe, H. J., & Degener, M. (2001). Belastungsprofile von Beschäftigen in Call Centern [Stressor profiles of employees working in call centres]. *Zeitschrift für Arbeits- und Organisationspsychologie,* 45, 124-135.

Mouton, J. E., & Marais, H. C. (1992). *Basiese begrippe: metodologie van die geesteswetenskappe.* [Basic concepts in the methodology of the social sciences]. Pretoria: RGN-uitgewers. Gutenberg Boekdrukkers (Edms)Bpk.

Muchinsky, P. M., Kriek, H. J., & Schreuder, D. (2002). *Personnel Psychology.* (2nd ed.) South-Africa: Oxford University Press.

Neuman, W. L. (1997). *Social research methods: Qualitative and quantitative approaches.* Needham Heights, MA: Allyn & Bacon.

Plug, C., Louw, D. A., Gouws, L. A., & Meyer, W. F. (1997). *Verklarende en vertalende sielkundewoordeboek.* [Eximplenary and translational psychology dictionary]. Johannesburg: Heineman.

Read, B. B. (2005). *Designing the best call center for your business* (2nd ed). San Francisco, CA: CMP Books.

Richter, P., & Schulze, F. (2001). Arbeitsorganisation als Möglichketi der Beanspruchungsoptimierung an call-Center-Arbeitsplätzen [Work organization as a possibility of strain optimization at call centre jobs]. In I. Mauschek, A. Henninger, & F. Kleemann (Eds.), *Neue Medien im Arbeitsalltag* (pp. 131-146). Wiesbaden, Germany: Westdeutscher Velag.

Schaufeli, W. B., & Bakker, A. B. (2003). *Utrecht Work Engagement Scale: Preliminary Manual.* Occupational Health Psychology Unit: Utrecht University.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study. *Journal of Organizational Behavior, 25,* 293-315.

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

Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: a two sample confirmatory factor analytic approach. *Journal of Happiness Studies, 3,* 71-92.

Schuler, H. (2000). Die Call Center der Zukunft: Vom Call Center Zum mulitmedialen Kunden-Interaktions-Center [The call centre of the future: Form the call centre to the multimedia customer interactions centre]. In H. Schuler, & J. Pabst (Eds.), *Personalentwicklung im call Center der Zukunft* (pp. 1-11). Neuwied, Germany: Luchterhand

Shaughnessy, J. J., & Zechmeister, E. B. (1997). *Research Methods in Psychology* (4thed.). New York: McGraw-Hill.

Skinner, B. F. (1948). *Walden Two.* New York: Macmillan.

Spector, P. E. (2006). *Industrial and Organizational Psychology: Research and Practice.* (4th ed.). New Jersey: John Wiley & Sons.

SPSS Inc. (2003). *SPSS 12.0 for Windows.* Chicago, IL: Author.

Steyn, H. S. (1999). *Praktiese beduidendheid: Die gebruik van effekgroottes.* [Practical significance: The use of effect sizes.] Wetenskaplike bydraes – Reeks B: Natuurwetenskappe Nr 117. Potchefstroom: PU vir CHO.

Storm, K., & Rothmann, S. (2003). A Psychometric analysis of the Utrecht Work Engagement Scale in the South African police services. *South African Journal of Industrial Psychology, 29*(4), 62-70.

Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.). Boston, MA: Allyn & Bacon.

Tuck, M. (2004/2005). Doing Excellent Business, *Human Capital Management Journal, 2,* 21-24.

Wheaton, B., Muthén, B., Alwin, D. F., & Summers, G. G. (1977). Assessing reliability and stability in panel models. In D.R. Heise (Ed), *Sociological methodology,* (pp. 84-136), San Francisco, CA: Jossey-Bass.

Wieland, R., Metz, A. M., & Richter, P. (2001). *Ccall Report 3. Call Center auf dem arbeitspsychologischen Prüfstand. Teil 1: Verfahren, Tätigkeitsmerkmale und erste Ergebnisse zur psychischen Belstung* [Call centres at the work psychology test bench. Part 1: Insturments, task characteristics and first results regarding psychological stress]. Hamburg, Germany: Verwaltungs-Berufsgenossenschaft.

Zapf, D., Isic, A., Bechtoldt, M., & Blau, P. (2003). What is typical for call centre jobs? Job characteristics, and service interactions in different call centres. *European Journal of Work and Organizational Psychology, 12*(4), 311-340.

CHAPTER 2

RESEARCH ARTICLE

THE RELATIONSHIP BETWEEN JOB CHARACTERISTICS, WORK WELLNESS AND WORK-RELATED FLOW OF CALL CENTRE AGENTS IN AN INSURANCE COMPANY*

ABSTRACT

The objective of this research was to investigate the relationship between job characteristics, work wellness and work-related flow of call centre agents in an insurance company. A cross-sectional survey design with an availability sample (N = 176) was used. A self-constructed instrument (JDRS) was used to measure the unique job demands and job resources of call centre agents in the insurance industry. The Oldenburg Burnout Inventory was used to measure Burnout, the Utrecht Work Engagement Scale to measure Work Engagement, and the Work-Related Flow Scale to measure Work-Related Flow. Burnout, work engagement and work-related flow were all found to be constructs of work wellness. The results showed that job demands (specifically working conditions and job security) significantly predicted burnout. No significant predictions were found of job resources on work engagement and work-related flow.

OPSOMMING

Die doel van hierdie studie was om die verhouding tussen werkeienskappe, werkwelstand en werkverwante vloei van telefoniesehulpsentrum-agente in 'n versekeringsfirma te bepaal. 'n Dwarsdeursnee-opname ontwerp met 'n beskikbaarheidsteekproef (N = 176) is gebruik. 'n Selfsaamgestelde vraelys (JDRS) is gebruik om die unieke werkeise en werkhulpbronne van telefoniesehulpsentrum-agente in die versekeringsbedryf te meet. Die Oldenburg-uitbrandingsvraelys is gebruik om Uitbranding te meet, die Utrecht Werkbegeesteringskaal om Werkbegeestering te meet, en die Werkverwante Vloei-skaal om Werkverwante vloei te meet. Uitbranding, werkbegeestering en werkverwante vloei is alles konstrukte van werkwelstand. Die resultate het getoon dat werkeise (spesifiek werktoestande en werksekuriteit) 'n betekenisvolle voorspeller van uitbranding is. Geen betekenisvolle voorspeller is verkry ten opsigte van werkhulpbronne op werkbegeestering en werkverwante vloei nie.

A new competitive market landscape is taking shape (Hitt, Keats, & DeMarie, 1998). Organisations face increasing pressures to achieve higher levels of performance within this fast-paced and competitive market (Cartwright, 2002). On top of this, the traditional bureaucratic and hierarchical models of work organisation have been referred to as being too inflexible to deliver goods and/or services at the high level of speed and quality required by today's dynamic market (Cartwright, 2002).

This new competitive landscape has been proven to be driven by technological revolution and globalisation. Due to the tempo of innovation, this landscape is moving towards hypercompetition (rapidly escalating competition and strategic maneuvering), with an extreme emphasis on price, quality and customer satisfaction. Furthermore, research has indicated an increasing focus on innovation (in both technology and new products/services) (Hitt, et al., 1998).

To emphasise the impact of this changing landscape, an increasing number of studies criticise the traditional strategies for prospering within the industrial markets which mainly focus on (a) ascertaining business customers' product and/or service requirements, (b) producing high-quality products and/or services to meet those requirements, (c) and marketing those products and/or services at competitive prices (Parasuraman, 1998). The reason for this is that ongoing changes within the business environment – most notably escalating competition, increasing globalisation, and more demanding customers (Hitt, et al., 1998) – are making it difficult to compete effectively on the basis of traditional marketing-mix variables alone (Parasuraman, 1998).

In order for organisations to navigate effectively within this competitive and dynamic landscape, it has become vital to shift from their traditional marketing strategies to strategies that place a greater emphasis on relationship marketing (Parasuraman, 1998). This reality perhaps forms the essence behind the increasing attention that relationship marketing has been receiving from both practitioners and researchers. The focus is now shifting from merely selling to customers to serving them effectively (e.g. high service quality, process quality) (Parasuraman, 1998).

Early writings (Grönroos, 1982; Lehtinen & Lehtinen, 1982; Lewis & Booms, 1983; Sasser, Olsen, & Wyckoff, 1978) have suggested that service quality stems from a comparison of what customers feel a seller should offer (i.e. their expectations) with the seller's actual service performance. A broad-based exploratory study conducted by Parasuraman, Zeithaml, and Berry, (1985) reinforced the notion that service quality is a function of the expectations-performance gap. Based on this study, Parasuraman, et al. (1985) defined service quality as the degree and

direction of discrepancy between customers' service perceptions and expectations. Thus it becomes evident that customers evaluate service on the basis of not only the expected outcome but also the process associated with it. For this reason, it is acknowledged that success-driven organisations – navigating within this dynamic landscape – need to have a customer-oriented business culture (Athanassopoulous, 2000; Deshpnadé, Farley, & Webster, 1993; Houston 1986; Parasuraman, 1987; Shapiro, 1988; Webster, 1988).

According to Jaworski and Kohli (1993), the increased attention towards customer orientation is due to the explicit assumption that customer-oriented organisations outperform competitors by being in a position to anticipate the developing needs of customers, responding with goods and/or services so that greater satisfaction is consistently attributed. Thus, it is implied that a customer orientation is the basis for organisation learning that results in greater customer satisfaction (Sinkula, Baker, & Noordewier, 1997; Slater & Narver, 1995).

It is evident that within the current service-oriented economy, customers are considered to be of prominent importance. Zapf, Isic, Bechtoldt, and Blau (2003) have stated that there can be no prospering without customers. For this reason, Moriset (2004) felt compelled to define the modern-day customer for the purpose of streamlining the efforts of organisations towards greater customer satisfaction and overall competitiveness. Moriset (2004) established that customers no longer accept delays, hazards and uncertainty. They want to monitor as closely and as quickly as possible ordering, shipping, delivery, banking operations, insurance claims, etc. As it becomes round-the-clock, multimedia and ubiquitous, digital communication seems to have materialised the modern "e-topia" (Mitchell 2000). The technological era in which modern-day organisations therefore function, where they make every aspect of service more efficient and customer friendly, has cultivated a need within organisations to invent new ways of service (Zapf, et al., 2003).

Call centres are one way in which organisations are trying to improve their customer service (Els & De Villiers, 2003). If you have dialled directory enquires, carried out a banking transaction or made a purchase via your phone, it is likely that you have been in contact with a call centre. Call centres are seen as tools for organising communication with customers through telecommunication (Henn, Kruse, & Strawe, 1996). They are places where a managed group of people are physically working in a computer-automated environment (Call Centre News Service, 1999). Call centre work has become progressively computerised over the last few decades (Norman, 2005) due to the increasing need for organisations to function at an optimal level within the current dynamic landscape (Dundu, 2004/2005). For this reason, call centres use a wide range

of information and communication technologies to maximise efficiency, and the technology that plays a key role within the centre is the Automatic Call Distributor (ACD) computer (Norman, 2005). This computer directs the calls to the next available and logged-in call centre agent (CCA). The computer also tracks how long it takes until the customer is connected, the duration of the call and the time that the CCA is not working actively with calls or is disconnected because he or she has left the workstation. The automatic processing and distribution of incoming telephone calls to the agents (who receive the calls through their headsets and seldom need to dial telephone numbers themselves) eliminates the need for a central telephone operator. Increasingly, ACD systems are connected to a range of databases using Computer Telephony Integration (CTI), which allows customer records to be transmitted to an agent's computer screen along with the call (Els & De Villiers, 2003).

Call centres are used by organisations in a wide range of contexts; therefore there are various types of call centres (Taylor & Bain, 2001), each functioning within its field of expertise. Two prominent variations of call centres are inbound and outbound call centres. *Inbound call centres* handle calls coming into the organisation (Els & De Villiers, 2003). Examples of activities with incoming calls are customer services, giving information, taking orders and providing helpdesk functions (Norman, 2005). ***Outbound call centres*** focus on outgoing telemarketing, seeing as CCAs make calls to customers (Els & De Villiers, 2003). Typical services with outgoing calls are advertising campaigns, market research and telephone sales (Norman, 2005). For the purpose of this paper, the focus was placed on call centres executing a combination of these two methods of interaction. For further clarification regarding the functioning of call centres, it is important to make the distinction between internal and external call centres. ***Internal call centres*** are departments or separate companies within a larger company, usually with another main core business (Norman, 2005). The term ***external call centre*** is usually associated with an independent company that uses telecommunications technology to handle everything from advice, e.g. computer and mobile telephone support, to ticket booking and telemarketing (Norman, 2005). For the purpose of this paper, the focus was on internal call centres.

Telephone call centres are one of the fastest-growing segments of the service sector (Kinne, Hutchinson, & Purcell, 2000). The growth in call centres is attributable to the benefits that they offer organisations (Holman, 2002). Call centres can improve service and retain customers, increase sales/revenue and reduce costs and/or improve efficiency (Mahesh & Kasturi, 2006). For this reason, organisations are placing an increasing emphasis on the role of call centres regarding the competitiveness of the company, and as a result place increased pressure on call centre agents.

The rationale for call centres is that they provide high levels of customer satisfaction and convenience in the most cost-effective manner. They provide the opportunity to allow relationships to be built and managed, making the customer feel valued and at the same time reinforce brand messages on a one-to-one basis (White, 1998). The quality of the interaction between the customer and the organisation – when the only contact is via telephone – becomes critical, seeing that it is often the only criterion by which the product – and perhaps the whole organisation – is judged (Norman, 2005). It has been argued by Schneider and Bowen (1993) that customers' overall impression of service quality is influenced by the way, style and manner in which the particular service is delivered. Consequently, this service interaction provides a means to obtaining a competitive advantage as well as attracting and retaining customers. Products, technology and price are vulnerable to emulation by competitors. Thus many companies choose to differentiate themselves by something they assume is less easy to copy, namely the quality of customer service (Rosenthal, Hill, & Peccei, 1997).

It becomes evident that, in theory, a call centre is just an office equipped with telephones and computer systems, which hold no significance without the people that operate those phones and computers (Read, 2005). This all comes down to the CCA and the demands that these high expectations make on him or her. For this reason, research criticises call centres based on the coercive employment systems adopted in the industry (Kinnie, Hutchinson, & Purcell, 2000). Call length is measured in seconds with an array of overt and covert performance surveillance measures that are in place to ensure that employees conform to standard operating procedures (Kinnie, et al., 2000). These characteristics have led to call centres being accused of Taylorism (Arkin, 1997), whereby the control model drawn from mass production has been employed (MacDonald & Sirianni, 1996; Schlesinger & Heskett, 1991). Call centres are regarded as high-pressure work environments (Knights & McCabe, 1998; McKinlay & Taylor, 1997). This statement is supported by research indicating an annual turnover rate of 12,5 percent in internal call centres (Bulloc, 1999).

Stressors present within these typical call centres are minimal selection criteria, low wages, rudimentary training, few opportunities for involvement or advancement, and very low levels of job or task discretion (Batt, 2002). Most CCAs operate around the clock or have extended operational hours (Norman, 2005). The work of the CCA is often tightly scripted, repetitive, mentally and physically demanding and stressful (Kinnie, et al., 2000). For further clarification regarding the strain of call centre agents, research indicates that CCAs spend 90% of their working time on the telephone and in front of a computer (Ferreira, Conceicao, & Da Saldiva,

1997). In extreme cases, a phone call could range from 15 to 20 seconds, which means that one CCA could handle 1 000 calls or more during a working day (Westin, 1992). Furthermore, CCAs are required to be stress-resistant, empathetic, able to work in a team, and success-oriented. He or she should also have fast reactions and a wide vocabulary, and the ability to handle a huge amount of information, different types of customers, and emotional demands (Köpf, 1998; Wiencke & Koke, 1997). Emotional demands refer to the demands made on CCAs to execute either surface acting or deep acting so as to comply with the organisation's strict structure and scripted dialogue in an attempt to improve customer relationships (Hochschild, 1983). ***Surface acting*** involves displaying the required emotions, but there is little attempt to feel those emotions. For example, an employee may 'smile down the phone'.

Analyses showed that CCAs faked emotions more often (surface acting) when they felt less positive (Holman, 2003). *Deep acting* involves trying to feel and display the required emotions by, for example, re-appraising the situation so that its emotional impact is lessened (Totterdell & Holman, 2003). This relates to emotional dissonance, which occurs when there is a discrepancy between what the employee expresses and what he or she truly feels (Totterdell & Holman, 2003). Emotional dissonance has been consistently associated with negative consequences for employees, such as emotional exhaustion (Zapf, Vogt, Seifert, Mertini, & Isic, 1999). There could be a risk of conflict between these demands and it is the CCA who must choose between serving a customer well and keeping the duration of the call minimal. Critical psychosocial risk factors are high psychological demands (emotional and cognitive demands and time pressure), little opportunity to influence the work and limited social support (Cooper, Dewe, & O'Driscoll, 2001; Cox, Griffiths, & Rial-Gonzalez, 2000; Karasek & Theorell, 1990; Theorell, 1996).

The mentioned stressors are closely related to the job characteristics (i.e. job demands and job resources) as identified by Hackman and Oldham (1975). A central proposition of the Job Demands-Resources (JD-R) model is that, although every occupation may have its own specific job characteristics, it is still possible to model these characteristics in two broad categories, namely job demands and job resources (Bakker, Demerouti, De Boer, & Schaufeli, 2003).

Job demands and job resources

Job demands refer to those physical, psychosocial or organisational aspects of the job that require sustained physical and or mental effort, and that are associated with certain physiological and/or psychological costs (Bakker & Geurts, 2004). Within the call centre industry, typical job

demands include working long hours, strain because of shift work and inter-role conflict (Cooper, et al., 2001; Cox, et al., 2000; Karasek & Theorell, 1990; Theorell, 1996). *Job resources* on the other hand refer to those physical, psychosocial or organisational aspects of the job that may be functional in meeting job demands and may thus reduce the associated physiological and or psychological costs, at the same time stimulating personal growth and development (Bakker & Geurts, 2004). These resources can be located in the task itself (e.g. autonomy, skill variety), as well as in the context (e.g. organisational resources such as career opportunities, job insecurity) and social resources (e.g. supervisor support). However, according to Cooper, et al. (2001), Cox, et al. (2000), Karasek and Theorell (1990), and Theorell (1996), call centre agents experience a severe lack of resources such as emotional support, social support and salary problems.

In addition, the Job Demands-Resources model proposes that the wellbeing of a person is the result of two relatively independent processes (Bakker, et al., 2003). During the first process, particularly the demanding aspects of work lead to constant overtaxing and in the long term to health problems such as burnout and fatigue. In the second process, the availability of job resources may help employees to cope with the demanding aspects of their work. Simultaneously, it may stimulate them to learn from and grow in their jobs. This may lead to motivation, feelings of accomplishment, organisational commitment and work engagement (Bakker & Geurts, 2004). However, lacking job resources is likely to cause failure and frustration, which are role players in the occurrence of burnout (Demerouti, Bakker, Nachreiner, & Schaufeli, 2000; Leiter, 1993). Burnout can thus be viewed as a consequence of an improper balance between job demands and job resources. Thus, it seems that job demands and job resources are role players within the accumulation of burnout and its antipode, engagement.

Burnout

Based on research by Schaufeli and Enzmann (1998), burnout is defined as a persistent, negative, work-related state of mind found in normal individuals. It is primarily characterised by exhaustion, which is accompanied by distress, a sense of reduced effectiveness, decreased motivation and the development of dysfunctional attitudes and behaviours at work. Maslach and Jackson (1981) developed the Maslach Burnout Inventory (MBI) to measure the dimensions of burnout. Developed in the early 1980s, the MBI is based on a three-factor model of burnout and includes scales to measure emotional exhaustion, depersonalisation, and personal accomplishment. *Emotional Exhaustion* refers to a lack of energy and a feeling that emotional resources are depleted, whereas *Depersonalisation* refers to the treatment of recipients of services

in a negative, cynical, detached and emotionally callous manner. *Reduced Personal Accomplishment* refers to negative self-evaluation, the belief that objectives are not reached, as well as poor professional self-esteem and beliefs of insufficiency on the part of the service provider (Maslach & Goldberg, 1998; Maslach, Schaufeli, & Leiter, 2001). Demerouti, Bakker, Vardakou, and Kantas (2003) developed the Oldenburg Burnout Inventory (OLBI). The OLBI differs from the MBI as in that it features only two scales, namely exhaustion and disengagement (Halbesleben & Demerouti, 2005). The most current version of the OLBI features questions that have balanced positive and negative wording (Bakker, Demerouti, & Verbeke, 2004). Furthermore, the OLBI features questions designed to assess cognitive and physical components of exhaustion – which is consistent with past criticisms put forth regarding the MBI suggestions in the burnout literature (Pines, Aronson, & Kafry, 1981; Shinn, 1982).

Research indicate that the OLBI is similar to the Maslach Burnout Inventory – General Survey (MBI-GS) (Schaufeli, Leiter, Maslach, & Jackson, 1996) in that both instruments are designed to reflect a conceptualisation of burnout that is not restricted to human service professions, with questions that apply to any occupational group (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). For the purpose of this research, the OLBI was used as burnout measure due to its fresh approach to burnout.

Because of the emergence of the positive psychology paradigm, positive aspects of health and wellbeing are becoming increasingly popular. One of these positive aspects of wellbeing is work engagement, which is considered to be the antipode of burnout (Schaufeli & Bakker, 2003).

Work engagement

Maslach and Leiter (1997) found that engagement is characterised by energy, involvement, and absorption, which are respectively considered to be the direct opposites of the three burnout dimensions exhaustion, cynicism, and lack of professional efficacy. Schaufeli, Salanova, González-Romá, and Bakker (2002) went further and defined work engagement as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication and absorption. *Vigour* is characterised by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties. *Dedication* is characterised by a sense of significance, enthusiasm, inspiration, pride, and challenge. *Absorption* is characterised by being fully concentrated and deeply engrossed in one's work, whereby time passes quickly and one has difficulties detaching oneself from work

(Schaufeli, et al., 2002). Absorption is regarded as playing a less central role in the engagement concept (Strümpfer, 2003). For further clarification regarding work-related engagement, research has indicated that it is not a momentary and specific state. It is persistent and pervasive affective-cognitive state and is not focused on a particular object, event, individual or behaviour (Schaufeli, et al., 2002). Eight characteristics of engaged workers have been identified by Schaufeli, Bakker, Hoogduin, Schaap, and Kladler (2001) based on conclusions drawn from a qualitative study they conducted. They came to the conclusion that burnout and engagement are, in their entirety, opposite concepts that need to be measured independently. With this in mind, they found that engaged workers take initiative and actively give direction to their lives. They generate their own positive feedback as encouragement, are engaged when outside their employment and have values and norms that agree with those of their employing organisation.

Furthermore, they, too, become fatigued. However, it is regarded as a positive fatigue – 'tired but satisfied' (Schaufeli, et al., 2001). They, too, have experienced burnout, or could develop it, but often get themselves out of it again. They will occasionally want to do something other than work. Lastly, they do not suffer from enslavement at work (Strümpfer, 2003). Enslavement refers back to the associated flaw of the call centre industry – the fact that it is criticised of exercising Taylorism.

Given the fact that burnout and engagement are indicators of the wellness of employees at work, Schaufeli and Bakker (2004) suggest that they could be combined in a model of wellbeing. These authors utilise a theoretical analysis and identify two underlying dimensions of work wellness: (a) activation, ranging from exhaustion to vigour, and (b) identification, ranging from cynicism to dedication. Theoretically speaking, burnout is then characterised by a combination of exhaustion (low activation) and mental distance (low identification), whereas engagement is characterised by vigour (high activation) and dedication (high identification). Accordingly, vigour and dedication are considered direct opposites of exhaustion and mental distance respectively (Naudé & Rothmann, 2006). It is argued that engaged employees see themselves as able to deal completely with the demands of their job, whereas burned-out employees do not. On top of this, Bakker (2004) found that when individuals are able to balance their job demands and job resources, they will be more open to positive experiences (such as flow) in the work situation, which may result in better performance by that individual.

Work-related flow

Work-Related Flow has been defined as a process of optimal experience (Csikszentmihalyi, 1975, 1988, 1992, 1993, 1997), as the consequences of a situation wherein challenges faced by an individual equal his or her skills (Ellis, Voelkl, & Morris, 1994; Ghani & Deshpande, 1994). According to Bakker (2004), flow is a state where people are engaged in an activity with high involvement, concentration and enjoyment, and where they experience an intrinsic interest and a sense of time distortion.

Within the scope of positive psychology, Seligman and Csikszentmihalyi (2000) distinguished between pleasure and enjoyment. Pleasure is regarded as the good feeling that comes from satisfying homeostatic needs such as hunger, sex and bodily comfort. Enjoyment, on the other hand, refers to the good feelings people experience when they break through the limits of homeostasis. Thus referring to accomplishing something that stretches them beyond what they previously were (Bryce & Haworth, 2002). Enjoyment, rather than pleasure, has been found to lead to personal growth and long-term happiness (Bryce & Haworth, 2002). Further research has made it possible to identify three elements of flow. The first element, *absorption*, refers to total concentration and immersion in the activity (Csikszentmihalyi, 1990; Ghani & Deshpande, 1994; Ghani, Supnick, & Rooney, 1991; Lutz & Guiry, 1994; Webster, Trevino, & Ryan, 1993). The second core element of flow is *enjoyment* (Csikszentmihalyi, 1990; Ghani, et al., 1991; Trevino & Webster; 1992).

Bakker (2005) includes work enjoyment in his definition of work-related flow and states that employees who enjoy their work and feel happy make a very positive judgment about the quality of their working life. This enjoyment or happiness is the outcome of cognitive and affective evaluations of the flow experience (Diener, 2000). The third and final element, *intrinsic motivation*, refers to the state in which people do what they do 'even at great cost, for the sheer sake of doing it' (Csikszentmihalyi, 1990; Ellis, et al., 1994; Trevino & Webster, 1992). Enjoyable flow experiences come from a wide range of activities (Demerouti & Bakker, 2004). Studies by Csikszentmihalyi and LeFevre (1989), and Haworth and Evans (1995) found that the vast majority of flow experiences came when people were at work rather than during leisure time. The lower level of flow during leisure time can be explained by the inability to organise one's psychic energy during unstructured free time, which may be due to the inability to create challenging situations that require skilled performance (Csikszentmihalyi & LeFevre, 1989).

Several external factors influencing whether an individual will experience flow has been identified by Csikszentmihalyi (1999, 2003) as being clear goals, feedback, control, and the fit between challenges and skills. For this reason, Csikszentmihalyi (1988) has reported that the measure of flow is an important one in organisations. A work environment often provides the ideal environment for experiencing flow in that it is usually structured to allow for goals to be set, it allows for clear feedback, it encourages concentration, and in most situations links skills and challenges (Bryce & Haworth, 2002). The matching of skills and challenges is ever present in the field of call centres. The rapid development of technology ensures that new challenges will always have to be met with some skills needing to be sharpened and others acquired. The degree to which CCAs experience flow will be determined by the perception of challenges and whether or not they posses the necessary skills to do the work (Harvan, Visser, & Crous, 2003).

Specifically, flow tends to occur when a person faces a clear set of goals that require appropriate responses (Csikszentmihalyi, 1997). If it is clear to employees how they can place their work within the 'whole' of the organisation, or if they experience a clear task identity, they will be more likely to experience flow. According to Hackman and Oldham(1975), task identity is having an identifiable piece of work. Similar to the organisational psychologists who consider feedback or the information about the effectiveness of one's performance as a core job characteristic, Csikszentmihalyi (1997) regards immediate feedback as a necessary condition in order to experience flow. Feedback may be provided by both supervisors and colleagues, but may also be derived from work itself, skills and talents of the employee.

Finally, Csikszentmihalyi (1997), Hackman and Oldham (1975) and Fried & Ferris, (1987) see the sense of control or autonomy as an important element promoting the experience of flow or motivation, respectively. Indeed, autonomy or employees' freedom in scheduling their work and in determining work methods has repeatedly been found to increase positive affect (Saavedra & Kwun, 2000), and motivation (Fried & Ferris, 1987).

To date, there have been no research efforts in South Africa regarding the possibility of a relationship between Job Characteristics, Work Wellness and Work-Related Flow. Therefore, the objective of this research was to identify possible mediating or moderating relationships between these constructs by focusing on people working within a South African call centre environment.

Based on the above mentioned realities, the following hypotheses are made.

H_1: There are practical and statistical significant relationships between job demands, job resources, burnout, work engagement and work-related flow of call centre employees in the insurance industry.

H_2: Burnout, work engagement and work-related flow are constructs of work wellness

H_3: Job demands will lead to higher levels of burnout.

H_4: Job resources will lead to higher levels of work engagement and work-related flow.

METHOD

Research design

A cross-sectional design with a survey as the data collection technique was used to achieve the research objectives. Cross-sectional designs are used to examine groups of subjects in various stages of development simultaneously, while a survey is a data-collection technique in which questionnaires are used to gather data about an identified population (Burns & Grove, 1993). Information collected is used to describe the population at that point in time. This design can also be used to assess interrelationships among variables within a population. According to Shaughnessy and Zechmeister (1997), this design is best suited to addressing the descriptive and predictive functions associated with the correlational design, whereby relationships between variables are examined.

Participants

The participants could be defined as an availability sample of employees working in different sectors in the insurance industry. A total population of 370 employees was targeted. A response rate of 48% was achieved, of which 166 responses (94%) could be utilised.

Descriptive information of the sample is given in Table 1.

Table 1

Characteristics of the Participants

Item	Category	Frequency	Percentage
Gender	Male	95	57,60
	Female	70	42,40
Age	20 – 29 yrs	113	68
	30 – 39 yrs	35	21
	40 – 49 yrs	2	1
	50 – 59 yrs	3	1
Race	White	42	25,50
	African	46	27,90
	Coloured	39	23,60
	Indian	33	20
	Other	3	1,80
Language	Afrikaans	28	17
	English	87	52,70
	Sepedi	9	5,50
	Sesotho	16	9,70
	Setswana	5	3
	siSwati	3	1,80
	isiXhosa	9	5,50
	isiZulu	6	3,60
	Xitsonga	1	0,60
Position	Broker Sales Consultant	46	27,90
	Direct Sales Consultant	27	16,40
	Claims Consultant	22	13,30
	Policy Services Consultant	33	20
	Retention Consultant	34	20,60
Qualification	Less than grade 10	6	3,60
	Grade 10 (Std 8)	3	1,80
	Grade 11 (Std 9)	4	2,40
	Grade 12 (Std. 10)	103	62,40
	Technikon Diploma	16	9,70
	Technical College Diploma	15	9,10

Table 1 (continued)

Characteristics of the Participants

Item	Category	Frequency	Percentage
Qualification	Less than grade 10	6	3,60
	University Degree	8	4,80
	Postgraduate Degree	2	1,20
	Other	6	3,60

The study population consisted mainly of male (57,60%), English-speaking (52,70%) employees between the ages of 20 and 29 (68,6%). The majority of the sample had a grade 12 (Std. 10) (62,40%) qualification, and were working as Broker Sales Consultants (27,9%).

Measuring battery

The following measurement instruments were used in the empirical study:

A *biographical questionnaire* was developed to gather information about the demographical characteristics of the participants. Information gathered included age, gender, race, home language, education, marital status and years employed in current position.

The *Job Demands and Resources Scale* (JDRS) was developed for the purpose of this study to measure the unique job demands and job resources of employees in a call centre. Various demands and resources in call centres were identified through the use of focus groups. Based on the results, a unique job demands and resources scale was compiled. The items were measured on a four-point scale, ranging from 1 (*never*) to 4 (*always*). The internal consistency and construct validity of the scale were determined.

The *Oldenburg Burnout Inventory* (Demerouti, et al., 2003) was used to measure burnout. The OLBI consists of 15 items that produce two scores: Exhaustion (Ex) (eight items; e.g. "There are days when I feel tired before I arrive at work") and Disengagement (DE) (eight items; e.g. "I can tolerate the pressure of my work very well"). The OLBI features questions designed to assess cognitive and physical components of exhaustion, and it reflects a conceptualisation of burnout that is not restricted to human service professions, but that can be applied to any occupational group (Demerouti, et al., 2001). Halbesleben and Demerouti (2005) reported that the internal

consistency of the OLBI was acceptable, with all the Cronbach's Alpha coefficients being 0,70 and more. In a South African study done by Le Roux (2006) it was found that two factors could be extracted. These two factors were labelled Engagement and Disengagement. All the positive items and negative items clustered together and loaded on the two factors respectively. These factors showed internal consistency with Cronbach Alpha coefficients of 0,71 (engagement) and 0,82 (disengagement) (Le Roux, 2006).

The *Utrecht Work Engagement Scale* (UWES) (Schaufeli, et al., 2002) was used to measure the levels of work engagement of the participants. The UWES includes three dimensions, namely vigour, dedication and absorption, which is conceptually seen as the opposite of burnout and is scored on a seven-point frequency-rating scale, varying from 0 ("never") to 6 ("every day"). The questionnaire consists of 17 questions and includes questions such as "I am bursting with energy every day in my work"; "Time flies when I am at work" and "My job inspires me". The alpha coefficients for the three subscales varied between 0,80 and 0,91. The alpha coefficient could be improved (varies between 0,78 and 0,89 for the three subscales) by eliminating a few items without substantially decreasing the scales internal consistency. Storm and Rothmann (2003) obtained the following alpha coefficients for the UWES in a sample of 2 396 members of the South African Police Service: Vigour: 0,78; Dedication: 0,89; Absorption: 0,78. Coetzer (2004) obtained the following alpha coefficients in a sample of employees in an insurance company: Vigour (0,80); Dedication (0,87), and Absorption (0,69).

The *Work-Related Flow Scale* (WOLF) (Bakker, 2001) was used to assess flow at work. The WOLF includes 13 items measuring absorption (4 items), work enjoyment (4 items), and intrinsic work motivation (6 items). Examples are: "When I am working, I forget everything else around me" (absorption), "When I am working very intensely, I feel happy" (work enjoyment), and "I get my motivation from the work itself, and not from the rewards for it" (intrinsic work motivation). The participants were asked to indicate how often they had each of the experiences during the preceding week (0 = never, 6 = every day). Bakker (in press) found the following reliability results: Absorption (0,80); Work enjoyment (0,90); and Intrinsic Work Motivation (0,75). In a South African study among employees in the mining industry, Le Roux (2005) found the following Cronbach alphas: Absorption (0,59), Work Enjoyment (0,84), and Intrinsic Work Motivation (0,71).

Statistical analysis

The statistical analysis was carried out with the help of the SPSS program (SPSS Inc., 2003) and the AMOS program (Arbuckle, 2003). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) were used to analyse the data. Cronbach alpha coefficients were used to assess the internal consistency, homogeneity and unidimensionality of the measuring instruments (Clark & Watson, 1995). Coefficient alpha contains important information regarding the proportion of variance of the items of a scale in terms of the total variance explained by the particular scale.

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

Covariance analysis or structural equation modelling (SEM) methods, as implemented by AMOS (Arbuckle, 2003), was used to construct and test a structural model of work wellness. Hypothesised relationships were tested for empirically for goodness-of-fit with the sample date. The χ^2 statistic and several other goodness-of-fit indices summarise the degree of correspondence between the implied and observed covariance matrices. However, because the χ^2 statistic equals $(N-1)F_{min}$ this value tends to be substantial when the model does not hold and the sample size is larger (Byrne, 2001). Researchers addressed the χ^2 limitation by developing goodness-of-fit indices that take a more pragmatic approach to the evaluation process.

A value < 2 for χ^2 / degrees of freedom ration (CMIN/df) (Wheaton, Muthén, Alwin, & Summers, 1977) indicates acceptable fit (Tabachnick & Fidell, 2001). The hypothesised relationships with the data were tested using the following goodness-of-fit statistics: Adjusted Goodness-of-Fit Index (AGFI), Parsimony Goodness-of-Fit Index (PGFI), Normed Fit Index (NFI), Comparative Fit Index (CFI), Tucker Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA).

A stepwise multiple regression analysis was conducted to determine the percentage of the variance in the dependent variables that is predicted by the independent variables. The effect size

(which indicates practical significance) in the case of multiple regressions, is given by the following formula (Steyn, 1999):

$$f^2 = R^2 / 1 - R^2$$

A cut-off point of 0,35 (large effect, Steyn, 1999) was set for the practical significance.

RESULTS

A simple principle component analysis was conducted on the 77 items of the JDRS on the total sample of call centre representative in the insurance industry. Analysis of the eigenvalues (larger that 1) and the scree plot indicated that ten factors could be extracted, explaining 52,83% of the total variance. Principle axis factoring analysis followed, using a direct oblimin rotation to carry out factor analysis.

The results of the factor analysis on the JDRS are shown in Table 2. Loading of variables on factors, communalities and percentage of variance are shown. Variables are ordered and grouped by size of loading to facilitate interpretation. Labels for each factor are suggested in a footnote.

Table 2

Factor Loadings, Communalities (h^2), and Percentage Variance for Principal Factors Extraction and Direct Oblimin Rotation on the JDRS Items

Item	F_1	F_2	F_3	F_4	F_5	F_6	F_7	F_8	F_9	F_{10}	h^2
3C. Do you know exactly what your direct supervisor thinks of your performance?	0,76	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,64
3F. Does your direct supervisor inform you about how well you are doing your work?	0,74	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,59
3H. Can you discuss work problems with your direct supervisor?	0,73	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,65
3B. In your work, do you feel appreciated by your supervisor / manager?	0,72	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,61
3I. Can you count on your supervisor when you come across difficulties in your work?	0,71	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,62
3E. Do you receive sufficient information on the results of your work?	0,70	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,63
3J. Are you and your colleagues treated fairly?	0,55	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,58
3A. Do you get on well with your supervisor / manager?	0,54	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,48
3D. Do you have autonomy to do your work as you prefer?	0,52	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,50
3G. Are you kept up-to-date about important issues within the mining industry affecting your job?	0,46	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,33
2J. Do you find it difficult to complete all your tasks for the day?	0,00	0,71	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,52

Table 2 (continued)

Factor Loadings, Communalities (h^2), and Percentage Variance for Principal Factors Extraction and Direct Oblimin Rotation on the JDRS Items

Item	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	h^2
2I. Are you asked to do an excessive amount of work?	0,00	0,68	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,50
2G. Do you have too much work to do?	0,00	0,64	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,54
2K. Do you have to meet targets that seem impossible/ unrealistic?	0,00	0,58	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,44
2H. Do you have work left when you leave work?	0,00	0,57	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,54
2E. Are your tasks often interrupted before they can be completed?	0,00	0,47	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,41
1I. Are there enough staff/labour to do the work?	0,00	-0,45	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,52
2A. Do you have to work under time pressure?	0,00	0,38	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,35
3K. Are your work performance affected by 'red-tape'?	0,00	0,32	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,31
2C. Do you have enough time to get the job done?	0,00	-0,32	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,38
7A. Are uncontrollable events in your work environment affecting your work performance?	0,00	0,31	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,41
5B. Do you think you are paid enough for the work that you do?	0,00	0,00	0,83	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,72
5A. Do you think your organisation pays good salaries?	0,00	0,00	0,82	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,77
5D. Can you live comfortably on your pay?	0,00	0,00	0,79	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,66
5C. Does your job offer you the possibility to progress financially?	0,00	0,00	0,67	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,60
5E. Do you think your organisation provides good benefits?	0,00	0,00	0,59	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,44
9P. Does your job give you the opportunity to be promoted?	0,00	0,00	0,45	0,00	0,00	0,00	0,00	-0,37	0,00	0,00	0,56
9I. Can you decide for yourself how to carry out your work?	0,00	0,00	0,00	-0,68	0,00	0,00	0,00	0,00	0,00	0,00	0,64
9M. Can you determine the content of your work yourself?	0,00	0,00	0,00	-0,57	0,00	0,00	0,00	0,00	0,00	0,00	0,39
9J. Do you have any influence over decisions about when a piece of work must be completed?	0,00	0,00	0,00	-0,57	0,00	0,00	0,00	0,00	0,00	0,00	0,49
9K. Can you decide for yourself how much time you would like to spend on a certain task?	0,00	0,00	0,00	-0,54	0,00	0,00	0,00	0,00	0,00	0,00	0,46
9N. Do you have influence in the planning of your work activities?	0,00	0,00	0,00	-0,49	0,00	0,00	0,00	0,00	0,00	0,00	0,40
9L. Do you solve problems that arise in your work yourself?	0,00	0,00	0,00	-0,39	0,00	0,00	0,00	0,00	0,00	0,00	0,31
6A. Do you have to work socially undesirable hours?	0,00	0,00	0,00	0,38	0,00	0,00	0,00	0,00	0,00	0,00	0,26
9H. Do you have freedom in carrying out your work activities?	0,00	0,00	0,00	-0,38	0,00	0,00	0,00	0,00	0,00	0,00	0,49
6B. Do you have to work irregular hours?	0,00	0,00	0,00	0,36	0,00	0,00	0,00	0,00	0,00	0,00	0,28
7H. Do you have to adhere to certain standards and regulations (i.e. legal aspects, code of conduct, statutory regulations, etc.)?	0,00	0,00	0,00	0,00	0,57	0,00	0,00	0,00	0,00	0,00	0,40
2B. Do you have to work very hard?	0,00	0,00	0,00	0,00	0,55	0,00	0,00	0,00	0,00	0,00	0,44
2F. Is your job hectic?	0,00	0,00	0,00	0,00	0,52	0,00	0,00	0,00	0,00	0,00	0,51
7M. Do you have a stressful working environment	0,00	0,00	0,00	0,00	0,46	0,00	0,00	0,00	0,00	0,00	0,34
2D. Does your job require long periods of intense concentration on the task?	0,00	0,00	0,00	0,00	0,33	0,00	0,00	0,00	0,00	0,00	0,32
9C. In your work, do you repeatedly have to do the same thing?	0,00	0,00	0,00	0,00	0,33	0,00	0,00	0,00	0,00	0,00	0,16
8F. Do you receive support from other people or places than the organisation (i.e. trade union)?	0,00	0,00	0,00	0,00	-0,32	0,00	0,00	0,00	0,00	0,00	0,23
1B. Is material (i.e. equipment) available when you need it?	0,00	0,00	0,00	0,00	0,00	0,73	0,00	0,00	0,00	0,00	0,58
1A. Do you have adequate resources (i.e. material/equipment/labour) to complete your daily tasks?	0,00	0,00	0,00	0,00	0,00	0,68	0,00	0,00	0,00	0,00	0,54

Table 2 (continued)

Factor Loadings, Communalities (h^2), and Percentage Variance for Principal Factors Extraction and Direct Oblimin Rotation on the JDRS Items

Item	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	h^2
1D. Are materials issued on time?	0,00	0,00	0,00	0,00	0,00	0,68	0,00	0,00	0,00	0,00	0,52
1C. Do you have the right resources (i.e. material/equipment/labour) available to complete your daily tasks?	0,00	0,00	0,00	0,00	0,00	0,62	0,00	0,00	0,00	0,00	0,56
1E. Do you have access to resources (i.e. material/equipment/labour) when you need it?	0,00	0,00	0,00	0,00	0,00	0,62	0,00	0,00	0,00	0,00	0,52
1F. Is the completion of your daily tasks dependant on the availability of resources (i.e. material/equipment/labour)?	0,00	0.00	0.00	0.00	0.00	0,39	0.00	0,00	0,00	0,00	0,29
4B. Do you need to be more secure that you will keep your current job in the next year?	0,00	0,00	0.00	0,00	0.00	0,00	-0,92	0,00	0,00	0,00	0,83
4A. Do you need to be more secure that you will still be working in one year's time?	0,00	0,00	0,00	0,00	0.00	0,00	-0,82	0,00	0,00	0,00	0,66
4C. Do you need to be more secure that you will keep the same function level as currently?	0,00	0,00	0,00	0,00	0,00	0,00	-0,79	0,00	0,00	0,00	0,65
9F. Does your job give you the feeling that you can achieve something?	0,00	0,00	0.00	0,00	0,00	0,00	0,00	-0,63	0,00	0,00	0,75
9G. Does your job offer you the possibility of independent thought and action?	0,00	0,00	0.00	0,00	0,00	0,00	0,00	-0,45	0,00	0,00	0,58
9E. Does your job offer you opportunities for personal growth and development?	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-0,45	0,00	0,00	0,56
9B. Does your work make sufficient demands on all your skills and capacities?	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-0.31	0,00	0,00	0,26
7L. Do you work in unsafe conditions?	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-0.69	0,00	0,53
7K. Do you work in dangerous conditions?	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-0.55	0,00	0,34
7D. Do you have to deal with crisis situations?	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-0,50	0.00	0,34
7E. Do you have to make critical, on-the-spot decisions?	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-0,43	0,00	0,30
7G. Do you experience language and communication barriers with co-workers?	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-0,43	0,00	0,30
7B. Are you exposed to health risks in your work environment (i.e. HIV/AIDS, tuberculosis, gases, etc.)?	0.00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-0,41	0,00	0,27
7C. Are there security risks posed in the area where your job is located?	0,00	0,00	0.00	0,00	0,00	0,00	0,00	0,00	-0,38	0,00	0,18
8A. Can you count on your co-workers when you come across difficulties in your work?	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,78	0,65
8B. If necessary, can you ask your co-workers for help?	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,73	0,66
8C. Do your co-workers help you to get the job done?	0,00	0,00	0,00	0.00	0.00	0,00	0,00	0,00	0,00	0,73	0,63
8D. Do you receive sufficient technical support to complete your tasks?	0,00	0,00	0,00	0,00	0,00	0.00	0,00	0,00	0,00	0,51	0,52
8E. Do you receive the right technical support to complete your tasks?	0,00	0,00	0,00	0.00	0,00	0.00	0,00	0,00	0,00	0,41	0,54
Percentage of variance	15,24	7,47	5,56	4.75	4.13	4,02	3,41	2,94	2,80	2,51	

F_1 Supervision F_2 Pressure F_3 Pay and Benefits F_4 Task Freedom F_5 Work Load F_6 Resource Availability F_7 Job Security F_8 Opportunity for Growth F_9 Working Conditions F_{10} Support

Ten internally consistent factors were extracted, explaining 52,83% of the total variance. Five of the 77 variables did not load on any of the factors.

The first factor labelled *Supervision* has items loading on it that relate to supervision in the work environment. It involved mainly the receiving of sufficient information regarding work results, purpose of work and work performance, clear expectations from superiors, and relationship with immediate supervisor. The second factor was labelled *Pressure,* and included aspects such as adequate staff numbers to execute the work, working under time pressure, adequate time

allocated to getting the job done, the amount of work to be done, and having to meet targets that seem impossible or unrealistic. *Pay and Benefits* as the third factor included perceptions of pay, the ability to progress financially, opportunity to be promoted, and the benefits provided by the organisation. The fourth factor was labelled *Task Freedom,* and included factors such as having to work socially undesirable and irregular hours, the freedom to carry out work activities, the freedom to decide how to carry out work, influence over decisions about when a piece of work must be completed, freedom to decide how much time to allocate to a certain task, responsibility for problem solving in work, determining the content of work, and influence in the planning of work activities.

The items that loaded on the fifth factor – labelled *Workload* – included aspects such as the requirement to work very hard, occurrence of long periods of intense concentration on the task, how hectic the job is, the need to adhere to certain standards and regulations (i.e. legal aspects, code of conduct, statutory regulations, etc.), and whether the working environment is stressful. The sixth factor was labelled *Resources Availability*. The items that loaded on this factor included aspects such as the availability of adequate resources, material (i.e. equipment) availability when needed, the availability of the right resources (i.e. material/equipment/labour) to complete daily tasks, material issued on time, and whether work performance is affected by 'red tape'. The seventh factor was *Job Security* and reflected participants' indication that they would still be working in one year's time and would keep the current level of functioning; and that they need to be more secure in keeping their current job in the next year.

The items that loaded on the eighth factor – labelled *Opportunity for Growth* – included aspects such as sufficient demands on all skills and capacities, opportunities available for personal growth and development, feeling able to achieve something, and being provided with the possibility of independent thought and action. *Working Conditions* as the ninth factor included factors that affected the working conditions, such as uncontrollable events in the working environment, health and security risks, crisis and conflict situations, communication barriers with co-workers, dangerous, and unsafe working conditions. Finally, the tenth factor was labelled *Support*. The items that loaded on this factor included aspects such as relying on colleagues when facing difficulties at work, asking colleagues for help, receiving adequate and sufficient technical support to complete tasks, and getting on well with colleagues.

A second-order factor analysis was performed on the ten factors of the JDRS. Two factors were extracted, explaining 46,85% of the total variance. These two factors were labelled Job Resources

(consisting of Supervision, Opportunity for Growth, Task Freedom, Pay and Benefits, Resource Availability, and Support) and Job Demands (consisting of Pressure, Working Conditions, Workload, and Job Security).

A simple principle component analysis was conducted on the 16 items of the OLBI on the total sample of call centre representatives in the insurance industry. Analyses of the eigenvalues (larger than 1) and the scree plot indicated that two factors could be extracted, explaining 42,38% of the total variance. Principle axis factoring analysis followed, using a direct oblimin rotation to carry out factor analysis. The two factors were labelled Mental Distance and Exhaustion.

A simple principle component analysis was conducted on the 17 items of the UWES on the total sample of call centre representatives in the insurance industry. Analysis of the eigenvalues (larger than 1) and the scree plot indicated that one factor could be extracted, explaining 58,11% of the total variance. This factor was labelled Work Engagement. A simple principle component analysis was conducted on the 14 items of the WOLF on the total sample of call centre representatives in the insurance industry. Analysis of the eigenvalues (larger than 1) and the scree plot indicated that two factors could be extracted, explaining 63,92% of the total variance. These factors were labelled Absorption and Flow (consisting of Work Enjoyment and Intrinsic Work Motivation).

The descriptive statistics, alpha coefficients and inter-item correlation of the measuring instruments, namely the JDRS, OLBI, UWES and the WOLF, are given in Table 3.

Table 3

Descriptive Statistics and Alpha Coefficients of the JDRS, OLBI, UWES and the WOLF

Item	Mean	SD	Skewness	Kurtosis	α
JDRS					
Resource Availability	18,91	3,34	-0,22	-0,69	0,79
Pressure	23,10	4,98	0,34	-0,28	0,73
Work Load	20,38	3,55	-0,24	-0,16	0,52
Supervision	28,73	7,11	-0.,33	-0,87	0,91
Job Security	8,07	2,91	-0,10	-1,17	0,88
Pay and Benefits	13,63	4,80	0.32	-0,64	0,87
Task Freedom	29,41	5,74	0,09	-0,05	0,68
Working Conditions	10,82	3,25	1,11	1,57	0,68
Support	14,18	3,45	-0,08	-0,50	0,84
Opportunity for Growth	10,43	2,83	0,11	-0,41	0,77

Table 3 (continued)

Descriptive Statistics and Alpha Coefficients of the JDRS, OLBI, UWES and the WOLF

Item	Mean	SD	Skewness	Kurtosis	α
OLBI					
Mental Distance	21,69	4,39	-0,07	-0,59	0,78
Exhaustion	14,10	3,32	0,44	0,03	0,70
UWES					
Work Engagement	46,81	13,84	-0,88	0,27	0,93
WOLF					
Absorption	16,70	6,65	-0,18	-1,08	0,88
Flow	36,51	13,50	-0,01	-0,99	0,92

Table 3 indicates that acceptable Cronbach alpha coefficients varying from 0,70 to 0,91 were obtained, except for Work Load (0,52). These alpha coefficients compare reasonably well with the guideline of 0,70 (0,55 in basic research), demonstrating that a large portion of the variance is explained by the dimensions (internal consistency of the dimensions) (Nunnally & Bernstein, 1994). It is evident from Table 3 that most of the scales of the measuring instruments have relatively normal distributions.

The product-moment correlation coefficients between job demands, job resources, burnout, work engagement and work-related flow are given in Table 4.

Table 4

Product-Moment Correlation Coefficients between the JDRS, OLBI, UWES, and WOLF

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Work Engagement	-	-	-	-	-	-	-							
2. Absorption	0,71*++	-	-	-	-	-	-							
3. Flow	0,79*++	0,77*++	-	-	-	-	-							
4. Mental Distance	0,03	-0,01	0,00	-	-	-	-							
5. Exhaustion	0,13	0,18*	0,14	0,25*	-	-	-							
6. Resource Availability	0,21*	0,21*	0,23*	0,03	0,13	-	-							
7. Pressure	-0,19*	-0,11	-0,22*	-0,10	0,05	-0,22*	-							
8. Work Load	0,13	0,09	-0,04	-0,03	0,14	-0,03	0,31*+							
9. Supervision	0,47*+	0,33*+	0,42*+	0,11	0,24*	0,30*	-0,18*	0,03	-	-	-	-	-	-
10. Job Security	-0,10	0,07	0,10	-0,15	-0,22*	-0,02	0,11	0,12	0,00	-	-	-	-	-
11. Pay and Benefits	0,53*++	0,33*+	0,51*++	0,03	0,11	0,22*	-0,23*	0,01	0,39*+	0,09	-	-	-	-
12. Working Conditions	0,08	0,15*	0,13	-0,21*	0,21*	-0,19*	0,33*+	0,23*	-0,04	0,11	0,04	-	-	-
13. Support	0,15	0,02	0,12	0,15	0,23*	0,26*	-0,11	0,08	0,41*+	-0,02	0,18*	-0,08	-	-
14. Opportunity for Growth	0,54*++	0,34*+	0,51*++	0,10	0,16*	0,24*	-0,01	0,19*	0,55*++	0,07	0,44*+	0,11	0,27*	-
15. Task Freedom	0,46*+	0,39*+	0,41*+	0,08	0,27*	0,29*	-0,01	0,12	0,56*++	0,12	0,38*+	0,10	0,11	0,69*++

* $p \leq 0,05$ – statistically significant

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

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

Table 4 shows statistically significant positive correlations (practically significant, large effect) between Work Engagement, Absorption, Flow, Pay and Benefits, and Opportunity for Growth. Work engagement shows a statistically positive correlation (practically significant, medium effect) with Supervision and Task Freedom. Absorption shows a statistically significant positive correlation (practically significant, large effect) with Flow and statistically significant positive correlations (practically significant, medium effect) with Supervision, Pay and Benefits, Opportunity for Growth, and Task Freedom. Flow shows statistically significant positive correlations (practically significant, large effect) with Pay and Benefits, and Opportunity for Growth and statistically significant correlations (practically significant, medium effect) with Supervision and Task Freedom.

Pressure shows statistically significant positive correlations (practically significant, medium effect) with Workload, and Working Conditions. Supervision shows statistically significant positive correlations (practically significant, large effect) with Opportunity for Growth, and Task Freedom, and statistically significant positive correlations (practically significant, medium effect) with Pay and Benefits, and Support. Pay and Benefits shows statistically significant positive correlations (practically significant, medium effect) with Opportunity for Growth, and Task Freedom. Opportunity for Growth shows a statistically significant positive correlation (practically significant, large effect) with Task Freedom. Based on the above, hypothesis 1 is only partially accepted.

Next, a model based on the results of the product-moment correlations as well as consensus of findings based on a review of the literature on work engagement, burnout (i.e. exhaustion and mental distance) and work-related flow (i.e. absorption and flow), with specific bearing on call centre agents in the insurance industry, was tested with SEM analysis in order to determine whether work wellness comprises work engagement, burnout (i.e. exhaustion and mental distance) and work-related flow (i.e. absorption and flow). First, a second-order factor analysis was performed on the two factors of the OLBI, the one factor of the UWES, and the two factors of the WOLF. Two factors were extracted, explaining 75,52% of the total variance. These two factors were labelled Burnout (consisting of Mental Distance and Exhaustion) and Positive Wellbeing (consisting of Work Engagement, Absorption and Flow).

Table 5

Goodness-of-fit statistics for the structural model of work wellness

Model	χ^2	χ^2/df	GFI	AGFI	PGFI	TLI	CFI	RMSEA
Model 1	12,43	2,49	0,97	0,92	0,32	0,96	0,98	0,10
Model 2	2,06	0,51	1,00	0,98	0,27	1,02	1,00	0,00

A model was tested (Model 1), consisting of burnout and wellbeing. Results indicated that the model did not fit the data adequately (Table 5), with RMSEA higher than the recommended 0,06. Further modification of the model was thus required. Inspection of the modification indices (MI) revealed that the fit between the model and the data could be further improved if one error pair of burnout was allowed to correlate.

This means that the fit of the proposed model could be improved it the measurement errors between Exhaustion and Mental Distance (MI = 10,05) were allowed to correlate. The revised model – including covariation – shows a good fit (Model 2). It is therefore evident that work wellness of call centre agents in an insurance industry comprises Burnout (i.e. Exhaustion and Mental Distance) and Wellbeing (i.e. Work Engagement, Absorption and Flow). Hypothesis 2 was therefore accepted.

The results of a multiple regression analysis with Burnout as dependent variable and Job Demands and Job Resources as independent variables are reported in Table 6.

Table 6

Multiple Regression Analyses with Burnout as Dependent Variable

	Model	Unstandardised Coefficients		Standardised Coefficients	*t*	*p*	*F*	*R*	R^2	ΔR^2
		B	SE	Beta						
	Dependent Variable: Mental Distance									
1	(Constant)	25,74	2,32		11,08	0,00	2.59*	0,25	0,06	0,06
	Pressure	-0,03	0.07	-0.04	-0.42	0,67				
	Work Load	0,05	0,10	0,04	0,49	0,62				
	Job Security	-0,19	0,12	-0,13	-1,63	0,11				
	Working Conditions	-0,26	0,11	-0,19	-2,33	0,02				
2	(Constant)	23,71	3,58		6,63	0,00	1,61	0,31	0,10	0,03
	Pressure	-0,03	0,08	-0.03	-0,33	0,74				
	Work Load	0,01	0,10	0,01	0,08	0,94				

Table 6 (continued)

Multiple Regression Analyses with Burnout as Dependent Variable

	Model	Unstandardised Coefficients		Standardised Coefficients	*t*	*p*	*F*	*R*	R^2	ΔR^2
		B	SE	Beta						
	Dependent Variable: Mental Distance									
	Job Security	-0,20	0,12	-0,13	-1,70	0.09				
	Working Conditions	-0,28	0,11	-0,21	-2,46	0.065				
	Resource Availability	-0,11	0,11	-0,08	-0,96	0,34				
	Supervision	-0,01	0,07	-0,02	-0,17	0,86				
	Pay and Benefits	-0,02	008	-0,02	-0.26	0,80				
	Support	0,17	0,11	0,13	1,50	0,14				
	Opportunity for Growth	0,10	0,18	0,06	0,55	0,58				
	Task Freedom	0,08	0,09	0,10	0.87	0,39				
	Dependent Variable: Exhaustion									
1	(Constant)	12,93	1,71		7,58	0,00	5,14*	0,34	0,11	0,11
	Pressure	-0,02	0,05	-0,03	-0,35	0,73				
	Work Load	0,12	0,07	0,13	1,62	0,11				
	Job Security	-0,28	0.09	-0,25	-3,32	0,00				
	Working Conditions	0,22	0,08	0,21	2,68	0,01				
2	(Constant)	4,71	2,46		1,92	0,06	5,15	0,50	0,25	0,14
	Pressure	0,03	0,05	0.04	0,46	0,65				
	Work Load	0,09	0,07	0,09	1,22	0,22				
	Job Security	-0.31	0,08	-0,27	-3,84	0,00				
	Working Conditions	0,23	0,08	0,22	2.87	0,01				
	Resource Availability	0,05	0,08	0,05	0,62	0,54				
	Supervision	0.03	0,05	0,07	0,75	0,45				
	Pay and Benefits	0,04	0,06	0,02	0,24	0,81				
	Support	0,20	0,08	0,21	2,62	0,01				
	Opportunity for Growth	-0,24	0,12	-0,21	-1,97	0,05				
	Task Freedom	0.19	0,06	0,33	3,11	0,00				

* $p< 0, 05$

Table 6 shows that 6% of the variance in Mental Distance is predicted by Job Demands ($F = 2,59$, $p<0,05$). Pressure, Workload and Job Security did not make a significant contribution to the variance explained. Adding Working Conditions to the prediction statistically significantly increased the R^2. Working Conditions is the only significant predictor of Mental Distance. Table 5 also showed that 11% of the variance explained in Exhaustion is predicted by Job Demands ($F = 5,14$, $p<0,05$). Neither Pressure nor Workload made a significant contribution to the variance explained. Adding the Job Security and Working Conditions variables to the prediction

statistically significantly increased the R^2. Job Security and Working Conditions are the only significant predictors of Exhaustion. Hypothesis 3 is only partially accepted as only certain job demands significantly predicted Burnout.

The results of a multiple regression analysis with Work Engagement and Work-Related Flow as dependent variable and Job Resources and Job Demands as independent variables are reported in Table 7.

Table 7

Multiple Regression Analyses with Work Engagement and Work-related Flow as Dependent Variable

	Model	Unstandardised Coefficients		Standardised Coefficients	*t*	*p*	*F*	*R*	R^2	ΔR^2
		B	SE	Beta						
	Dependent Variable: Work Engagement									
1	(Constant)	8,65	6,14		1,41	0,16	19,40	0,65	0,42	0,42
	Resource Availability	0,10	0.27	0,02	0,37	0,71				
	Supervision	0.36	0,16	0,19	2,24	0,03				
	Pay and Benefits	0.92	0,20	0,32	4,63	0,00				
	Support	-0,32	0,28	-0,08	-1,13	0,26				
	Opportunity for Growth	1,39	0,44	0,28	3,15	0,00				
	Task Freedom	0,11	0,22	0,05	0,51	0,61				
2	(Constant)	8.34	8.81		0,95	0,34	12,53	0,67	0,45	0,03
	Resource Availability	0,08	0.28	0,02	0,30	0,76				
	Supervision	0,36	0,16	0,18	2,20	0,03				
	Pay and Benefits	0,82	0,20	0,28	4,02	0,00				
	Support	-0,34	0,28	-0,09	-1,24	0,22				
	Opportunity for Growth	1,34	0,45	0,28	3,04	0,00				
	Task Freedom	0,10	0,22	0,04	0,45	0,65				
	Pressure	-0,42	0,19	-0,15	-2,16	0,03				
	Work Load	0,39	0,25	0,10	1,54	0,13				
	Job Security	0,24	0,29	0,05	0,83	0,41				
	Working Conditions	0,27	0,28	0,06	0,95	0,34				
	Dependent Variable: Absorption									
1	(Constant)	1,84	3,44		0,53	0,59	7,25	0,47	0,22	0,22
	Resource Availability	0,18	0,15	0,09	1,20	0,23				
	Supervision	0,14	0,09	0,15	1,50	0,14				

Table 7 (continued)

Multiple Regression Analyses with Work Engagement and Work-related Flow as Dependent Variable

	Model	Unstandardised Coefficients		Standardised Coefficients	*t*	*p*	*F*	*R*	R^2	ΔR^2
		B	SE	Beta						
	Pay and Benefits	0,25	0,11	0,18	2,20	0,30				
	Support	-0,26	0,16	-0,14	-1,67	0,10				
	Opportunity for Growth	0,17	0,25	0.07	0,70	0,49				
	Task Freedom	0,21	0,12	0,18	1,68	0,10				
2	(Constant)	-0,56	4,95		-0,11	0,91	5,02	0,50	0,25	0,03
	Resource Availability	0,22	0,16	0,11	1,44	0,15				
	Supervision	0,14	0,09	0,15	1,58	0,12				
	Pay and Benefits	0,20	0,12	0,15	1,78	0,08				
	Support	-0,26	0,16	-0,14	-1,69	0,09				
	Opportunity for Growth	0,13	0,25	0,06	0,52	0,60				
	Task Freedom	0,19	0,12	0,16	1,53	0,13				
	Pressure	-0,15	0,11	-0,11	-1,39	0,17				
	Work Load	0,12	0,14	0,07	0,86	0,39				
	Job Security	0,04	0,16	0,02	0,24	0,81				
	Working Conditions	0,33	0,16	0,16	2,11	0,04				
	Dependent Variable: Flow									
1	(Constant)	1,95	6,21		0,32	0,75	16,23	0,62	0,38	0,38
	Resource Availability	0,29	0,27	0,07	1,05	0,30				
	Supervision	0,32	0,16	0,17	1,97	0,05				
	Pay and Benefits	0,89	0,20	0,32	4,44	0,00				
	Support	-0,42	0,28	-0,11	-1,50	0,14				
	Opportunity for Growth	1,43	0,45	0,30	3,21	0,00				
	Task Freedom	-0,04	0,22	-0,12	,-0,20	0,84				
2	(Constant)	9,75	8,78		1,11	0,27	11,35	0,65	0,42	0,04
	Resource Availability	0,31	0,28	0,08	1,11	0,27				
	Supervision	0,30	0,16	0,16	1,84	0,07				
	Pay and Benefits	0,74	0,20	0,26	3,64	0,00				
	Support	-0,38	0,28	-0,10	-1,36	0,18				
	Opportunity for Growth	1,56	0,44	0,33	3,52	0,00				
	Task Freedom	-0,06	0,22	-0,03	-0,29	0,77				
	Pressure	-0,41	0,19	-0,15	-2,15	0,03				

Table 7 (continued)

Multiple Regression Analyses with Work Engagement and Work-related Flow as Dependent Variable

Model	Unstandardised Coefficients		Standardised Coefficients	*t*	*P*	*F*	*R*	R^2	ΔR^2
	B	SE	Beta						
Dependent Variable: Flow									
Work Load	-0,34	0,25	-0,90	-1,35	0,18				
Job Security	0,29	0,29	0,06	1,01	0,31				
Working Conditions	0,68	0,28	0,16	2,41	0,02				

* $p < 0, 01$

Table 7 shows that 42% of the variance explained in Work Engagement is predicted by Job Resources (F = 19,40). This prediction was not statistically significant. 22% of the variance explained in Absorption is predicted by Job Resources (F = 7,25). This prediction was also not significant. Table 7 shows that 38% percent of the variance explained in Flow is predicted by Job Resources (F = 16,23). Again, this prediction was not statistically significant. Hypothesis 4 is therefore rejected.

DISCUSSION

The objective of this study was to determine the relationship between job demands, job resources, burnout, work engagement and work-related flow. First, a simple factor analysis was conducted on the JDRS, identifying a ten-factor structure, explaining 52,83% of the variance. These factors were labelled Resource Availability, Pressure, Workload, Supervision, Job Security, Pay and Benefits, Task Freedom, Working Conditions, Support, and Opportunity for Growth.

A second-order factor analysis was then performed on the ten factors of the JDRS. Two factors were extracted, explaining 46,85% of the total variance. These two factors were labelled Job Resources (consisting of Supervision, Opportunity for Growth, Task Freedom, Pay and Benefits, Resource Availability, and Support) and Job Demands (consisting of Pressure, Working Conditions, Workload, and Job Security).

Acceptable Cronbach alpha coefficients varying from 0,70 to 0,91 were obtained, except for Workload (0,52). These alpha coefficients compared reasonably well with the guideline of 0,70 (0,55 in basic research), demonstrating that a large portion of the variance was explained by the

dimensions (internal consistency of the dimensions) (Nunnally & Bernstein, 1994). Most of the scales of the measuring instruments had relatively normal distributions, with the exception of Working Conditions.

Pearson product-moment correlations showed that Work Engagement correlated positively with Absorption and Flow, implying that higher levels of work engagement may result in the probability of experiencing Work-Related Flow. Work Engagement also showed positive correlations with Pay and Benefits, Opportunity for Growth, Supervision, and Task Freedom. This implies that the availability of certain job resources may lead to higher levels of work engagement. Absorption showed positive correlations with Flow, Supervision, Pay and Benefits, Opportunity for Growth, and Task Freedom. This also implies that the availability of certain job characteristics may result in a higher probability that Work-Related Flow may be experienced. Although Csikszentmihalyi (1990) and Bakker (in press) found that job demands such as work pressure had a positive relationship with absorption, no correlation could be found in this study. Bakker (in press) also found that Opportunities for Growth were positively related to each of the three flow dimensions. Le Roux (2005) found, in a sample of employees working in the mining industry, that Opportunity for Growth was only correlated to Work Enjoyment. However, in this study, Opportunity for Growth was only positively related to Absorption.

Pressure showed positive correlations with Workload and Working Conditions, indicating that the increase in Pressure is associated with the increase in Workload and Working Conditions. Supervision showed positive correlations with Opportunity for Growth, Task Freedom, Pay and Benefits, and Support. Pay and Benefits showed positive correlations with Opportunity for Growth, and Task Freedom. Opportunity for Growth showed a positive correlation with Task Freedom.

A second-order factor analysis, using principle axis factoring, was conducted on the constructs of burnout (i.e. exhaustion and mental distance), work engagement and work-related flow (i.e. absorption and flow). Two factors were extracted, explaining 75,52% of the total variance. The one factor was named Burnout (consisting of Mental Distance and Exhaustion) and Positive Wellbeing (consisting of Work Engagement, Absorption and Flow). A model was tested consisting of burnout and wellbeing. Results indicated that the model did not fit the data adequately and that further modification of the model was thus required. Inspection of the modification indices (MI) revealed that the fit between the model and the data could be further improved if errors of the burnout factors were allowed to correlate. The revised model –

including covariation – showed a good fit. It is therefore evident that work wellness of call centre agents in an insurance industry comprises Burnout (i.e. Exhaustion and Mental Distance) and Wellbeing (i.e. Work Engagement, Absorption and Flow).

Multiple regression analysis showed that 6% of the variance in Mental Distance was predicted by Job Demands, with Working Conditions being the only significant predictor. Within Exhaustion 11% of the variance explained was predicted by Job Demands, with Job Security and Working Conditions being the only significant predictors. No statistically significant predictions were obtained for Work Engagement and Work-Related Flow (i.e. Absorption and Flow).

RECOMMENDATIONS

Call centres are one way in which organisations are trying to improve their customer service (Els & De Villiers, 2003). The growth in call centres is attributable to the benefits that they offer organisations (Holman, 2002). Call centres can improve service and retain customers, increase sales/revenue and reduce costs/improve efficiency (Mahesh & Kasturi, 2006). For this reason, organisations are placing an increasing emphasis on the role of call centres regarding the competitiveness of the company, and as a result place increased pressure on call centre agents.

As a result, it is important to assist the call centre industry in ensuring sustainability, through critically examining the job characteristics (i.e. job demands and job resources), burnout symptoms (i.e. fatigue, forgetfulness, and low intrinsic motivation), work engagement characteristics (i.e. vigour, dedication, and absorption) and work-related flow characteristics (i.e. absorption, intrinsic motivation, and enjoyment) in the environment. Research conducted by Demerouti, et al. (2000), show that job demands and job resources are role players within the accumulation of burnout and engagement. Bakker (2004) found that when individuals are able to balance their job demands and job resources they will be more open to positive experiences (such as flow) in the work situation, which may result in better performance by that individual.

Work wellness was found to comprise burnout, work engagement and work-related flow. It is therefore recommended that organisations, and specifically call centres, look at all three these constructs when managing the work wellness of their employees. More research should also be done on the positive impact of work-related flow in the industry and the relationship thereof with job demands, job resources, burnout, and work engagement. Although previous research (Bakker & Geurts, 2004; Le Roux, 2005) found that job resources seem to be a significant predictor of

Work Engagement and Work-Related Flow, this result could not be confirmed in this study. Further research is therefore necessary to determine the impact, or lack thereof, of job resources and job demands on work engagement and work-related flow, specifically within a bigger sample of call centre agents. The possibility also exists that the identified job resources and job demands may have been biased and not have reflected the experience of all call centre agents. It is therefore recommended that a further analysis be done on the unique job resources and job demands of call centres.

Limitations of this study include the use of a cross-sectional survey design. Longitudinal research may have provided more valid results. The response of the call centre agents was also very poor due to the hectic, demanding and competitive nature of their working environment. It was felt that their work performance suffers when they are absent from their work stations, seeing that they work on commission basis. As a result, only 176 surveys were retrieved.

The results were also solely obtained by self-report measures. This may lead to a problem known as "method variance" or "nuisance" (Dollard & Winefield, 1998). The questionnaire was available only in English. The possibility exists that respondents' level of English language skills (with English as a second, third or even fourth language) could have influenced the results. Although the JDRS was developed for the purpose of this study, it is possible that certain information was not included in the compilation of the instrument. It may therefore be necessary to investigate the factor structure of the JDRS in other organisations in the insurance industry. The OLBI presented difficulty during the statistical analysis of the responses obtained from the call centre agents. For this reason, it may be necessary to make use of alternative instruments to measure burnout (such as the MBI-GS), but also to determine whether the items within the OLBI are stated in a South African vocabulary.

Similar studies need to be undertaken for other samples from the call centre industry. Future longitudinal research should be conducted to identify the causal nature of – and determine the relationship between – variables, and to ascertain which variables could enhance work-related flow. The inclusion of personality dimensions in future research is recommended to establish the effects of personality differences on work-related flow experienced in call centre environments. Larger sample sizes will also allow for testing of construct equivalence and item bias in multicultural samples.

REFERENCES

Arbuckle, J. L. (2003). *AMOS 5.0. Update to the AMOS User's Guide*. Chicago, IL: Smallwaters Corporation.

Arkin, A. (1997). Hold the Production Line, *People Management, 3*(3), 22-7.

Athanassopoulous, A. D. (2000). Customer Satisfaction Cues to Support Market Segmentation and Explain Switching Behavior, *Journal of Business Research*, 47, 191-207.

Bakker, A. B. (in press). *Development and validation of the Work-Related Flow Inventory (WOLF)*. Manuscript submitted for publication.

Bakker, A. B. (2001). *Questionnaire for the assessment of work-related flow: The WOLF*. Utrecht University, The Netherlands: Department of Social and Organizational Psychology.

Bakker, A. B. (2004). *Development and validation of the Work-Related Flow inventory (WOLF)*. Utrecht University, Department of Social and Organizational Psychology, and Research Institute Psychology and Health, Utrecht, The Netherlands.

Bakker, A. B. (2005). Flow among music teachers and their students: The crossover of peak experiences. *Journal of Vacational Behaviour,* 66, 26-44.

Bakker, A. B., Demerouti, E., De Boer, E., & Schaufeli, W. B. (2003). Job demands and job resources as predictors of absence duration and frequency. *Journal of Vocational Behavior,* 62, 341-356.

Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management, 43*(1), 83-104, Spring.

Bakker, A. B., & Geurts, S. A. E. (2004). Towards a dual-process model of work-home interference. *Work and Occupations*, 31, 345-366.

Batt, R. (2002). Managing customer services: Human resource practices, quit rates, and sales growth. *Academy of Management Journal,* 45, 587-597.

Bryce, J., & Haworth, J. (2002). Wellbeing and flow in sample of male and female office workers. *Leisure Studies*. 21, 249-263.

Bulloc, C. (1999). Call centres – the never centres of business. In Norman, K. (2005). *Call centre work – characteristics, physical, and psychosocial exposure, and health related outcomes.* Unpublished Doctoral Thesis. Graduate School for Human-Machine Interaction Division of Industrial Ergonomics Department of Mechanical Engineering. (pp 2). Linköning University.

Burns, N., & Grove, S. K. (1993). *The practice of nursing research, conduct, critique, and utilization* (2nd ed.). Philadelphia, PA: W.B. Saunders.

Byrne, B. M. (2001). *Structural equation modelling with AMOS: basic concepts, applications, and programming*. Mahwah, N.J.: Lawrence Erlbaum Associates.

Call Centre News Service. (1999). Statistics and the call centre industry (sales, lies and vendors). In Els, L., & De Villiers, P. (2003). *Call centre effectiveness.* (1st ed). (pp 5). Lynnwood Ridge: Amabhuku.

Cartwright, S., & Cooper, C. L. (2002). *ASSET: An Organisational Stress Screening Tool – The Management Guide.* Manchester, RCL Ltd.

Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment, 7,* 309-319.

Coetzer, W. J. (2004). *Burnout and Work Engagement of employees in an insurance company.* Unpublished doctoral thesis, North-West University, Potchefstroom Campus, Potchefstroom.

Cohen, J. (1988). *Statistical power analysis for the behavioural sciences.* (Revised ed.) Orlando, FL: Academic Press.

Cooper, C. L., Dewe, P. J., & O'Driscoll, M. P. (2001). *Organizational stress: A review and critique of theory, research and applications.* Thousand Oaks: Sage.

Cox, T., Griffiths, A., & Rial-Gonzalez, E. (2000). *Research on Work-related Stress.* European Agency for Safety and Health at Work, Office for Official Publications of the European Communities, Luxemburg.

Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety,* San Francisco, CA: Jossey Bass.

Csikszentmihalyi, M. (1988). The flow experience and its significance for human psychology. In M. Csikszentmihalyi & I. S. Csikszentmihalyi (Eds.), *Optimal Experience: Psychological Studies of flow in Consciousness* (pp.15-35). New York: Cambridge University Press.

Csikszentmihalyi, M. (1990). *Flow: The Psychology of Optimal Experience.* New York: Harper and Row.

Csikszentmihalyi, M. (1992). *Flow: The psychology of happiness.* London: Rider.

Csikszentmihalayi, M. (1993). *The evolving self: A psychology for the third millennium.* New York: HarperCollins.

Csikszentmihalyi, M. (1997). *Finding flow: The psychology of engagement with everyday life.* New York: HarperCollins.

Csikszentmihalyi, M. (1999). If we are so rich, why aren't we happy? *American Psychologist,* 54, 821-827.

Csikszentmihalayi, M. (2003). *Good business: Leadership, flow and the making of meaning.* London: Hodder & Stoughton.

Csikszentmihalyi, M., & LeFevre, J. (1989). Optimal experience in work and leisure. *Journal of Personality and Social Psychology,* 56, 815-822.

Demerouti, E., & Bakker, A. B. (2004). *Job Resources, Flow and Other-Ratings of Performance.* University of Utrecht, Department of Social and Organizational Psychology, and Research Institute Psychology and Health, Utrecht. The Netherlands.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2000). A model of burnout and life satisfaction amongst nurses. *Journal of Advanced Nursing*, 32, 454-464.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands–resources model of burnout. *Journal of Applied Psychology,* 86, 499–512.

Demerouti, E., Bakker, A. B., Vardakou, I., & Kantas, A. (2003). The convergent validity of two burnout instruments: A multitrati-multimehtod analysis. *European Journal of Psychological Assessment,* 19, 12-23.

Deshpnadé, R., Farley, J. U., & Webster, F. E. (1993). Corporate Culture, Customer Orientation, and Innovativeness in Japanese Firms: A Quadrant Analysis. *Journal of Marketing*, 57, 23-37, January.

Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, *55*(1), 34-43.

Dollard, M.F. & Winefield, A.H. (1998). A test of the demand-control-support model of work stress in correctional officers. *Journal of Occupational Health Psychology, 3*, 243-264.

Dundu, N. (2004/2005). World Class Organisations: world class? Why not! *Human Capital Management Journal,* 2, 18-20.

Ellis, G. D., Voelkl, J. E., & Morris, C. (1994). Measurement and analyses issues with explanation of variance in daily experience using the flow model. *Journal of Leisure Research*, 26, 337-256.

Els, L., & De Villiers, P. (2003). *Call centre effectiveness.* Lynnwood Ridge: Amabhuku.

Ferreira, M., Conceicao, G., & Da Saldiva, P. (1997). Work organization is significantly associated with upper extremities musculoskeletal disorders among employees engaged in interactive computer-telephone tasks of an international bank subsidiary in Sao Paulo, Brazil. *American Journal of Industrial Medicine, 31*(4), 468-473.

Fried, Y., & Ferris, G. R. (1987). The validity of job characteristics model: A review and meta-analysis. *Personnel Psychology*, 40, 287-322.

Ghani, J. A., & Deshpande, S.P. (1994). Task characteristics and the experience of optimal flow in human-computer interaction. *The Journal of Psychology,* 128, 381-391.

Ghani, J. A., Supnick, R., & Rooney, P. (1991). The Experience of Flow in Computer-Mediated and in Face-to-Face Groups, In J. I. DeGross, I. Benbasat, G, DeSanctis, & C. M. Beath (Eds.) *Proceedings of the Twelfth International Conference on Information Systems* (pp. 16-18). New York, December 16-18.

Grönroos, C. (1982), *Strategic Management and Marketing in the Service Sector.* Swedish School of Economics and Business Administration, Helsinki, Finland.

Hackman, J. R., & Oldham, G. R. (1975). Development of the Job Diagnostic Survey. *Journal of Applied Psychology,* 60(2), 159-170.

Halbesleben, J. R. B., & Demerouti, E. (2005). The construct validity of an alternative measure of burnout: Investigating the English translation of the Oldenburg Burnout Inventory. *Work and Stress,* 19, 208-220.

Harvan, H., Visser, D., & Crous, F. (2003). The internal career orientation of permanent and contracting information technology staff. *South African Journal of Industrial Psychology, 29*(3), 53-60.

Haworth, J. T., & Evans, S. (1995). Challenge, skill and positive subjective states in the daily life of a sample of YTS students. *Journal of Occupational and Organisational Psychology,* 68, 109–121.

Henn, H., Kruse, P., & Strawe, O. (1996). *Handbuch Call Center-Managment: das große Nachschlagewerk für alle, die professionell mit dem Telefon arbeiten* [Handbook of call centre management: The great reference work for all who work professionally with the telephone]. Hannover, Germany: Telepublic Verlag.

Hitt, M. A., Keats, W., & DeMarie, S. M. (1998). Navigating in the new competitive landscape: Building strategic flexibility and competitive advantage in the 21st century. *Academy of Management Executive, 12*(4), 22-42.

Hochschild, A. R. (1983). *The Managed Heart: The Commercialization of Human Feeling.* Berkeley, CA: University of California Press.

Holman, D. (2002). Employee well-being in call centers. *Human Resource Management Journal,* 12, 35-50.

Holman, D. J. (2003). Call centres. In D. J. Holman, T. D. Wall, C. W. Clegg, P. Sparrow, & A. Howard (Eds.), *The new workplace: A guide to the human impact of modern working practices.* (pp 115-134). West Sussex: Wiley & Sons.

Houston, F. S. (1986). The Marketing Concept: What it is and what it is not. *Journal of Marketing,* 50, 81-87, April.

Jaworski, B., & Kohli, A. (1993). Market Orientation: Antecedents and Consequences. *Journal of Marketing,* 52, 53-70.

Karasek, R., & Theorell, T. (1990). *Healthy Work Stress, productivity and the reconstruction of working life.* New York: Basic Books.

Kinnie, N., Hutchinson, S., & Purcell, J. (2000). 'Fun and surveillance': The paradox of high commitment management in call centres. *International Journal of Human Resource Management, 11*(5), 967-85.

Knights, D., & McCabe, D. (1998). What Happens When the Phones Go Wild? Staff, Stress and Spaces for Escape in a PR Telephone Banking Work Regime. *Journal of Management Studies, 35*(2), 163–94.

Köpf, J. (1998). Call Centre Concept. Praxishandbuch fuhr ergolgreiches Telemarketing. Nurwid: Luchterhand. In Norman, K. (2005). *Call centre work – characteristics, physical, and psychosocial exposure, and health related outcomes.* Unpublished Doctoral Thesis. Graduate School for Human-Machine Interaction Division of Industrial Ergonomics Department of Mechanical Engineering: (pp 8). Linköning University.

Lehtinen, U., & Lehtinen, J. R. (1982). *Service quality: a study of quality dimensions.* Unpulished research report, Service Management Group OY, Finland.

Le Roux, A. (2005). *Job demands, job resources and work-related flow of employees in the mining industry in South Africa.* Unpublished masters dissertation, North-West University, Potchefstroom Campus.

Le Roux, A. M. (2006). *The validation of two burnout measures in the South African earthmoving equipment industry.* Unpublished masters dissertation, North-West University, Potchefstroom Campus.

Leiter, M. P. (1993). Burnout as a developmental process: Consideration of models. In W.B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research.* (pp 237-250). Washington, DC: Taylor & Francis.

Lewis, R. C., & Booms, B. H. (1983). The marketing aspects of service quality. In L. L. Berry, G. L. Shostack, & G. Upah. (Eds), *Emerging Perspectives in Services Marketing* (pp. 99-107). Chigaco, IL: American Marketing Association.

Lutz, R. J., & Guiry, M. (1994). *Intense consumption experiences: Peaks, performances, and flows.* Paper presented at the Winter Marketing Educators' Conference, St. Petersburg, Florida. MacDonald, C. L., & Sirianni, C. (1996). The Service Society and the Changing Experience of Work. In C. L. MacDonald, & C. Sirianni (Eds). *Working in the Service Economy.* Philadelphia: Temple University Press.

Mahesh, V. S., & Kasturi, A. (2006). Improving call centre agent performance: A UK-India study based on the agent's point of view. *International Journal of Service Industry Management, 17*(2), 136-157.

Maslach, C., & Goldberg, J. (1998). Prevention of burnout: New perspectives. *Applied and Preventive Psychology,* 7, 63-74.

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

Maslach, C., & Leiter, M. P. (1997). *The truth about burnout.* San Francisco, CA: Jossey-Bass.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology,* 52, 397-422.

McKinlay, A., & Taylor, P. (1997). Foucault and the politics of production. In A. McKinlay, & K. Starkey (Eds), *Foucault, Management and Organisation.* Sage, London.

Mitchell, W. J. (2000). *E-topia.* Cambridge, Mass.: MIT Press.

Moriset, B. (2004). *The Rise of the Call Centre Industry: splintering and virtualization of the economic space.* Centennial Meeting of the Association of American Geographers: Philadelphia.

Naudé, J. L. P., & Rothmann, S. (2006). Work-related well-being of emergency workers in Gauteng. *South African Journal of Psychology, 36*(1), 63-81.

Norman, K. (2005). *Call centre work – characteristics, physical, and psychosocial exposure, and health related outcomes.* Unpublished Doctoral Thesis. Graduate School for Human-Machine Interaction Division of Industrial Ergonomics Department of Mechanical Engineering: Linköning University.

Nunnally, J. C. & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

Parasuraman, A. (1987). Customer Oriented Corporate Cultures Are Crucial to Services Marketing Success. *Journal of Services Marketing, 1*(1), 39-46.

Parasuraman, A. (1998). Customer service in business-to-business markets: an agenda for research. *Journal of Business and Industrial Marketing, 13*(4/5), 309-321.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Retailing, 64*, 12-40.

Pines, A., Aronson, E., & Kafry, D. (1981). *Burnout: From tedium to personal growth.* New York: Free Press

Read, B. B. (2005). *Designing the best call center for your business* (2nd ed). San Francisco, CA: CMP Books.

Rosenthal, P., Hill, S., & Peccei, R. (1997). Checking Out Service: Evaluating Excellence, HRM and TQM in Retailing. *Work Employment and Society, 11*(3), 481-503.

Saavedra, R., & Kwun, S. K. (2000). Affective states in job characteristics theory. *Journal of Organizational Behavior*, 21, 131-146.

Sasser, W. E. Jr, Olsen, P. R., & Wyckoff, D. D. (1978). *Management of Service Operations: Test and Cases.* Boston, MA: Allyn and Bacon.

Schaufeli, W. B., & Bakker, A. B. (2003). *Utrecht Work Engagement Scale: Preliminary Manual.* Occupational Health Psychology Unit, Utrecht University.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behaviour, 25*, 1-23.

Schaufeli, W. B., Bakker, A. B., Hoogduin, K., Schaap, C., & Kladler, A. (2001). On the clinical validity of the Maslach Burnout Inventory and the Burnout Measure. *Psychology and Health*, 16, 565–582.

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

Schaufeli, W. B., Leiter, M. P., Maslach, C., & Jackson, S. E. (1996). Maslach Burnout Inventory-General Survey.

Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A confirmative analytic approach. *Journal of Happiness Studies, 3*, 71-92.

Schneider, B., & Bowen, D. E. (1993). The Service Organisation: Human Resource Management is Crucial. *Organizational Dynamics, 21*(4), 39–52.

Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55, 5-14.

Shapiro, B. P. (1988). What the Hell is 'Market Oriented?' *Harvard Business Review*, 66, 119-25, November – December.

Shaughnessy, J. J., & Zechmeister, E. B. (1997). *Research Methods in Psychology* (4th ed.). New York: McGraw-Hill.

Shinn, M. (1982). Methodological issues: Evaluating and using information. In W. S. Paine (Ed.), *Job stress and burnout.* Beverly Hills: Sage.

Sinkula, J. M., Baker, W. E., & Noordewier, T. (1997). A Framework for Market-Based Organizational Learning: Linking values, knowledge and behavior, *Journal of the Academy of Marketing Science*, 25, 305-18, Fall.

Slater, S., & Narver, J. C. (1995). Market Orientation and the Learning Organization, *Journal of Marketing*, 59, 162-67.

SPSS Inc. (2003). *SPSS 12.0 for Windows.* Chicago, IL: Author.

Steyn, H. S. (1999). *Praktiese beduidendheid: Die gebruik van effekgroottes.* [Practical significance: The use of effect sizes.] Wetenskaplike bydraes – Reeks B: Natuurwetenskappe Nr 117. Potchefstroom: PU vir CHO.

Storm, K., & Rothmann, S. (2003). A Psychometric analysis of the Utrecht Work Engagement Scale in the South African police services. *South African Journal of Industrial Psychology, 29*(4), 62-70.

Stümpfer, D. J. W. (2003). Resilience and burnout: A stitch that could save nine. *South African Journal of Psychology, 33*(2), 69-79.

Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.). Boston, MA: Allyn & Bacon.

Taylor, P., & Bain, P. (2001). Trade unions, workers' rights and the frontier of control in UK call centres. *Economic and Industrial Democracy,* 22, 39-66.

Theorell, T. (1996). Possible mechanisms behind the relationship between the demand-control-support model and disorders from the locomotor system. In S. D. Moon SD, & S. L. Sauter (Eds). *Beyond Biomechanics. Psychosocial aspects of musculoskeletal disorders in office work.* Bristol, London: Taylor Francis.

Totterdell, P., & Holman, D. (2003). Emotion regulation in customer service roles: Testing a model of emotional labor. *Journal of Occupational Health Psychology,* 8, 55-73.

Webster, F. E. Jr. (1988). Rediscovering the Marketing Concept, *Business Horizons*, 31, 29-39, May-June.

Webster, J., Trevino, L. K., & Ryan, L. (1993). The dimensionality and correlates of flow in human computer interactions. *Computers in Human Behavior,* 9, 411-426.

Westin, A. F. (1992). Two key factors that belong in a macro ergonomic analysis of electronic monitoring: Employee perceptions of fairness and the climate of organizational trust or distrust. *Applied Ergonomics*, 23, 35-42.

Wheaton, B., Muthén, B., Alwin, D. F., & Summers, G. G. (1977). Assessing reliability and stability in panel models. In D.R. Heise (Ed), *Sociological methodology* (pp. 84-136). San Francisco, CA: Jossey-Bass.

White, B. (1998). Centres of Attention: Motivating Call Centre Staff, *Flexible Working*, 23-4, September.

Wiencke, W., & Koke, D. (1997). *Call centre Praxis. Den telefonischen Kundenservice erfolgreich organisieren.* Stuutgart; Schäffer-Poeschel. In Norman, K. (2005). *Call centre work – characteristics, physical, and psychosocial exposure, and health related outcomes.* Unpublished Doctoral Thesis. Graduate School for Human-Machine Interaction Division of Industrial Ergonomics Department of Mechanical Engineering: (pp 8). Linköning University.

Zapf, D., Isic, A., Bechtoldt, M., & Blau, P. (2003). What is typical for call centre jobs? Job characteristics, and service interactions in different call centres. *European Journal of Work and Organizational Psychology, 12*(4), 311-340.

Zapf, D., Vogt, C., Seifert, C., Mertini, H., & Isic, A. (1999). Emotion work as a source of stress: The concept and development of an instrument. *European Journal of Work and Organizational Psychology,* 8, 371 – 400.

CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

The purpose of this chapter is to provide conclusions regarding the results obtained in the empirical studies of the research article. Conclusions are drawn with regard to the research objectives. Furthermore, limitations that have been identified throughout the course of the study are discussed. Finally, recommendations for the organisation are made and research opportunities that emanate from this research are presented for future research.

3.1 CONCLUSIONS

The general objective of this research was to determine the relationship between Job Characteristics (i.e. job demands and job resources), Work Wellness (i.e. burnout and work engagement) and Work-Related Flow of call centre agents within Insurance Call Centres in South Africa. The following conclusions can be drawn:

The first objective of the study was to conceptualise job characteristics (i.e. job demands and job resources), work wellness (i.e. burnout and work engagement) and work-related flow from the literature. *Job demands* were conceptualised as the characteristics of the job that require sustained physical and/or mental effort, and that are therefore associated with certain physiological and/or psychological costs (Bakker & Geurts, 2004). *Job resources* were conceptualised as the physical, psychosocial, or organisational aspects of the job that may be functional in meeting job demands, and that may thus reduce the associated physiological and or psychological costs, at the same time stimulating personal growth and development (Bakker & Geurts, 2004).

Burnout was defined as a persistent, negative, work-related state of mind found in normal individuals (Schaufeli & Enzmann, 1998). It is primarily characterised by three dimensions, namely emotional exhaustion, depersonalisation, and personal accomplishment. *Emotional Exhaustion* refers to a lack of energy and a feeling that emotional resources are depleted, whereas *Depersonalisation* refers to the treatment of recipients of services in a negative, cynical, detached and emotionally callous manner. *Reduced Personal Accomplishment* refers to negative self-evaluation, the belief that objectives are not reached, as well as poor professional self-esteem and beliefs of insufficiency on the part of the service provider (Maslach & Goldberg, 1998; Maslach, Schaufeli, & Leiter, 2001).

Schaufeli, Salanova, González-Romá, and Bakker (2002) define work engagement as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication and absorption. *Vigour* is characterised by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties. *Dedication* is characterised by a sense of significance, enthusiasm, inspiration, pride, and challenge. *Absorption* is characterised by being fully concentrated and deeply engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work (Schaufeli, et al., 2002). Absorption is regarded as playing a less central role in the engagement concept (Strümpfer, 2003). Research has indicated that it is not a momentary and specific state. It is a persistent and pervasive affective-cognitive state and is not focused on a particular object, event, individual or behaviour (Schaufeli, et al., 2002).

Work-Related Flow has been defined as a process of optimal experience (Csikszentmihalyi, 1975, 1988, 1992, 1993, 1997), as the consequence of a situation wherein challenges faced by an individual equal his or her skills (Ellis, Voelkl, & Morris, 1994; Ghani & Deshpande, 1994). Research has made it possible to identify three elements of flow. The first element, *absorption*, refers to total concentration and immersion in the activity (Csikszentmihalyi, 1990; Ghani & Deshpande, 1994; Ghani, Supnick, & Rooney, 1991; Lutz & Guiry, 1994; Webster, Trevino, & Ryan, 1993). The second core element of flow is *enjoyment* (Csikszentmihalyi, 1990; Ghani, et al., 1991; Trevino & Webster, 1992). The third and final element, *intrinsic motivation*, refers to the state in which people do what they do 'even at great cost, for the sheer sake of doing it' (Csikszentmihalyi, 1990; Ellis, et al., 1994; Trevino & Webster, 1992). Studies by Csikszentmihalyi and LeFevre (1989), and Haworth and Evans (1995) found that the vast majority of flow experiences came when people were at work rather than during leisure time. The lower level of flow during leisure time can be explained by the inability to organise one's psychic energy during unstructured free time, which may be due to the inability to create challenging situations that require skilled performance (Csikszentmihalyi & LeFevre, 1989).

The second objective of this study was to determine the relationship between job characteristics (i.e. job demands and job resources), work wellness (i.e. burnout and work engagement) and work-related flow according to the literature. The Job Demands-Resources model proposes that the wellbeing of a person is the result of two relatively independent processes (Bakker, Demerouti, De Boer, & Schaufeli, 2003). During the first process, particularly the demanding aspects of work load to constant overtaxing and health problems such as burnout and fatigue. In the second process, the availability of job resources may help employees to cope with the

demanding aspects of their work. Simultaneously, it may stimulate them to learn from and grow in their jobs. This may lead to motivation, feelings of accomplishment, organisational commitment and work engagement (Bakker & Geurts, 2004). However, lacking job resources is likely to cause failure and frustration, which are role players in the occurrence of burnout (Demerouti, Bakker, Nachreiner, & Schaufeli, 2000; Leiter, 1993). Burnout can thus be viewed as a consequence of an improper balance between job demands and job resources. Thus, it seems that job demands and job resources are role players within the accumulation of burnout and engagement. Because of the emergence of the positive psychology paradigm, positive aspects of health and wellbeing are becoming increasingly popular. One of these positive aspects of wellbeing is work engagement, which is considered to be the antipode of burnout (Schaufeli & Bakker, 2003).

Given the fact that burnout and engagement are indicators of the wellness of employees at work, Schaufeli and Bakker (2004) suggest that they could be combined in a model of wellbeing. It is argued that engaged employees see themselves as able to deal completely with the demands of their job, whereas burned-out employees do not. On top of this, Bakker (2004) found that when individuals are able to balance their job demands and job resources, they will be more open to positive experiences (such as flow) in the work situation, which may result in better performance by that individual. Bakker's (2005) study among music teachers, related organisational resources to work-related flow.

The third objective of this study was to determine the construct validity and internal consistency of the different measuring instruments of job characteristics (i.e. job demands and job resources), work wellness (i.e. burnout and work engagement) and work-related flow in a sample of call centre agents. The factor structures of the measuring instruments were determined via principle axis factoring. A direct oblimen rotation was used when there was more than one factor and when the factors were found to be correlated. Ten factors could be extracted on the JDRS, explaining 52,83% of the total variance. These factors were labelled Resource Availability, Pressure, Workload, Supervision, Job Security, Pay and Benefits, Task Freedom, Working Conditions, Support and Opportunity for Growth. Two factors could be extracted on the OLBI, explaining 37,73% of the total variance. These factors were labeled Mental Distance and Exhaustion. One factor could be extracted on the UWES, explaining 58,11% of the total variance. This factor was labeled Work Engagement. Two factors could be extracted on the WOLF, explaining 66,75% of the total variance. These factors were labeled Absorption and Flow.

Acceptable Cronbach alpha coefficients varying from 0,70 to 0,91 were obtained, except for Workload (0,52). These alpha coefficients compared reasonably well with the guideline of 0,70 (0,55 in basic research), demonstrating that a large portion of the variance was explained by the dimensions (internal consistency of the dimensions) (Nunnally & Bernstein, 1994). Most of the scales of the measuring instruments had relatively normal distributions, with the exception of Working Conditions.

The fourth objective of the study was to determine the relationship between job characteristics (i.e. job demands and job resources), work wellness (i.e. burnout and work engagement) and work-related flow in a sample of call centre representatives. Pearson product-moment correlation showed that Work Engagement correlated positively with Absorption and Flow, implying that higher levels of work engagement may result in the probability of experiencing Work-Related Flow. Work Engagement also showed positive correlations with Pay and Benefits, Opportunity for Growth, Supervision, and Task Freedom. This implies that the availability of certain job resources may lead to higher levels of work engagement. Absorption showed positive correlations with Flow, Supervision, Pay and Benefits, Opportunity for Growth, and Task Freedom. This also implies that the availability of certain job characteristics may result in a higher probability that Work-Related Flow may be experienced. Although Csikszentmihalyi (1990) and Bakker (in press) found that job demands such as work pressure had a positive relationship with absorption, no correlation could be found in this study. Bakker (in press) also found that Opportunities for Growth were positively related to each of the three flow dimensions. Le Roux (2005) found in a sample of employees working in the mining industry, that Opportunity for Growth was only correlated to Work Enjoyment. However, in this study, Opportunity for Growth was only positively related to Absorption.

Pressure showed positive correlations with Workload and Working Conditions, indicating that the increase in Pressure is associated with the increase in Workload and Working Conditions. Supervision showed positive correlations with Opportunity for Growth, Task Freedom, Pay and Benefits, and Support. This implies that an increase in terms of Pressure is associated with an increase in Opportunity for Growth, Task Freedom, Pay and Benefits, and Support. Pay and Benefits showed positive correlations with Opportunity for Growth, and Task Freedom. Opportunity for Growth showed a positive correlation with Task Freedom. This implies that the experience of Task Freedom increases in correlations to an increase in the Opportunity for Growth.

The fifth objective of this study was to determine the unique job demands and job resources experienced in a sample of call centre representatives. For this purpose the *Job Demands and Resources Scale* (JDRS) was developed. Various demands and resources in call centres were identified through the use of focus groups. Based on the results, a unique job demands and resources scale was compiled. In this study, a simple factor analysis was conducted on the JDRS, identifying a ten-factor structure, explaining 52,83% of the variance. These factors were labelled Resource Availability, Pressure, Workload, Supervision, Job Security, Pay and Benefits, Task Freedom, Working Conditions, Support and Opportunity for Growth.

A second-order factor analysis was then performed on these ten factors. Two factors were extracted, explaining 46,85% of the total variance. These two factors were labelled Job Resources (consisting of Supervision, Opportunity for Growth, Task Freedom, Pay and Benefits, Resource Availability, and Support) and Job Demands (consisting of Pressure, Working Conditions, Workload, and Job Security).

3.2 LIMITATIONS

The first limitation of this study was the use of a cross-sectional survey design. To deal with the limitation of the use of a cross-sectional design, prospective longitudinal and quasi-experimental research designs are needed to further validate the hypothesised causal relationships within the study.

The second limitation was the size of the sample. The response of the call centre agents was very poor due to the hectic, demanding and competitive nature of their working environment. It was felt that their work performance suffers when they are absent from their work stations, seeing that they work on commission basis. Only 176 of the 370 surveys were retrieved.

The results were obtained solely by self-report measures. This may lead to a problem known as "method variance" or "nuisance". However, several authors argue that this phenomenon is not a major threat if interactions are found (Dollard & Winefield, 1998). Another limitation was that the questionnaire booklets were given to the managers of the various call centres who then had to give the instructions to the call centre agents that participated. The participants completed the questionnaire booklets either at home or at work. Some individuals working in the same area could have discussed the answers, and this could have influenced their responses.

The questionnaire was available only in English. The possibility exists that respondents' level of English language skills (with English as a second, third or even fourth language) could have influenced the results. Another limitation was that only selected job demands and job resources were included in this study. It is possible that certain information was not included in the compilation of the instrument. It may therefore be necessary to investigate the factor structure of the JDRS in other organisations in the insurance industry. On top of this, the OLBI presented difficulty during the statistical analysis of the responses obtained from the call centre agents. For this reason, it may be necessary to make use of an alternative instrument to measure burnout – such as the MBI-GS.

3.3 RECOMMENDATIONS

Recommendations for the management of the organisation and for future research are made in this section.

3.3.1 Recommendations for the organisation

Customer service was initially an unheard of profession, with the overall focus being on production and manufacturing processes (Els & De Villiers, 2003). Since then, quality customer service has become a critical and competitive factor and the fulcrum of businesses worldwide for satisfying the growing need to improve responsiveness and deliver high quality service (Els & De Villiers, 2003). Call centres are one way in which organisations are trying to improve their customer service (Els & De Villiers, 2003). Due to the various advantages organisations obtain through the effective functioning of their call centres, increasing pressure is placed on call centre agents to maintain high levels of performance. For this reason, call centres are labelled as a working environment associated with high levels of stress and Taylorism. In the modern world of business no prospering seems possible without customers (Zapf, Isic, Bechtoldt, & Blau, 2003), but in theory a call centre is just an office equipped with telephones and computer systems, which hold no significance without the people that operate those phones and computers (Read, 2005).

For this reason, it is important to assist the call centre industry in ensuring sustainability, through critically examining the job characteristics (i.e. job demands and job resources), burnout symptoms (i.e. fatigue, forgetfulness, and low intrinsic motivation), work engagement characteristics (i.e. vigour, dedication, and absorption) and work-related flow characteristics (i.e. absorption, intrinsic motivation, and enjoyment) in the environment. The objective is to help the

call centre agents to be engaged and experience a sense of flow in the execution of their work. This might result in higher levels of performance, thus adding to the competitiveness of the industry.

Work wellness was found to comprise burnout, work engagement and work-related flow. It is therefore recommended that organisations and specifically call centres look at all three these constructs when managing the work wellness of their employees. More research should also be done on the positive impact of work-related flow in the industry and the relationship thereof with job demands, job resources, burnout, and work engagement. Although previous research (Bakker & Geurts, 2004; Le Roux, 2005) found that job resources seem to be a significant predictor of Work Engagement and Work-Related Flow, this result could not be confirmed in this study. Further research is therefore necessary to determine the impact, or lack thereof, of job resources and job demands on work engagement and work-related flow, specifically within a bigger sample of call centre agents. The possibility also exists that the identified job resources and job demands may have been biased and not have reflected the experience of all call centre agents. It is therefore recommended that a further analysis be done on the unique job resources and job demands of call centres.

3.3.2 Recommendations for future research

Similar studies need to be undertaken for other samples from the call centre industry. Further research into work-related flow is also needed. Future longitudinal research should be conducted to identify the causal nature of, and determine the relationship between, variables and to ascertain which variables could enhance work-related flow. The inclusion of personality dimensions in future research is recommended to establish the effects of personality differences on work-related flow experienced in call centre environments. Larger sample sizes will also allow for testing of construct equivalence and item bias in multicultural samples. Although the JDRS was developed for the purpose of this study, it is possible that certain information was not included in the compilation of the instrument. It may therefore be necessary to investigate the factor structure of the JDRS in other call centres.

REFERENCES

Bakker, A. B. (in press). *Development and validation of the Work-Related Flow Inventory (WOLF).* Manuscript submitted for publication.

Bakker, A. B. (2004). *Development and validation of the Work-Related Flow inventory (WOLF).* Utrecht University, Department of Social and Organizational Psychology, and Research Institute Psychology and Health, Utrecht, The Netherlands.

Bakker, A. B. (2005). Flow among music teachers and their students: The crossover of peak experiences. *Journal of Vacational Behaviour,* 66, 26-44.

Bakker, A. B., Demerouti, E., De Boer, E., & Schaufeli, W. B. (2003). Job demands and job resources as predictors of absence duration and frequency. *Journal of Vocational Behavior,* 62, 341-356.

Bakker, A. B. & Geurts, S. A. E. (2004). Towards a dual-process model of work-home interference. *Work and Occupations*, 31, 345-366.

Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*, San Francisco, CA: Jossey-Bass.

Csikszentmihalyi, M. (1988). The flow experience and its significance for human psychology. In M. Csikszentmihalyi, & I. S. Csikszentmihalyi (Eds.), *Optimal Experience: Psychological Studies of flow in Consciousness* (pp.15-35). New York: Cambridge University Press.

Csikszentmihalyi, M. (1990). *Flow: The Psychology of Optimal Experience.* New York: Harper and Row.

Csikszentmihalyi, M. (1992). *Flow: The psychology of happiness.* London: Rider.

Csikszentmihalayi, M. (1993). *The evolving self: A psychology for the third millennium.* New York: HaperCollins.

Csikszentmihalyi, M. (1997). *Finding flow: The psychology of engagement with everyday life.* New York: HarperCollins.

Csikszentmihalyi, M., & LeFevre, J. (1989). Optimal experience in work and leisure. *Journal of Personality and Social Psychology*, 56, 815-822.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2000). A model of burnout and life satisfaction amongst nurses. *Journal of Advanced Nursing*, 32, 454-464.

Dollard, M. F., & Winefield, A. H. (1998). A test of the demand-control-support model of work stress in correctional officers. *Journal of Occupational Health Psychology, 3*, 243-264.

Ellis, G. D., Voelkl, J. E., & Morris, C. (1994). Measurement and analyses issues with explanation of variance in daily experience using the flow model. *Journal of Leisure Research*, 26, 337-256.

Els, L., & De Villiers, P. (2003). *Call centre effectiveness.* Lynnwood Ridge: Amabhuku.

Ghani, J. A., & Deshpande, S. P. (1994). Task characteristics and the experience of optimal flow in human-computer interaction. *The Journal of Psychology,* 128, 381-391.

Ghani, J. A., Supnick, R., & Rooney, P. (1991). The Experience of Flow in Computer-Mediated and in Face-to-Face Groups, In J. I. DeGross, I. Benbasat, G. DeSanctis, & C. M. Beath (Eds.) *Proceedings of the Twelfth International Conference on Information Systems* (pp. 16-18). New York, December 16-18.

Haworth, J. T., & Evans, S. (1995). Challenge, skill and positive subjective states in the daily life of a sample of YTS students. *Journal of Occupational and Organisational Psychology,* 68, 109–121.

Leiter, M. P. (1993). Burnout as a developmental process: Consideration of models. In W.B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research.* Washington, DC: Taylor & Francis.

Le Roux, A. (2005). *Job demands, job resources and work-related flow of employees in the mining industry in South Africa.* Unpublished masters dissertation, North-West University, Potchefstroom Campus.

Lutz, R. J., & Guiry, M. (1994). *Intense consumption experiences: Peaks, performances, and flows.* Paper presented at the Winter Marketing Educators' Conference, St. Petersburg, Florida.

Maslach, C., & Goldberg, J. (1998). Prevention of burnout: New perspectives. *Applied and Preventive Psychology,* 7, 63-74.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology,* 52, 397-422.

Nunnally, J. C. & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

Read, B. B. (2005). *Designing the best call center for your business* (2nd ed). San Francisco, CA: CMP Books.

Schaufeli, W. B., & Bakker, A. B. (2003). *Utrecht Work Engagement Scale: Preliminary Manual.* Occupational Health Psychology Unit: Utrecht University.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behaviour, 25,* 1-23.

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

Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A confirmative analytic approach. *Journal of Happiness Studies, 3,* 71-92.

Stümpfer, D. J. W. (2003). Resilience and burnout: A stitch that could save nine. *South African Journal of Psychology, 33*(2), 69-79.

Trevino, L. K., & Webster, J. (1992). Flow in Computer-Mediated Communication. *Communication Research*, 19, 539-573.

Webster, J., Trevino, L. K., & Ryan, L. (1993). The dimensionality and correlates of flow in human computer interactions. *Computers in Human Behavior, 9,* 411-426.

Zapf, D., Isic, A., Bechtoldt, M., & Blau, P. (2003). What is typical for call centre jobs? Job characteristics, and service interactions in different call centres. *European Journal of Work and Organizational Psychology.* 12(4), 311-340.