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Determinant Factors of Work Engagement in South African Retail Pharmacists.

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A research report submitted to the Faculty of Commerce, Law and Management, University of Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Masters of Business Administration.

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ABSTRACT

The healthcare industry in South Africa has been subject to legislative changes in recent years that have impacted the pharmaceutical industry. Retail pharmacies are especially negatively affected with the new pricing regulations. In light of this, the research focuses on retail pharmacists. The purpose of this research is to identify the determinant factors of work engagement in South African retail pharmacists, and to measure the impact of the determinant factors on work engagement in South African retail pharmacists.

A survey was conducted on a sample of retail pharmacists in South Africa, and the data was analysed quantitatively. An adapted version of May, Gilson & Harter's (2004) model was used to test the determinant factors of work engagement. The results revealed that the determinant factors for this sample exhibited significant positive relations with work engagement, as well as influencing work engagement directly. The determinant factors identified were supervisor relations, resources, work role fit, co-worker relations, job enrichment and skill variety.

Work role fit and co-worker relations influenced work engagement the most. The theoretical and practical implications related to work engagement are discussed.

DECLARATION

I, Salmari Viljoen, declare that this research report is my own, unaided work. It is submitted in partial fulfilment of the requirements for the degree of Masters of Business Administration in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Salmari Viljoen
17 November 2006

DEDICATION

I dedicate this report to Jesus Christ, my Lord and Saviour.

Ps 37:5 Commit your way to the Lord, trust also in Him, And He shall bring it to pass.

ACKNOWLEDGEMENTS

I wish to express my sincere thanks to

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1 INTRODUCTION

1.1 Background to the problem

Organisations expect employees to be pro-active, show initiative, take responsibility for their own professional development and be committed to high quality performance (Schaufeli & Salanova, 2005). This objective cannot be achieved only with a 'healthy' workforce, meaning employees who are not absent from work and do not suffer from job stress. More is required to achieve this objective, and this is where the emerging 'Positive Organisational Psychology' comes in (Schaufeli & Salanova, 2005).

The amount of publications on negative physical and mental states outnumbers the amount of publications on positive physical and mental states. Since 1887, 70,000 scientific articles appeared on depression and only 3,000 on happiness and 850 on joy (Schaufeli & Salanova, 2005). The purpose of positive psychology is "to begin to catalyze a change in the focus of psychology from pre-occupation only with repairing the worst things in life to also building positive qualities" (Seligman & Csikszentmihalyi, 2000:5).

Schaufeli, Salanova, González-Romá & Bakker (2002:74) define engagement "as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption". They further state that engagement is not a momentary and specific state, but a more persistent and pervasive affective-cognitive state that is not focused on a particular object, event, individual or behaviour. *Vigour* refers to the resilience and high levels of energy, and being willing and able to invest effort in the work and persist even in times of difficulties. *Dedication* refers to the involvement in one's work with enthusiasm and significance, and a sense of inspiration and pride. *Absorption* refers to total immersion in one's work and being unable to detach oneself from the work.

People occupy roles at work and use varying degrees of themselves, physically, emotionally and cognitively, which have an impact on their work and the experience thereof (Kahn, 1990). The behaviours by which people bring or leave out their personal selves during work role performances is called *personal engagement* and *personal disengagement* Kahn (1990).

May, Gilson & Harter (2004) built onto Kahn's (1990) ethnographic work and distinguished between a physical, emotional and cognitive component of work engagement. This three-dimensional concept of engagement corresponds to the vigour, dedication and absorption as discussed above.

The South African healthcare industry is currently going through regulatory changes, particularly the pharmaceutical industry. Research done recently by Rothman (2005), measuring work engagement in different sectors in South Africa, indicates that hospital pharmacists rank the lowest on work engagement (retail pharmacists were not a sector that was investigated in this particular research).

Work engagement research in the South African healthcare industry, based on the May, *et al* (2004) concept of work engagement, has not been done before. With the changing pharmaceutical industry environment, it is pertinent to focus on this particular sector at this time.

1.2 Context of pharmaceutical industry

Recent legislation changes in the South African healthcare industry had a drastic impact on the pharmaceutical sector (Medicines and Related Substances Control Amendment Act, 1997). Since May 2004, the impact of price regulation on medication has been noticed when this legislation came into play.

A transparent pricing system on all medicines and scheduled substances sold in the Republic of South Africa was introduced. The transparent pricing system

includes a single exit price (SEP), published by the Department of Health, and such price shall be the only price at which manufacturers will be allowed to sell medicines and scheduled substances to any person other than the State. All incentives, samples, bonuses and discounts on medication are prohibited. An appropriate legislated dispensing fee must be charged by a pharmacist or by a person licensed in terms of section 22C(1)(a). This limited dispensing fee for pharmacists on medication replaces the previous 50% mark-up on prescription medication (Medicines and Related Substances Control Amendment Act, 1997).

The Constitutional Court judgement of 30 September 2005 required that the Minister of Health and the Pricing Committee review the above-mentioned dispensing fee of pharmacists, calculated at 26% for an item under R100, and a maximum of R26 for an item that is more than R100. A survey was conducted on all pharmacies in South Africa requesting specific questions on income and expenditure of the pharmacies (Department of Health, press release 18 January 2006).

The Pricing Committee made recommendations to the Minister of Health on the revised dispensing fee, and the proposed draft regulations were published in the first half of 2006, which was open for comment from all stakeholders (Department of Health, press release 9 March 2006).

On 31 October 2006 the Minister of Health, Dr Manto Tshabalala-Msimang, announced the Department of Health's new dispensing fee for medicine, which regulates the pricing system of medicine throughout the pharmaceutical industry. The manufacturers are allowed an annual SEP increase of maximum 5.2% up to the international benchmark for the period 2006/2007. Retail pharmacies are allowed to charge a set tiered dispensing fee on medicine as follows:

- SEP < R75: dispensing fee R4 + 33% of SEP
- SEP R75<R250: Dispensing fee R24 + 6% of SEP

- SEP R250<R1000: Dispensing fee R33 + 3% of SEP
- SEP ≥R1000: Dispensing fee R50 + 1.5% of SEP

Government further legislated in this announcement that the originated medicines have to be benchmarked against selected countries with similar regulatory environment as South Africa, namely Australia, Canada, New Zealand and Spain. Generic medication companies have to be benchmarked indirectly to be at least 40% less than the internationally benchmarked price of the originator medicine (Department of Health, press release, 31 October 2006).

According to the Council of Medical Schemes (Bester, O. Personal Communication, 13 January 2006), there are currently 11,150 registered pharmacists in South Africa of which 153 (1.37%) have emigrated during the last 18 months. A letter of good standing has to be requested from the Council before a person can register as a pharmacist overseas. Numerous retail pharmacies have closed down since the implementation of the new pricing structure. The exact figure is unknown. The researcher perceived a general feeling of disillusionment and frustration from most pharmacists participating in the survey, which was further highlighted in the comments included in the survey.

At the North West University applicants for the pharmacy degree have reduced drastically in recent years. This Pharmacy School has traditionally been the largest faculty to train pharmacists in South Africa. According to Professor Linda Brand, in the past (pre-2004) the Pharmacy School limited their admissions to 180 from the hundreds of applications they received. During the past two years, they have not received more than 90 applicants per annum (Brand, L. Personal Communication, 13 November 2006).

1.3 Purpose of the study

The purpose of this study is to identify the determinant factors of work engagement

in South African retail pharmacists, and to measure the impact of the determinant factors on work engagement in South African retail pharmacists.

1.4 The sub-problems

First sub-problem: What are the determinant factors of work engagement in South African retail pharmacists?

Second sub-problem: Do the determinant factors have an influence on work engagement in South African retail pharmacists?

1.5 Research methodology

May *et al* (2004) proposed a model for the determinant factors and mediating factors of work engagement (Figure 2 & 3). The research is an adapted version of May *et al* (2004), which was built onto Kahn's (1990) ethnographic work done in a field study. The determinant and mediating factors, namely the three psychological conditions (meaningfulness, safety and availability), were researched by May *et al* (2004). The measuring instrument is an adapted version of May *et al's* (2004) statements used in their research, defining the determinant factors and mediating factors of work engagement. The researcher has limited this research to the determinant factors of work engagement in retail pharmacists. The psychological mediating factors are not included.

The media to gather information for this research were a postal survey, e-mail, fax or a door-to-door survey. The data has been captured and analysed quantitatively.

1.6 Significance of study

Research done by Kahn (1990) focused on the psychological conditions of personal engagement and disengagement at work. Kahn's (1990) research

explored which people engage, or employ and express themselves, and which people disengage, or withdraw and defend themselves at work.

Aktouf (1992) argues that workers' relation to their work should be a real extension of themselves, where they can express themselves and be satisfied, and personal desires and interests converge with those of the company. The company becomes a place for partnership and dialogue, a workplace no longer functioning solely on the use of a work force. For retail pharmacists, being empathetic towards patients and contributing to improve their quality of life of customers, can be personally rewarding and enhance work satisfaction and work engagement.

Alienation or disengagement is the core problem of workers' lack of commitment and motivation (Aktouf, 1992). Saks (2006) noticed that previous research indicates that employee engagement predicts employee outcomes, financial performance and organisational success. At the same time, recent research by Richman (2006) indicated that employee engagement is on the decline, and disengagement is on the increase.

Work engagement is an individual construct, and one would expect that it would relate to an individual's intentions, behaviour and attitude (Saks, 2006).

The retail pharmacists play an important role in the healthcare industry of South Africa by providing affordable healthcare to the public in urban and rural areas. Blood pressure monitoring, hyperlipidaemia screening tests, administration of immunisations and vaccines have historically been done free of charge by pharmacists or a qualified nursing sister in retail pharmacies clinics. This 'free' service will change in the near future, as the Department of Health is expected to announce a set fee that pharmacists may charge for tests and related healthcare services provided in retail pharmacies.

Providing meaningful work to individuals is important from a humanistic and

practical point of view, as it contributes to personal fulfilment. Research on measuring employee involvement and enthusiasm, indicates that customer satisfaction, loyalty, employee turnover, safety, and to a lesser extent, productivity and profitability are linked to work engagement (May *et al* 2004).

To be able to predict why some individuals can identify with their jobs on a psychological basis, we need to understand the psychological foundations of work engagement. The result of this identification will be more than increased productivity and innovation at work, but may contribute to creating a better and more satisfying work environment (Kahn, 1990). The focus of retail pharmacy owners and managers should be on providing a work environment that ensures engaged, loyal employees, thus preventing unnecessary employee turnover and loss of productivity.

This research will focus on work engagement of retail pharmacists in South Africa at the moment (2006). Research in work engagement has not been widely explored, especially in the South African context. The researcher aims to explore this field of positive psychology in a changing pharmaceutical healthcare environment.

1.7 Definition of terms

The following definitions are relevant to this research study:

Determinant factors are the factors influencing the mediating factors and work engagement. These factors were identified by May *et al* (2004) in a field study as job enrichment, work role fit, co-worker relations, supervisor relations, co-worker norms, self-consciousness, resources and outside activities.

Mediating factors are the three psychological conditions identified by Kahn (1990), namely psychological meaningfulness, psychological safety and

psychological availability which influence work engagement.

A retail pharmacist is a person qualified to prepare and dispense medicinal drugs, selling to the public for use or consumption, also known as a community pharmacist.

Single exit price (SEP) means the price set by the manufacturer or importer of a medicine or scheduled substance in terms of Government regulations combined with the logistics fee and value added tax (VAT). This is the price of the lowest unit of the medicine or scheduled substance within a pack, multiplied by the number of units in the pack (Government Notice, 2004).

Work engagement is the action of engaging or being engaged in your work. Work engagement entails the active use of emotions and behaviours in addition to cognition and physical presence. Also referred to as 'engagement' is this research.

1.8 Scope and limitations

The healthcare industry was chosen as it represents a traditional service sector with strong historical roots. These historical foundations influence work roles and establish more or less a universal image of what attitudes qualities and skills a pharmacist should have. The focus was the pharmaceutical industry, more specifically retail pharmacists. The research results cannot be inferred to be representative of all pharmacists or other sectors within pharmacy in South Africa.

Pharmacists normally specialise and work in different sectors of the pharmaceutical health industry – academic, hospital, manufacturing, wholesale, research and development, managed healthcare, speciality pharmacies (e.g. oncology centres or diabetic centres) and retail pharmacies (also called community pharmacies). Due to accessibility and practicality, the study was limited to all registered retail pharmacies in South Africa, more specifically in Gauteng and the

Free State. This sector deals directly with the public regarding prescribed and over-the-counter medication. Legislation requires that a retail pharmacy must have at least one pharmacist on duty at all times.

The study relied on the Pharmaceutical Council of South Africa database of retail pharmacists, thus the accuracy of the population was limited by errors and omissions that may exist within the database. The Pharmaceutical Council of South Africa classifies pharmacists in two different categories according to the sector of work; pharmacists working in the private and public sectors. These categories are differentiated as private institutional, public institutional, community, wholesale, and manufacturing.

The accuracy of the data is dependent on pharmacists' disclosure of this information to the Pharmaceutical Council of South Africa. There is a six months to a year delay in the update of this database at the Pharmaceutical Council (O. Bester, personal communication, 13 January 2006).

Although this research originated and was inspired by Kahn (1990) and May *et al* (2004), the focus of the research was limited to the determinant factors of work engagement in South African retail pharmacists. It did not focus on the influence of work engagement on the determinant factors. The psychological mediating factors that may play a role in work engagement, as suggested by Kahn (1990) and May *et al* (2004), were excluded from this research.

1.9 Assumption

The disclosure of the retail pharmacists is an accurate reflection of their experience at work at the time of the research.

2 LITERATURE REVIEW

2.1 Work engagement

2.1.1 Background

During the last century workers have become better educated and numerous jobs have been increasingly simplified. The result is that “the person is too much for the job rather than the job is too much for the person” (Hackman & Oldham, 1980:13). Millions of individuals do not find work a challenge nor a personally fulfilling part of their life (Hackman & Oldham,1980).

The human spirit seeks fulfilment through self-expression at work, which is different to what the organisations demand of people, namely rationality, efficiency and personal sacrifice (May *et al,* 2004).

Individuals relate differently to their work environment. Aligning employees to their work improves their chances to be smart, productive and satisfied (Herrmann, 1996). When congruency exists between the individual and the environment, more satisfaction is likely to be the result. On the contrary, Myers & McCaulley (1985:78) state that when a mismatch exists between personality type and occupation, the person usually reports “feeling tired and inadequate”.

According to Kahn (1990), ‘self’ and ‘role’ exist in a dynamic relation, which is negotiable between personal energies and role behaviour (self-employment) and displays ‘self’ within the role (self-expression). The self-in-role is how the person and role performed makes the individual alive or not (Kahn, 1990).

People show an enormous capacity to adapt to their environment in their personal and work life. In the work life, people adapt to challenges, other jobs or to routine affairs. When a person adjusts to a job or new organisation, the ‘change’ is almost invisible. Over the years work experiences change individuals in profound ways –

people become more complacent, personal growth and learning orientated, more security conscious, healthier or more complex (Hackman & Oldham,1980).

Admitting dissatisfaction in your job can indicate a poor choice of work, which causes anxiety that most people try to avoid. Healthcare research show that patient satisfaction is linked to the satisfaction of healthcare employees, and that working conditions are related to medical errors in these settings (May, Oldham & Rathert, 2005).

In focusing on optimal work engagement, employee productivity should increase as it is related to work engagement, as well as the opposite of burnout (Maslach *et al,* 2001; May *et al*, 2004). The implication is important for managers in terms of job design, employee selection and relations with employees.

2.1.2 Concept of engagement and disengagement

Kahn (1990:694) defines personal engagement as "the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances". According to Kahn (1990), engagement means to be psychologically (cognitively, emotionally and physically) present when performing a role at work.

Practical examples of engagement reported by Kahn (1990: 701) were the employment of physical self ('I was just flying around in the office'), cognitively ('in working out the design-construction interfaces') and emotionally ('she refused to give criticism publicly, empathizing with other people's feelings'). Experiencing the joy of creativity in one's work, as well as working with the client as a collaborator is also seen as personal engagement. People become physically involved in tasks (alone or with others), cognitively vigilant and empathetically connected to others during work (Kahn, 1990).

Creativity, beliefs, values and personal connection to others is the result of work engagement (Kahn, 1990). People vary their personal engagement according to the perceived benefits, meaningfulness, guarantee or safety involved. Resources, like availability, are a determinant of engagement as well (Kahn, 1990).

According to Schaufeli & Bakker (2004) engagement is a positive experience and state of mind. Engaged employees have a greater sense of attachment to an organisation, and a lower tendency to leave. When a person is engaged in their work, the individual's relationship with the organisation will be high-quality and trusting, which will further result in a positive attitude and intention to work (Saks, 2006).

Researchers refer to self-employment as 'job involvement' (Lawler & Hall, 1970), 'effort and intrinsic motivation' (Hackman & Oldham, 1980), 'flow', 'interest', 'happiness' and 'joy' (Csikszentmihalyi,1975,1990,1997; Lykken & Csikszentmihalyi, 2001; Hunter & Csikszentmihalyi, 2003).

Lawler & Hall (1970:310-311) describe job involvement as "the degree to which the job situation is central to the person and his [or her] identity". Job involvement differs from engagement, in that job involvement results from cognitive judgment about the ability of a job to satisfy one's personal needs tied to one's self-image (May *et al*, 2004). Engagement differs from job involvement, in that engagement is more concerned with how the individual employs his/her self performing his/her job. Engagement includes actively using emotions and emotions in addition to cognition. Engagement is an antecedent of job involvement, as engaged people will identify with their jobs (May *et al,* 2004).

Csikszentmihalyi (1975:36) defines the concept of 'flow' as "the holistic sensation that people feel when they act with total involvement". This optimal state is characterised by focused attention, clear mind, body and mind unison, effortless

concentration and intrinsic enjoyment. When individuals function in this state, they need no external goals or rewards to motivate them, as the activity creates the motivating force to keep the engagement optimum (May *et al*, 2004). Initial research on 'flow' by Csikszentmihalyi (1975) has shown that during creative tasks, like art, games and science, 'flow' is readily observed and experienced. Flow occurs when a person's skill level is perfectly balanced to the challenge and level of a task that has clear goals and provides immediate feedback (Csikszentmihaly, 1997).

Managers and supervisors tend to experience 'flow' and work engagement more than blue-collar workers (Csikszentmihalyi, 1990; Schaufeli & Salanova, 2005). Typically, 'flow' is a short-term experience whereas a more persistent and pervasive state of mind occurs with engagement (Schaufeli & Salanova, 2005).

Learning and exercising skills as well as doing constructive work and doing it well, contributes to experience of 'happiness'. This 'happiness' forms part of engagement, and varies from time to time, but research indicates that the set point may be genetic (Lykken & Csikszentmihalyi, 2001). 'Happiness' has shown to increase with societal changes such as a better quality of life and changes in expectations and values (Lykken & Csikszentmihalyi, 2001).

'Interest' provides staying power in the face of adversity. When work or other activities are experienced as interesting, concentration comes easy, and persisting with a task is not burdensome (Hunter & Csikszentmihalyi, 2003). During interest-eliciting situations, 'joy' is experienced. The positive state of 'joy' has the following qualities: (1) being fascinated and caught up, (2) enjoying what one is doing (3) being in a state of excitement (Hunter & Csikszentmihalyi, 2003).

Research done on 'burnout' by Maslach, Schaufelli & Leitner (2001) defines engagement as the opposite or positive antithesis of burnout. According to Maslach *et al* (2001), engagement characteristics are energy, involvement and

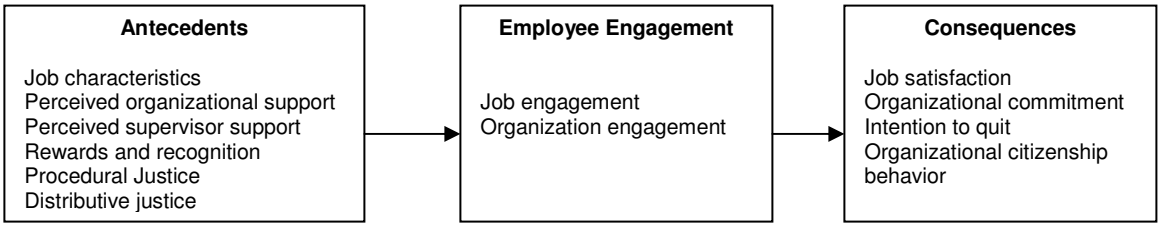
efficacy, which are the opposite characteristics of burnout.

Maslach *et al* (2001) state that six areas of work-life lead to burnout and engagement: workload, control, rewards and recognition, community and social support, perceived fairness and values. Work engagement is expected to mediate the link between these six work-life factors and various work outcomes. Work engagement is associated with sustainable workload, feelings of control and choice, appropriate recognition and reward, a supportive work community, fairness and justice, and meaningful and valued work (Saks, 2006).

According to Saks (2006), a stronger rationale to explain employee engagement, can be found in social exchange theory (SET). SET argues that there is reciprocal interdependence ('rules') between employees and employers. Individuals repay an organisation with their level or work engagement. The amount of cognitive, emotional and physical resources that employees devote in the work role is contingent to socio-emotional and economic resources derived from the organisation (Saks, 2006).

The following model of antecedents and consequences of employee engagement is suggested by Saks (2006):

Figure 1: Model of the antecedents and consequences of employee engagement
Source: Saks, A.M. (2006:604)



The antecedents of employee engagement, as indicated above, include job characteristics which are discussed in more detail under *job enrichment.* Kahn (1992) indicates that jobs, that are high on core job characteristics, give individuals

the incentive to bring themselves into their work and be more engaged. From a SET perspective, it is possible to argue that employees with enriched jobs that are challenging will feel more obliged to respond with higher levels of engagement (Saks, 2006).

According to Kahn (1990), people vary in their engagement, based on their perception of the benefits (rewards and recognition) they receive from work, which confirms SET theory. Furthermore, when high perceptions of justice exist at work, employees are more likely to feel obliged to be fair in how they perform their role by giving more of themselves through greater levels of engagement (Saks, 2006). Maslach *et al* (2001) indicated that a lack of fairness could exacerbate burnout, while a perception of fairness can improve engagement.

The focus on employee engagement indicates that is has positive consequences for organisations and business results (Harter, Schmidt & Hayes, 2002; Saks, 2006). Engagement leads to individual results (i.e. quality of work and a person's experience of work) and the organisation's outcome (i.e. productivity and growth of the organisation) (Kahn, 1992).

Schaufeli & Salanova (2005) describe the positive job features that engaged workers experience as follows: they value intrinsic aspects of their job (e.g. nature of the job, creative part of work, responsibility of the job). Engaged workers enjoy interpersonal aspects (teamwork, humour, sense of belonging), job resources (e.g. variety, autonomy, feedback, opportunities to develop, career prospects) and rewards (e.g. financial rewards, social recognition, self-confirmation, and goal-achievement).

Engaged workers are absorbed because their work is intrinsically motivating, whereas workaholics are absorbed because of their inner drive that they cannot resist. Although both types of workers are loyal and work hard, workaholics work at the expense of social contacts outside work, and at the expense of their own

mental health. Engaged workers feel quite good – socially and mentally (Schaufeli & Salanova, 2005).

According to Schaufeli & Salanova (2005), three strategies may enhance work engagement: establishing and managing the psychological contract, periodic wellness audits, and interactive workshops on work engagement.

This 'psychological contract' reflects the employee's subjective notion of reciprocity: the outcomes or gains are expected from the organisation to be proportional to the employee's inputs or investments. The outcomes can be tangible aspects such as money, or intangible aspects such as dignity, promotion and self-esteem. The investments can be time, effort, loyalty, skills and commitment (Schaufeli & Salanova, 2005).

A chronic mismatch between people and work setting in terms of work life eventually result in burnout (Maslach *et al,* 2001). According to Kirpal (2004) the psychological contract is changing. In severe economic constraints companies tend to undermine their commitment to their employees, which results in a less trust-based relationship between the organisation and employees. When the psychological contract is violated, it might lead to negative outcomes, including job dissatisfaction, intention to quit, staff turnover, cynicism, poor organisational commitment and absenteeism (Schaufeli & Salanova, 2005). To establish this contract, personal and professional goals of the employee must be listed and the necessary resources provided to accomplish these.

Wellness audits are similar to employee satisfaction surveys, but they are more comprehensive as they focus on the positive aspects, like resources and engagement, and the positive individual and organisational outcomes (Schaufeli & Salanova, 2005).

Workshops that aim to build engagement focus on *personal* resources such as

cognitive, behavioural and social skills (e.g. time-management, goal setting and life-style improvement). Workshops also act as a tool for transmission of corporate culture and socialisation of employees, and show organisational commitment to the employees (Schaufeli & Salanova, 2005). All of the above strategies enforce work role fit and work engagement.

Kahn (1990:694) defined personal disengagement as “the uncoupling of selves from work roles; in disengagement, people withdraw and defend themselves physically, cognitively, or emotionally during role performances”. According to Aktouf (1992), a lack of meaning experienced at work normally leads to disengagement.

People perform tasks at a distance from their preferred selves, which remain hidden, and perform the role as external script instead of internal interpretation; they act as custodians, rather than innovators (Kahn, 1990). The person becomes physically uninvolved in their tasks, cognitively unvigilant, and emotionally disconnected from others. They hide their thoughts and feelings, creativity, beliefs and values, and personal connection to others (Kahn, 1990). This withdrawal or disengagement is the removal of personal, internal energies from physical, cognitive and emotional work. A practical example of disengagement reported by Kahn (1990:702) was of a counsellor withdrawing herself physically (‘sending them out and just lying around’), cognitively (‘not telling or helping them much’), and emotionally (‘I was more bland, superficial, talking in flat, unemotional tones’).

When there is a lack of congruency between people’s felt emotions and the organisation’s desired emotions, the individual can potentially disengage from their work (Morris & Feldman, 1996). This type of unemployment behaviour of self has been described by previous researchers as ”apathetic behaviour or robotic” (Hochschild, 1983), ”effortless” (Hackman & Oldham, 1980) and ”burnout” (Maslach *et al*, 2001). Burnout and work engagement are aspects of work-related well-being (Jackson, 2004; Maslach *et al*, 2001).

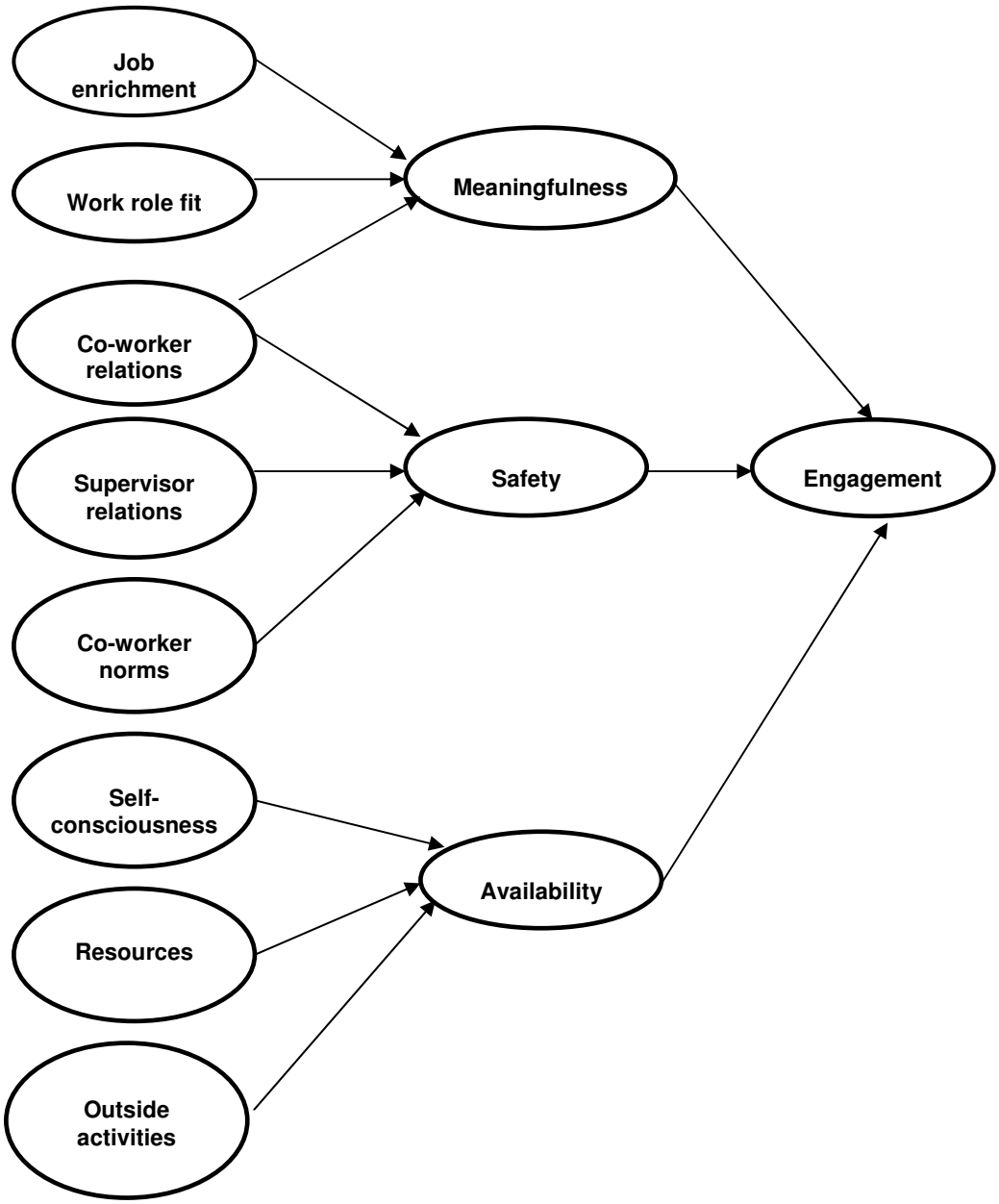
Burnout is defined as “a prolonged response to chronic emotional and interpersonal stressors on the job, and is defined by the three dimensions of exhaustion, cynicism, and inefficacy” (Maslach *et al,* 2001:397). Recent research done by González-Romá, Schaufeli, Bakker & Lloret (2006) on engagement and burnout, indicates that the core dimensions of engagement (vigour and dedication) and burnout (exhaustion and cynicism) are opposites of each other. The three dimensions refer to different aspects in people’s relationship with their work.

The overwhelming exhaustion component of burnout refers to an individual’s depletion of emotional and physical resources. Feelings of cynicism (or depersonalisation) refer to the negative, excessively detached and callous response to aspects of the job. A sense of ineffectiveness and lack of accomplishment reflects the self-evaluation part of the burnout dimension, and refers to feelings of incompetence and lack of achievement and productivity at work (Maslach *et al*, 2001).

Various forms of job withdrawal have been associated with burnout – absenteeism, intension to leave a job and turnover. According to Maslach *et al* (2001), work withdrawal and burnout lead to a reduction in work commitment and a decrease in job satisfaction. A dual-process model assumes that burnout mediates the negative effects of job demands on employee health, whereas work engagement mediates the positive effect of job resources on organisational outcomes (Schaufeli & Salanova, 2005).

May *et al* (2004) came up with the following work engagement model or framework, building on Kahn's (1990) research:

Figure 2: The framework of work engagement
Source: May *et al* (2004:22)



May *et al* (2004) revised the initial framework or model based on the outcome of their research.

Figure 3: The revised framework of work engagement
Source: May *et al* (2004:24)

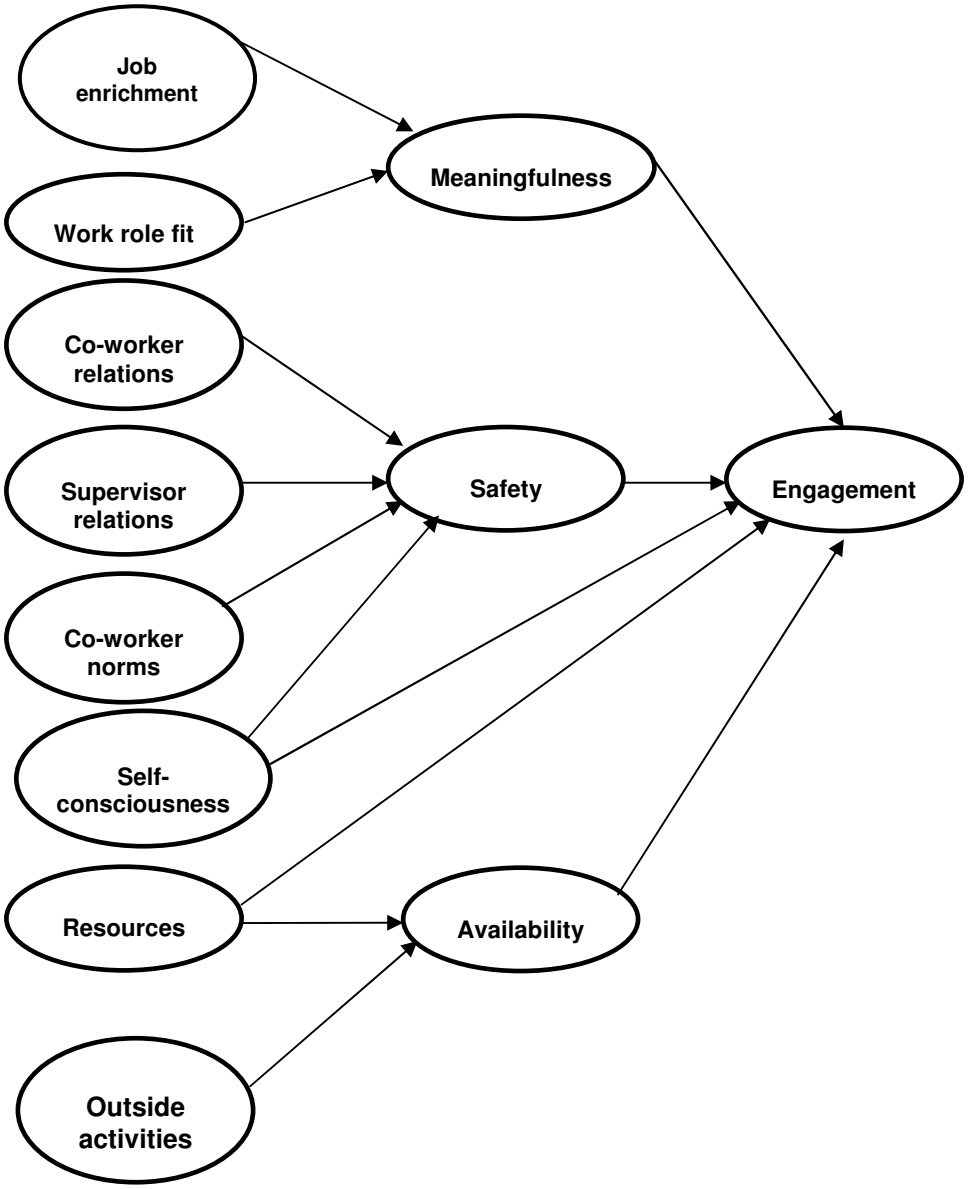
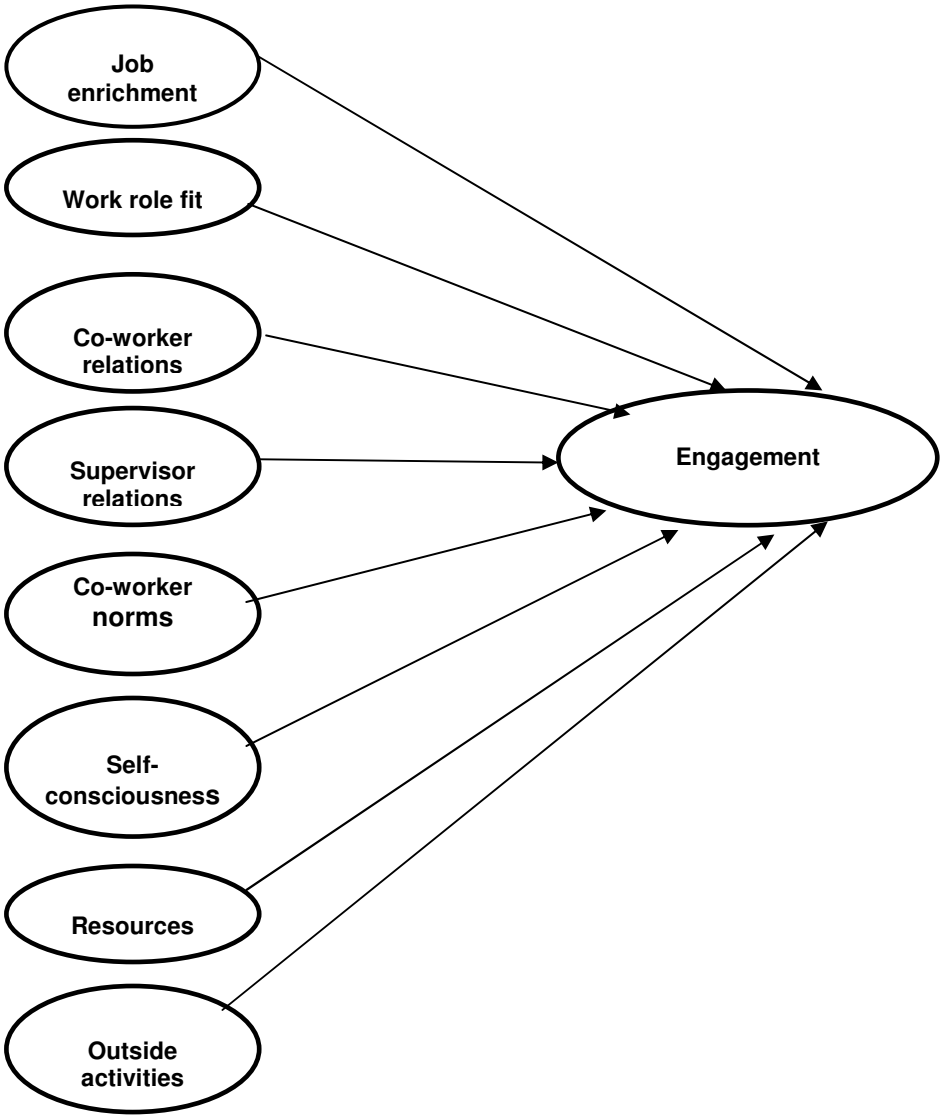


Figure 4: Suggested framework of work engagement for this research



In the Figure 2 and 3 May *et al* (2004) confirm the results from previous theoretical frameworks, and reveal that all three psychological conditions (psychological meaningfulness, psychological safety and psychological availability) exhibit significant positive relations with engagement as stated by Kahn (1990). Psychological meaningfulness displays the strongest relation to work engagement (May *et al*, 2004). Job enrichment and work role fit (determinant factors) are

positively linked to psychological meaningfulness. The relationship of job enrichment and work role fit with engagement are fully mediated by the psychological condition of meaningfulness (May *et al*, 2004).

Rewarding co-worker and supportive supervisor relations (determinant factors) are positively associated with psychological safety. Adherence to co-worker norms and self-consciousness (determinant factors) are negatively associated with psychological safety. Self-consciousness and work engagement are partially mediated by psychological safety (May *et al*, 2004).

Availability of resources (determinant factor) is positively related to psychological availability. Availability of resources and work engagement are partially mediated by psychological availability. Involvement in outside activities (determinant factor) is negatively related to psychological availability (May *et al,* 2004).

This research will focus only on the determinant factors of work engagement as proposed by the model seen in Figure 4, and not the mediating factors (psychological meaningfulness, safety and availability)

2.2 Determinant factors work engagement

2.2.1 Job enrichment

Internal motivation is the result of three things: if a person has the *knowledge of the results* of their work, the person *experiences responsibility* for the results of the work and the person *experiences the work as meaningful*. In order for internal motivation to develop and persist at work, these three factors labelled "psychological states" have to be present (Hackman & Oldham, 1980).

Research done by Kirkcaldy, Trimpop, Fischer & Furnham (1997), has shown that top British managers appear to be motivated by intrinsic aspects of their work

rather than extrinsic aspects. Strengthening the opportunity to experience such potentially rewarding aspects of work is thus important. This can be achieved by creating a managerial job where a high level of autonomy of action (self-sufficiency) is perceived and opportunities exist for planning and structuring work processes. The company can furthermore allow the manager to take full charge of a task domain instead of a sub-task. Rewarding an intrinsically satisfying activity can turn intrinsic motivation into extrinsic motivation (Kirkcaldy *et al*, 1997).

According to the Job Characteristic Theory, the five core job characteristics are skill variety, task identity, task significance, autonomy and job feedback (Hackman & Oldham,1980). The critical psychological states that are the result of five core job characteristics are experienced meaningfulness of the work, experienced responsibility for outcomes of the work and knowledge of the actual results of the work activities. Finally, the outcomes are high internal motivation, high 'growth' and general job satisfaction and high work effectiveness (Hackman & Oldham, 1980).

The job characteristics that contribute to meaningfulness of work, are skill variety, task identify and task significance. When skill variety, task identity (doing a whole piece of work), autonomy and job feedback are present, a person would experience a positive 'kick' from their work, and this internal reinforcement is an incentive for continued performance (Hackman & Oldham, 1980).

Skill variety is "the degree to which a job requires a variety of different activities in carrying out the work, involving the use of a number of different skills and talents of a person" (Hackman & Oldham, 1980:78). Work can be experienced as meaningful if it utilises and stretches a person's skills and talents. Humans seem to explore and manipulate their environment for occasions to test and use their skills (Hackman & Oldham, 1980).

Task identity is "the degree to which a job requires completion of a 'whole' and identifiable piece of work, that is, doing a job from beginning to end with a visible outcome" (Hackman & Oldham, 1980:78). People see a task as more meaningful if they are responsible for doing the whole job, like a doctor seeing to all the needs of

his patients in his field of expertise, or a pharmacist dispensing a prescription and consulting the patient regarding the medication afterwards.

Increase in task identity, where employees have more control over the results of tasks and means used, decreases role ambiguity and role conflict (Lin & Hsieh, 2002). Career stage is possibly a moderator between task identity and organisational commitment. According to Lin & Hsieh (2002), employees in the early and middle stages of their employment period (under the age of 40), identify more strongly with the organisation. Increasing task identity in the early and middle career stages is an important way to increase organisational commitment.

In the late career stage of employees, task identity has a negative influence on organisational commitment. This can be due to a higher demand of ability required, which causes stress. Employees who remain in lower positions can be disillusioned with the lack of further career prospects, and instead of seeing task identity as motivation and trust bestowed on them, they experience it as an extra burden. Too high or too low a level of task identity, reduces work performance (Lin & Hsieh, 2002).

Task significance is “the degree to which the job has a substantial impact on the lives of other people, whether those people are in the immediate organization or in the world at large” (Hackman & Oldham, 1980:79). When workers understand the substantial impact of the job on the physical or psychological well-being of other people (like happiness, health or safety), they experience enhanced meaningfulness in their work (Hackman & Oldham, 1980).

Meaningful tasks that demand new skills and routine, contribute to the experience of meaningfulness at work. Job enrichment focuses on the importance of learning new things, taking courses and advanced programmes to develop skills (Mano-Negrin, 1998).

Within an organisation, the role that people occupy can have status, which contributes to the power and influence that the role brings about. Roles perceived

as unimportant, lacked the power to give the employees a sense of meaningfulness (Kahn, 1990).

The job characteristic that fosters an increase in feelings of personal responsibility is called *autonomy*. Hackman & Oldham (1980:79) define *autonomy* as "the degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out". People seem to feel more personally responsible for success and failures when the job depends on their own effort, decisions and initiatives (Hackman & Oldham, 1980).

The results of a person's work are directly affected by the feedback received from doing the work. Hackman & Oldham (1980:80) define *job feedback* as "the degree to which carrying out the work activities required by the job provides the individual with direct and clear information about the effectiveness of his or her performance". The knowledge and results of how well the work is being done, is derived directly from the work activity, like a doctor treating a patient and seeing the patient getting well. Feedback from a supervisor or co-worker can be designed in the job itself, and is important in getting specific instructions, being informed and receiving feedback on being appreciated (Mano-Negrin, 1998).

The lack of feedback is consistent with the three dimensions of burnout – exhaustion, cynicism and inefficacy. People with little participation and lack of autonomy at work, tend to experience burnout more (Maslach *et al* , 2001).

According to Hackman & Oldham (1980), work effectiveness should improve, especially the quality of work, when jobs are enriched. Work redesign can increase the motivation of employees to work effectively. On the contrary, work redesign can lead to a decrease in the employee's capability to work effectively, due to a lack of new skills required for the new job.

In order for job enrichment to result in a continued change of employees' attitudes and behaviour, the following is necessary: training, career development,

compensation and supervisory practises (Hackman & Oldham, 1980).

Training practises: When the organisation neglects to provide all the information and expertise to perform a new enriched task, the result is frustrated employees. The employees will be unable to take advantage of new opportunities of an enriched job, due to lack of skills development and information. When the organisational practises are incongruent with the new attitudes or behaviours of enriched work, the result may be low levels of motivation and performance (Hackman & Oldham, 1980).

Career development: Employees respond in three different ways to a new enriched job. Some employees might find a new enriched job threatening due to lack of knowledge and skills, as they might not be able to cope with the demands and opportunities of a new enriched job. The fulfilled employee may perform well at work, but has no desire to move upward in the organisation. The growing employee is stimulated to move up the hierarchical career path to positions of leadership and authority. If the possibility of hierarchical mobility is limited, special assignments can be given to exercise authority and creativity (Hackman & Oldham, 1980).

Compensation: The absolute level of pay refers to the employees' perception of their pay. In a new enriched job people might not expect higher salaries, as the psychological rewards can be motivation enough. People tend to connect more responsibility with pay. The form of payment is important, as incentives such as bonuses can be inappropriate if the task is intrinsically interesting and meaningful. (Hackman & Oldham, 1980).

Compensation can offset dissatisfaction in one domain (either family or work) with another. When a person experiences little autonomy at work, it can lead to them seeking autonomy outside of work. As involvement in one domain decreases and increases in another domain, the pursuit of rewards in that domain may lead to satisfaction (Edwards & Rothbard, 2000).

Supervisory practices: The first-line supervisor of an employee, whose job is redesigned, is important. Autonomy, responsibility and quality control can be removed from the supervisor, and given to the employee whose job has been redesigned. The shrinkage in responsibilities may lead to a change in behaviour of the supervisor. The supervisor's duties and responsibilities should change to be supportive and effective toward the employees (Hackman & Oldham, 1980).

Thus, the Job Characteristics Theory (Hackman & Oldham, 1980) assumes that these particular job characteristics, namely skill variety, feedback and autonomy have motivating potential, and should predict positive outcomes, of which intrinsic motivation is closely related to the work engagement concept (Schaufeli & Salanova, 2005).

2.2.2 Work role fit

Work roles (like being a receptionist) carry identities that people in an organisation are required to assume (Kahn, 1990). These identities create work role fit or misfit (Hochschild, 1983). According to Kristof (1996), a distinction is made between the perceived fit and the actual person-organisational fit. The person-organisational fit consists of the constructs of values, goals, climate and culture-variables, and is most frequently an individual's perception (Kristof, 1996).

Employees' ambivalence about their fit in an organisation and the organisation's purposes makes employees insecure. According to Kahn (1990), wealthy employees sometimes lack organisational commitment. Employees sometimes struggle with their desires to contribute to the end goals of an organisation, and are less willing and able to commit if the organisational values do not fit their personal values. Inner debate, when these values do not correspond, takes up energy and leaves little room for engagement to work (Kahn, 1990).

A job is defined as the tasks a person is expected to perform in exchange for

employment, and the characteristics of those tasks. According to Kristof-Brown (2000) two forms of fit are important when making hiring decisions: person-job (P-J) fit, or the match between an applicant and the requirements of a specific job, as well as person-organisation (P-O) fit, or the match between an applicant and broader organisational attributes. P-J fit is judged on the tasks performed and not the organisation in which the job is done (Kristof, 1996).

P-J fit is typical operational, as it matches the employee's knowledge, skills, abilities and the job demands, whereas P-O fit is the congruence of values of the individual and the organisation (Kristof-Brown, 2000). On the other hand, Edwards (1991) defines a P-J fit as the fit between a person's abilities or skills and the demands of a job (demands-abilities fit), or when the job meets the needs of the person (needs-individual fit).

P-J fit is conceptualised as a one's personality or understanding of the job, instead of the motivations, emotions and stress responses to the job (Maslach *et al*, 2001). Emotional harmony occurs when the expressed feelings of employees are congruent with their experienced emotions and expectations. This is an indicator of a good fit between a person and their position at work (Rafaeli & Sutton, 1987).

Roles carry status or influence which is possibly experienced as a sense of meaningfulness, with an underlying sense of power (Kahn, 1990). This leads to a sense of feeling valued and needed. People like to have a feeling of shaping the external world through their work, whether they design a car or work with people. This role status is an indicator of how needed and central a person feels in an organisation.

Human beings tend to be self-expressive and creative at work, and not only goal-oriented (Shamir, 1991). People seek out work roles that allow them to express their authentic self-concepts. Research by Britt (1999) on the Triangle Model of Responsibility indicates that the 'identity-prescription' link (i.e. the degree to which a set of prescriptions or rules are relevant to one's identity or role) was associated with an individual's level of engagement (i.e. responsibility and commitment).

Butler & Waldroop (1999) wrote in their seminal article *"Job Sculpting"*, that people who excel in their work are not necessarily happy in their jobs. Skills do not always lead to job satisfaction - only if the job matches a person's *deeply embedded life interest*s. "Deeply embedded life interests are long-held, emotionally driven passions, intricately entwined with personality and thus born of an intermediate mix of nature and nurture. Deeply embedded life interests do not determine what people are good at - they drive what *kinds* of activities make them happy. At work, this happiness often translates into commitment. It keeps people engaged, and keeps them from quitting." (Butler & Waldroop, 1999:146)

The following eight deeply embedded interests draw people to different business careers (Butler & Waldroop, 1999):

1. *Application of technology* – People who are intrigued by the inner working of things and by analysing them (e.g. taking it apart and solving it).
2. *Quantitative analysing* – People who excel at numbers and see mathematical work as fun (e.g. a marketing person who analyses trends and data).
3. *Theory development and conceptual thinking* – People who love thinking about abstract things.
4. *Creative production* – People who enjoy the beginning of a project the most, when they can create something out of nothing.
5. *Counselling and mentoring* – People who find teaching the most enjoyable thing. In business, the role of mentor or coach fills this need (e.g. when they can guide employees, peers and clients to perform better).
6. *Managing people and relationships* – People who want to manage people. They are less interested in how people grow and accomplish their goals, but rather on building and achieving business goals.
7. *Enterprise control* – People who are driven and want to 'run the business' or take ownership of a project.
8. *Influence through language and ideas* – People who love to talk about ideas, for instance by persuading, negotiating or storytelling. They love to

communicate.

It is therefore pertinent that job sculpting matches the person to the job and that the deeply embedded life interests are identified and incorporated in their job description. This will ensure retention of talented employees (Butler & Waldroop, 1999).

2.2.3 Co-worker relations

Supportive co-worker relations can add meaning and psychological safety to employees. Kahn's research (1990) notices that rewarding interactions with clients and co-workers lead to psychological meaningfulness, which promote dignity, self-appreciation and a sense of feeling worthwhile. In co-worker and client relations, personal and professional elements are involved. In the absence of interpersonal communication and respect, employees prefer to be psychologically absent from that relationship (Kahn, 1990).

Lateral trust in an organisation is the relationship between the employees and co-workers (Costigan, Ilter, Berman, 1998). One of the reasons trust is more important in the work environment, is the migration of organisations towards work teams (Costigan *et al*, 1998). Co-worker trust is found to be a significant predictor of lowered turnover intention, perceived organisational support, and greater affective commitment (Ferris, Connell & Travaglione, 2004). Trust can facilitate effective attitudes and relationships that affect the organisations bottom line (Ferris *et al*, 2004).

When interpersonal relations are supportive and trusting, it promotes psychological safety (Kahn, 1990). On the contrary, when people feel disconnected to co-workers, they do not experience psychological safety. Crossing personal or work boundaries, or hierarchical differences, can be experienced as threatening (Kahn, 1990).

If a person's role at work is perceived to receive respect and authority, people tend to engage more if psychological safety is experienced (Kahn, 1990). The quality of co-worker relations depends on the employees' shared belief whether a mistake will be held against them or not (Edmondson, 1996).

It is a conscious choice of people to trust other people, until proven untrustworthy (Spector & Jones, 2004). 'Insiders' are given a great deal of initial trust, as organisations assume that they operate under the same norms and rules, whereas 'outsiders' would be perceived unknown and less trustworthy. This is called category-based trust (Spector & Jones, 2004). According to McAllister (1995), interpersonal trust can be either cognitive or affective. In cognitive-based trust, reliability and dependability (the facts) is important. In affective trust, the emotional relationship between individuals forms the basis.

Different skills tend to differentiate between co-workers and an informal hierarchy is formed (Kahn, 1990). Informal hierarchy often develops between co-workers, as they perceive differences in work roles. Female employees often feel that male colleagues are undermining their role at work (Kahn 1990). Trust levels vary among males, in that they have shown low initial trust in a new female colleague, and higher initial trust in a new male colleague (Spector & Jones, 2004).

Increased trust in co-worker relationships produces more risk-taking behaviour, specifically affect-based trust of co-workers (Mayer, Davis & Schoorman, 1995). May *et al's* (2004) research determined that supportive and affective trust-building co-worker relations lead to greater psychological safety and engagement at work.

Work engagement is not merely an individual phenomenon, but it occurs in groups, as it was noticed that some teams are more engaged than other teams. This behaviour suggests that a process or emotional contagion exists, thus team members feel engaged as they converge emotionally with the engagement of others in the team (Schaufeli, & Salanova, 2005).

2.2.4 Supervisor relations

There is a power imbalance between subordinates and their managers. Employees are 'dependent' on their managers, as they directly control employees' salaries, promotion and other benefits. People withdraw quicker from possible conflict from a person in a higher hierarchical level, than possible conflict with a co-worker on the same level (Kahn, 1990).

A statistically significant relationship was reported by Wells & Kipnis (2001) between dependency and trust referring to supervisors and employees. Tan & Tan (2000) indicate that trust in a supervisor and trust in an organisation correlate positively and significantly. Mayer *et al* (1995) define trust in a supervisor as the willingness of a subordinate to be vulnerable to the actions of his or her supervisor whose behaviour and actions he or she cannot control.

Tan & Tan (2000) report that trust in a supervisor is strongly associated with benevolence, ability and integrity of the supervisor. Trust in an organisation strongly correlates with global variables, like perceived organisational justice and support (Tan & Tan, 2000).

Supervisors are the link between the organisation and subordinate employees. Trust in a supervisor relates to increased innovative behaviour and satisfaction with the supervisor. Trust in an organisation seems to relate to higher organisational commitment and lower intention to leave (Tan & Tan, 2000). Becker (1992) found that trust in top management and supervisors was positively related to organisational commitment.

Management style that is supportive, resilient and clear, creates psychological safety (Kahn, 1990). Supportive management creates an environment of safety for employees to try, and fail, without fear of the consequences (Kahn, 1990). A supportive, and not controlling, relation between the supervisor and employees should foster perceptions of safety (Edmondson, 1999). Positive trust in supervisors results in employees who know they can rely on the supervisor for

guidance and support (Tan & Tan, 2000).

Individuals are likely to try out innovative ways of doing things and discuss mistakes, when the work environment is supportive (Edmondson, 1996, 1999). A supportive supervisor will display concern for employees' feelings, give feedback and develop new skills, and encourage employees to discuss their concerns.

Autonomy in the work creates a safer environment for people to work in (Hackman & Oldham, 1980). Employees that are tightly controlled by management experience this tight control as not being trusted, and will fear stepping over boundaries. Managers who are unpredictable, inconsistent and hypocritical will aggravate this fear (Kahn, 1990). People need to feel that the figures of authority are secure and competent in their own visions to create paths for the subordinates (Kahn, 1990).

Ambivalence in the way that an organisation's management acts, sends mixed messages to employees. Different 'tones' of management lead to a lack of safety experienced by employees and, to subordinates limiting themselves in expressing and employing themselves towards management (Kahn, 1990). Working together requires some degree of trust, as one would expect the other party to respond with similar good intentions. Individuals take a risk in this belief, as the other party may not act out to benevolence (Whitener, Brodt, Korsgaard, & Werner, 1998).

The development of trust for another person in an organisation is critical at the beginning of the relationship. Personal trust is linked to performance, cooperation and quality of communication in organisations (Whitener *et al*, 1998).

Five categories of behaviour have been linked to employees' perceptions of managerial trustworthiness: behavioural consistency, behavioural integrity, sharing and delegation of control, communication (accuracy, explanations and openness), and demonstration of concern (Whitener *et al*, 1998).

Behavioural consistency, or predictability, involves behaving in the same manner across time and contexts. Behavioural integrity entails consistency between words

and deeds. Sharing of control involves employee participation in decision-making. Open communication fosters accurate explanations for managerial actions. Benevolence involves consideration, protecting employees' interests and refraining from exploitation (Mayer *et al*, 1995; McAllister, 1995).

When employees experience supervisor support, the employees perceive this support indicative of the organisation's support, which is an important predictor of employees' engagement (Saks, 2006).

When supervisors' behaviour is trustworthy, it leads to employees being able to invest themselves at work (May *et al*, 2004). Engaged employees always look for new challenges in their work. According to Schaufeli & Salanova (2005), engaged employees are committed to perform on a high quality level, which usually generates positive feedback from the organisation and supervisors (e.g. praise, promotion, fringe benefits) as well as from customers (e.g. satisfaction, gratitude and appreciation).

2.2.5 Co-worker norms

Organisational norms set the safety boundaries for role performances and provide individuals with a reference of appropriate behaviour (Mullen, 2005). In a psychologically safe environment, team leaders and employees can define objectives and agree upon norms to work towards (Edmondson, 2002). Where clear norms are set, information collected and distributed regularly, the mistrust and frustration is less. Edmondson (2002) notes that, for instance, technology implementation could be either a challenge or a team project, depending on the frame created by the team leader. These different frames lead to norms for employees, allowing or disallowing for learning, reflecting and modifying procedure in a participative way.

Norms are enforced where behaviours have some significance to most group

members and certain behaviours are necessary for the group to function effectively. Feldman (1984:47) defines group norms as “the informal rules that groups adopt to regulate and regularize group members’ behavior”. Norms are generally enforced to enable a group’s survival, lead to predictable behaviour, express the values of the group, and avoid embarrassing interpersonal problems (May *et al*, 1990).

According to Feldman (1984) four conditions under which group norms are likely to be enforced are when group survival is at stake (e.g. not discussing internal problems with members of other units). Norms are enforced to predict behaviour of group members (e.g. one person does the filing) and helping the group avoid embarrassing interpersonal problems (e.g. certain types of social interaction might be openly discouraged). Norms are also enforced if they express the central values of the group and clarify what is distinctive about the group’s identity (e.g. an advertising company saying “we think of ourselves personally and professionally as trend-setters”).

Norms usually develop informally and gradually as group members learn that certain behaviours are necessary for the group to function more effectively in the following ways (Feldman,1984):
Explicit statements by supervisors or co-workers (e.g. being on time for work, personal phone calls, long coffee breaks and the way everybody addresses each other at work – Mr. or Mrs.).

1. Critical events in the group’s history (e.g. norms of secrecy might develop that will protect the group, or a norm about not hiring spouses).
2. Primacy (e.g. at group meetings where the supervisor is formal, the group would expect future meetings with the supervisor to be formal or when students develop groups in a lecture hall with ‘their’ seats).
3. Carry-over behaviours from past situations (e.g. doctors are expected to maintain a professional distance from their patients and lawyers maintain strict rules of confidentiality).

Norms most closely associated with relational exchanges are those norms that are expected to enable commitment and trust to develop (Blois & Ivens, 2006). Some types of norms are role integrity, reciprocity and flexibility (Macneil, 1983 cited in Blois & Ivens 2006). Although people retain a desire to achieve their own goals, this can be done discretely. Furthermore, both parties can expect a consequent improvement from their pre-exchanged position when adherence of norms starts taking place (Blois & Ivens, 2006).

Kahn (1990) notices that when individuals conform to established parameters, and stay within these boundaries of appropriate known behaviours, they would feel safe at work. Deviation from norms is a source of anxiety and frustration, especially for people with low status and leverage in an organisation. Norms regulate physical and emotional dimensions of work (Hochschild, 1983).

Non-alignment of job candidates with occupational norms will significantly reduce the likelihood of employees achieving full job satisfaction and fulfilment (Herrmann, 1996). The cause of job dissatisfaction can also be due to other factors, such as poor working conditions.

Cohesion in groups reduces the willingness to challenge or disagree with others' opinions and views. This indicates a lack of interpersonal risk taking in a group (Edmondson, 1999). Openness in communication exists in intimate and small closed systems, where there are no secrets (Kahn, 1990).

May *et al* (2004) state that normative rules in teams, where employees feel they must follow, have the ability to create feelings of less psychological safety, compared to a work environment where employees feel they have more flexibility in their behaviours. Like May *et al* (2004), this research will focus on co-worker norms and not on broader organisational norms, as co-workers have the most influence on employees' actions.

2.2.6 Self-consciousness

Human beings are self-conscious beings, as we can reflect on ourselves, on what we do and what we do not do, as well as what we imagine and not imagine. To be a self-conscious being, does not mean that one constantly operates in self-consciousness.

A self-conscious person lives in a manner where a question such as 'are you aware of what you are doing' is asked and makes sense (Maturana, 2005).

Maturana (2005:69) states: "The experience of being self-conscious occurs when the silent body sensoriality (*sic*) of an operation in self-distinction becomes distinguished as an element of inter-objectivity in the flow of a conversation of self-distinction." When we claim we are operating in self-consciousness, we actually observe ourselves, and are conscious of being in self-consciousness (Maturana, 2005). Thus, self-consciousness is not a neuro-physiological or physiological phenomenon.

Four basic mistakes are made in understanding self-consciousness according to Maturana (2005), namely that we think we need an independent domain of transcendental reality to explain cognition in general, particularly self-consciousness. Another mistake is if we treat language as a tool that distinguishes independent entities. Although the brain is necessary for the occurrence or self-consciousness, this phenomenon is a perceptual experience. Lastly, another basic mistake is that we think we should be able to describe sensations and feelings of self-consciousness, forgetting that "sensations have a presence only as evocation in inter-objectivity" (Maturana, 2005: 69).

Research done by Mano-Negrin (1998), indicates that work related attitudes affect withdrawal behaviour of employees. Judgments about potential, performance and career mobility are driven by expectations of others. Perceptions held by others on

how an individual should behave or act create these expectations. The behaviours behind others' perceptions are not always clearly defined (Moses, Hollenbeck & Sorcher, 1993).

Employees' perceptions and perceived judgment by others, lead to self-consciousness, and this insecurity distracts people too much to engage personally in their work (May *et al*, 2004). People that are preoccupied with others' perceptions of themselves, manage these impressions rather than focus on their work (Kahn, 1990).

According to Maslach *et al* (2001:415) "people thrive in community and function best when they share praise, comfort, happiness, and humour with people they like and respect".

Two personality traits, self-esteem and locus of control, are antecedents as they shape the way how individuals see themselves in relation to work environment (Spreitzer, 1995). Kahn's (1990) research indicates that security in one's work role is influenced by self-consciousness. This lack of self-confidence is very pertinent in new low-status employees in organisations (Kahn, 1990).

Identification occurs when people adopt behaviours and attitudes in order to be associated with a satisfying, self-defining relationship with another person or group (Becker, 1992). Hunter & Csikszentmihalyi (2003) state that the belief that the self is worthy and good provides a setting for effective personal functioning.

During the research on burnout, the personality profile of a stress-prone individual indicates that these individuals have low levels of hardiness, an external locus of control, poor self-esteem and avoidant coping skills (Maslach *et al*, 2001). Neurosis is linked to burnout – which includes anxiety, depression, hostility, self-consciousness, and vulnerability. These individuals tend to be more prone to psychological stress (Maslach *et al*, 2001).

When people defend themselves, they hide their true feelings, thoughts and identity. The behaviour that follows might be defensive and emotionally inexpressive or impersonal. This will result in a decrease in productivity and innovation, as the 'safe' boundaries will form the framework (Kahn, 1990).

Self-consciousness creates self-awareness, in that we are aware of what we do, if we want to do what we do, and the possible consequences of what we do to ourselves, other human beings and non-human beings (Maturana, 2005).

2.2.7 Resources

Resources include material, space, time and funds, which are required to empower individuals to get things done. Access to resources enhances an individual's sense of control over environmental contingencies (Zimmerman, 1995). According to Kahn (1990), physical, emotional and cognitive resources are necessary to engage in one's work.

In this study we will focus more on the physical, emotional and cognitive resources, similar to research done by Kahn (1990) and May *et al* (2004). Being pro-active at work is often discretionary, as individuals have to care about their work and regard it as worthwhile to go the extra mile and invest the effort. If the available resources are limited, there is often little need for an individual to be pro-active (Sonnentag, 2003).

The Vitamin Model of Warr (1987) lists nine types of job resources ('vitamins') that are related to well being and employee health: (1) opportunity for control; (2) opportunity for skill use; (3) external generated goals; (4) variety; (5) environmental clarity; (6) availability of money; (7) physical security; (8) opportunity for interpersonal contact; (9) valued social position. These categories can be further subdivided, but they provide a list of resources that can be profiled in a particular

job to identify lacking resources.

Levels of physical energy, strength and readiness are required for personal engagement. Some jobs are physically more demanding than others are. Hollenbeck, Ilgen & Campton (1992) indicate that even sitting at work for periods of time, could put enormous stress on a person's back. When people are physically worn out, they are unable to engage properly in their work, which normally results in physical disengagement (May *et al*, 2004).

Exhaustion is the incapability of physically performing well because of a lack of energy, whereas mental distancing involves an employee's *unwillingness* to perform because of an increased intolerance of any effort (Jackson, Rothman, & de Vijver, 2004).

Emotional demands at work vary, and research has indicated that service sector jobs require emotional labour (Sutton, 1991). According to Kahn (1990), even giving attention to somebody else can be emotionally draining, especially in the service sector.

Mental distancing, or psychological withdrawal from the task, is an adaptive mechanism to cope with excessive job demands and resulting feelings of exhaustion (Maslach *et al,* 2001). Role conflict exists when conflicting demands of work are experienced. Role ambiguity is experienced when a person has a lack of adequate information to do the work well. According to Maslach *et al* (2001), burnout is particularly related to job demands (e.g. emotional demands and work overload) whereas work engagement is related to job resources (e.g. availability of feedback, learning opportunities, and job control).

According to Maslach *et al* (2001), emotional work can be very draining. This is pertinent when a job requires people to express emotions that are contrary to their own feelings. This workload mismatch can result from doing the wrong kind of

work, and contributes to experiencing exhaustion. Emotional labour has negative and dysfunctional consequences for workers. The constant pressure of emotional labour may lead to headaches, absenteeism, drug use and excessive drinking (Hochschild, 1983).

Expression of self in a task, like designing a building, requires emotional labour which ensures a person engages emotionally (Kahn, 1990). People withdraw from their tasks when they feel they have 'nothing to give'.

According to Hochschild (1983), jobs that involve displays of emotion, possess three characteristics: they entail facial or voice contact with the public, the job requires the worker to react with an emotion to the customer, and it provides the employer with an opportunity to control emotional activities of the employee. When employees are expected to display emotions to customers or clients, it is a form of 'labour'. These types of public expression of emotions require anticipation, planning, effort and adjustment to situational factors, that employees might not feel privately (James, 1989).

Research on emotional labour by Morris & Feldman (1996) indicates that emotional dissonance, the frequency, duration, and intensity of these emotional displays, lead to depletion of emotional resources.

Frequency of interaction: Customers and clients comply with organisational goals when employees have established trust, affective bonds of liking and respect with their customers and clients (Morris & Feldman, 1997).

Duration of action: Short interaction with customers might require a smile or 'thank you', whereas longer interactions are associated with higher levels of burnout (Cordes & Dougherty, 1993). Longer interactions reveal more personal information about the customer or client, and it is harder for employees to show 'real' feelings that might violate organisational norms (James, 1989).

Emotional dissonance: This conflict exists between genuinely felt emotions and the emotions that need to be displayed by the employee (Morris & Feldman, 1997). Organisations can enrich service jobs by allowing more flexibility for their employees on how they could display emotions. Emotional dissonance has the most negative impact on psychological well-being. Recruitment selection should consider the individuals' characteristics when matching the positions, for example, flight attendants require positive emotions, whereas debt collectors and funeral directors require negative emotions (Morris & Feldman, 1997).

Emotional deviance occurs when expressed emotions clash with local norms. This is the opposite of emotional dissonance, as the employee expresses inner feelings and ignores feeling rules. Employees may quit or be punished it they behave this way (Rafaeli & Sutton, 1987). When a person is unable to express empathy and concern, even if they believe that expressing such feelings is part of the job, it is a sign of burnout (Rafaeli & Sutton, 1987).

Cognitive demands and resources vary between individuals and different jobs (May *et al*, 2004). Some people seem to have more cognition for complex tasks than others, and their specific work role might demand a certain amount of cognition. The access to resources increases the likelihood of a person feeling hopeful and optimistic about the future. This access make people feel more positive (powerful, confident, enthusiastic) and less negative (doubtful, lonely, empty) (Hunter & Csikszentmihalyi , 2003).

2.2.8 Outside activities

Life outside work has an impact on how individuals feel and behave at work (Sonnentag, 2003). The components of work engagement are vigour, dedication and absorption (Schaufeli *et al*, 2002). Recovery during leisure time will have a positive effect on vigour, dedication and absorption (Sonnentag, 2003).

Outside lives have the potential of distracting a person psychologically from their work role and diminishing their energy at work (Kahn, 1990). The boundaries that exist in work-family, indicate that non-work lives could preoccupy and distract from the work role performance (Kahn, 1990; Edwards & Rothbard, 2000). When time demands of outside activities are substantial (e.g. volunteer work, school activities and recreation), it can distract the individual's attention to such a degree that the person is unable to focus adequately on work. This is referred to as the resource drain perspective (Edwards & Rothbard, 2000).

On the other hand, activities outside of work can actually increase one's energy levels at work. The influence of family on work and work on family is pertinent. Rothbard's (2001) research indicates that family engagement could positively influence the work engagement of women. This multiple role involvement leads to 'energy expansion' (May *et al*, 2004).

The pressure of fulfilling different roles, is described by Mischenko (2005: 214) as "my many other positions relating to my professional background, my gender, my roles at home and university also merge, confuse and influence my managerial work identities". It is evident that these conflicting identities have a huge impact on work engagement.

Work and family have a spill over effect on one another (Barling, 1995). According to Barling (1995), daily work role overload experienced by one partner, has indirect consequences on the marital behaviour of the other spouse. Family functioning is influenced indirectly by work role experience rather than work role status. The quality rather than the quantity of employment and non-employment has different effects on personal well-being. Personal well-being has an influence on spouses' interaction with one another as well as parent-child interaction. These interactions have an influence on marital functioning and the child's behaviour (Barling, 1995).

Work-to-family conflict has greater effects on both work and family outcome measures (Burke, 2004). Antecedents of work-family conflict include family status, gender, work involvement and work demands. Women with children who are more involved in their jobs, as well as those women experiencing greater job demands, report more work-family conflict (Burke, 2004). Work-family conflict is associated with less job satisfaction and greater intention to quit, lower levels of family satisfaction and higher levels of psychosomatic symptoms and emotional exhaustion (Burke, 2004).

Family well-being consists of two aspects: how well family members get along, and how well the family is functioning. Family-work interference showed consistent negative relationships with satisfaction and well-being (Burke, 2004). A positive association is often found between work and family satisfaction, as well as work and family values (Edwards & Rothbard, 2000).

What constitutes a good work-life balance is elusive, because it is different for different people and it changes as one progresses through life. More demands are made on our time, and how we balance our work and private life. The chaotic confusion of possibilities has a particular impact on woman (Gergen, 2000; Mischenko, 2005). When there is an imbalance of work-life, one is likely to feel stressed, resentful and rushed. At work, this imbalance is reflected in underperformance, resistance to change, absence, people either leaving or the people that are staying, are grumbling (Murphy, 2005). Frustration and reduced capability in the organisation can be the result of this imbalance.

Getting out of balance can be due to priorities and circumstances that change. Resentment can be due to habitual extended work hours, forsaking leisure time and neglecting personal goals. One can also get out of balance when one is trying to fit in with someone else's definition of a 'good' lifestyle (Murphy, 2005). Realising one is out of balance, leaves one with a choice: ignore it or decide to make some changes, like exploration of one's values and priorities, and making some changes

(Murphy, 2005). One should decide what enough is: enough time, enough money, enough family, enough career.

Recent research by Lu, Gilmour, Kao & Huang (2006) on the work-family demands and conflict indicate a contrast in employees from an individualistic (UK) and collective (Taiwan) society. In collectivist societies the focus is on the family welfare. Work is seen as a means of supporting the family. Collectivists work to live, thus the family prosperity is the prerequisite for personal happiness and meaning of life. Work and home are not viewed as independent domains, and less conflict is experienced when demands are made on both. The value orientation of collectivists may act as a buffer on the demands of the work-family and family-work conflict experience (Lu *et al*, 2006).

The core of cultural individualism is supremacy of individual goals, emphasising personal independence and autonomy. Personal accomplishment is a prerequisite for personal happiness and the meaning of life. Conflict is experienced when both family and self make demands. Individualists live to work (Lu *et al*, 2006).

In the process of striving for continual self-improvement and developing self-awareness, the individual is encouraged to work towards self-fulfilment particularly in the work context (Mischenko, 2005). This contributes to the self-inflicted and experienced pressure to perform in their personal and work life.

Research done by Cockerill, Pyle & Read (1996) focused on the self-efficacy/self-esteem relationship in sport and work. This research proposes that self-efficacy is necessary for success in sport and work, and a successful performance outcome in both these arenas lead to enhanced self-esteem.

According to Kirkcaldy *et al* (1997), a perceived lack of leisure time reduces relaxation, as well as a person's need to recuperate and participate in diverse family activity. Further repercussions of reduced leisure time are the impact on the

quality of work, physical health problems, because of lack of physical recreational activities, and conflict that can arise in home-work interference. People, who face stressful work, need more time to relax, unwind and recover from work (Sonnentag, 2003). Men experience lower positive work affect and higher negative affect (Rothbard, 2001), when they spend more time on work-related activities during their leisure time (Sonnentag, 2001). Doing work-related activities at home is detrimental for recovery (Sonnentag, 2001).

People who can honestly say 'I am happy with my life' have either taken responsibility for their own happiness and are actively working at making their life what they want it to be, or they are lucky. When working and living with 'happy people' one finds that they are easy and enjoyable company, professional, positive, good humoured resourceful and capable (Murphy, 2005).

Engaged workers enjoy other things outside work and, unlike workaholics, they do not work because of a strong inner irresistible drive, but because they experience work as fun (Schaufeli & Salanova, 2005).

Individuals, who recover during leisure time, experience a higher level of work engagement during the subsequent workday, if the amount of quality sleep is sufficient (Sonnentag, 2003). According to Kahn (1990), success experienced in outside activities adds to a person's confidence, which has a positive impact on work. A positive interplay between home and work is associated with work engagement (Schaufeli & Salanova, 2005).

2.5 List of Propositions

Proposition 1:

The determinant factors of work engagement in South African retail pharmacists will be:

a) Job enrichment
b) Work role fit
c) Co-worker relations
d) Supervisor relations
e) Co-worker norms
f) Self-consciousness
g) Resources
h) Outside activities

This is because:

People personally engage or disengage at work [Kahn, 1990].

Jobs that are high on core job characteristics (part of job enrichment) give individuals the incentive to bring themselves into their work and be more engaged [Kahn, 1992].

The factors that directly or indirectly influence work engagement, are job enrichment, work role fit, co-worker relations, supervisor relations, co-worker norms, self-consciousness, resources and outside activities. These can be partially mediated by psychological conditions [May et al, 2004].

Job characteristics and perceived supervisor support are antecedents of work engagement [Saks, 2006].

Positive trust in supervisors results in employees who know they can rely on the supervisor for guidance and support [Tan & Tan, 2000].

Work engagement is positively associated with various job resources such as social support, performance feedback, job autonomy, coaching and task variety [Schaufeli, & Salanova, 2005].

Supportive and effective, trust-building co-worker relations lead to greater psychological safety and engagement at work [May *et al,*2004].

Work engagement is not merely an individual phenomenon, but it occurs in groups. This behaviour suggests that a process or emotional contagion exists, thus team members feel engaged as they converge emotionally with the engagement of others in the team [Schaufeli, & Salanova, 2005].

Job sculpting matches the person to the job and the deeply embedded life interests are identified and incorporated in their job description. This will ensure retention of talented employees [Butler & Waldroop, 1999].

"Deeply embedded life interests do not determine what people are good at - they drive what kinds of activities make them happy. At work this happiness often translates into commitment. It keeps people engaged, and keeps them from quitting." [Butler & Waldroop, 1999:146]

Team leaders and employees can define objectives and agree upon norms to work towards [Edmondson, 2002].

Employees' perceptions and perceived judgment by others, lead to self-consciousness, and this insecurity distracts people too much to engage personally in their work [May *et al*, 2004].

Physical, emotional and cognitive resources are necessary to engage in one's work [Kahn, 1990].

Engaged workers enjoy other things outside work and, unlike workaholics, they do not work because of a strong inner irresistible drive, but because they experience work as fun [Schaufeli & Salanova, 2005].

People who are good at their jobs are not necessarily engaged by it, as only life interests will keep people happy and fulfilled over the long term [Butler & Waldroop, 1999].

Proposition 2:

The determinant factors will have an influence on work engagement in South African retail pharmacists.

This is because:

The determinant factors of work engagement, namely job enrichment, work role fit, co-worker relations, supervisor relations, co-worker norms, self-consciousness, resources and outside activities have a direct and indirect influence on work engagement [May et al, 2004].

Job Characteristics Theory (Hackman & Oldham, 1980) assumes that job characteristics, namely skill variety, feedback and autonomy have motivating potential, and should predict positive outcomes, of which intrinsic motivation is closely related to the work engagement concept [Schaufeli & Salanova, 2005].

The relationship of job enrichment and work role fit with engagement are fully mediated by the psychological condition of meaningfulness [May *et al*, 2004].

The Triangle Model of Responsibility indicated that the 'identity-prescription' link (i.e. 'the degree to which a set of prescriptions or rules are relevant to one's identity or role') was associated with an individual's level of engagement (i.e. responsibility and commitment) [Britt, 1999].

The dual-model assumes that work engagement mediates the positive effect of job resources on organisational outcome, whereas burnout mediates the negative

effects of job demands on employee health [Schaufeli & Salanova, 2005].

"Deeply embedded life interests do not determine what people are good at - they drive what kinds of activities make them happy. At work this happiness often translates into commitment. It keeps people engaged and keeps them from quitting." [Butler & Waldroop, 1999:146]

Work engagement is positively associate with various job resources such as social support, performance feedback, job autonomy, coaching and task variety [Schaufeli, & Salanova, 2005].

Supportive and affective trust-building co-worker relations lead to greater psychological safety and engagement at work [May *et al,* 2004).

Social support from job autonomy and work colleagues is positively related to levels of engagement [Schaufeli & Salanova, 2005].

2.6 Integrated Literature Review

Table 1: Integrated Literature Review

FOCUS / AUTHOR	Job enrichment	Work role fit	Co-worker relations	Supervisor relations	Co-worker Norms	Self-Consciousness	Resources	Outside Activities
Britt, 1999				x	x			
Barling, 1995								x
Becker, 1992				x		x		
Blois & Ivens, 2006					x			
Burke, 2004								x
Butler & Waldroop, 1999		x						
Cockerill, Pyle & Read, 1996								x
Cordes & Dougherty, 1993							x	
Costigan, Ilter, Berman, 1998			x					

FOCUS / AUTHOR	Job enrichment	Work role fit	Co-worker relations	Supervisor relations	Co-worker Norms	Self-Consciousness	Resources	Outside Activities
Csikszentmihalyi, 1990, 1997				x				
Edmondson, 1996, 1999				x	x			
Edmondson, 2002					x			
Edwards, 1991		x						
Edwards & Rothbard 2000								x
Feldman, 1984					x			
Ferris, Connell & Travaglione, 2004			x					
Hackman & Oldham, 1980	x			x			x	
Herrmann, 1996		x						
Hochschild, 1983					x		x	
Hunter & Csikszentmihalyi , 2003						x	x	
James, 1989							x	
Kahn, 1990, 1992	x	x	x	x	x	x	x	x
Kirkcaldy, Trimpop, Fischer & Furnham (1997),								x
Kristof, 1996		x						
Kristof-Brown, 2000		x						
Lin & Hsieh, 2002	x							
Lu, Gilmour, Kao & Huang (2006								x
Mano-Negrin, 1998	x							
Maslach, Schaufeli, & Leiter, 2001	x	x	x	x		x	x	
Maturana, 2005						x		
May, 2004	x	x	x	x	x	x	x	x
Mayer, Davis & Schoorman, 1995			x	x				
McAllister, 1995			x	x				
Mischenko, 2005		x						x
Morris & Feldman, 1996, 1997							x	
Moses, Hollenbeck & Sorcher, 1993).						x		
Mullen, 2005					x			
Murphy, 2005								x

FOCUS / AUTHOR	Job enrichment	Work role fit	Co-worker relations	Supervisor relations	Co-worker Norms	Self-Consciousness	Resources	Outside Activities
Myers & McCaulley, 1985		x						
Rafaeli & Sutton, 1987		x					x	
Rothbard,2001								x
Saks, 2006	x	x	x	x				
Schaufeli, & Bakker, 2004							x	
Schaufeli & Salanova, 2005	x		x	x			x	
Shamir, 1991		x						
Sonnentag, 2001, 2003							x	x
Spector & Jones, 2004			x	x				
Tan & Tan, 2000				x				
Warr, 1987							x	
Wells & Kipnis, 2001			x	x				
Whitener, Brodt, Korsgaard & Werner, 1998				x				
Zimmerman, 1995							x	

3 RESEARCH METHODOLOGY

A quantitative analysis approach has been employed in this study. This analysis was performed on data collected through a postal survey, e-mail with electronic questionnaire, a door-to-door survey and faxes. The measuring instrument statement used is an adapted version of May *et al* (2004), which was based on an earlier ethnographic research by Kahn (1990). This was a self-report investigation, which raises the concern for common method variance (Becker, 1992) as data on work engagement was used from one point in time.

3.1 Research population

Two options were considered for the research population for this study:

- All registered pharmacists working in different sectors of the pharmaceutical industry in South Africa; e.g. hospital pharmacists, pharmaceutical companies pharmacists, academic pharmacists, managed healthcare pharmacists, registration pharmacists, research and development pharmacists, retail pharmacists.
- Focus on one specific sector of the pharmaceutical industry, namely the retail pharmacists.

Arguments can be made for both broad and narrow population. A broad population sample gives a complete overview on the pharmaceutical healthcare industry. This approach would be very ambitious considering different sectors where pharmacists practice and time restraints allowed for the research.

The population focus for the research was the retail (also called community) pharmacists of South Africa. Thus, the population consists of all registered retail pharmacists working in community pharmacies in South Africa.

The South African Pharmacy Council mainly classifies pharmacists as working in the private and public sectors, as private institutional, public institutional, community, wholesale, and manufacturing. Legislation stipulates that there should be at least one pharmacist present in a pharmacy (hospital or retail). The participants were informed that the study was for research purposes only, and focus on the participant's perception of their work, perceptions about themselves, their jobs, supervisors and co-workers.

3.2 Sample size and selection

For logical and practical purposes, the population was limited to the South African retail pharmacists. A hardcopy listing all the retail pharmacies in South Africa was bought from the South African Pharmacy Council in January 2006. This list divides all retail pharmacies in South Africa in provinces with their physical and postal address, as well as the telephonic and fax details, and e-mail address. Some retail pharmacies may have more than one pharmacist.

According to the list from the Pharmacy Council of South Africa, the total population of registered retail pharmacies (also called community pharmacies) in South Africa is 2592 as indicated in Table 2**.**

Table 2: Population size of retail pharmacies in South Africa
(Source: South African Pharmaceutical Council, 2006)

Province	**Number of retail pharmacies**
Gauteng	916
KwaZulu-Natal	468
Mpumalanga	147
Limpopo	103
North West Province	137
Free State	127
Western Cape	440
Northern Cape	56
Eastern Cape	196
Undefined	2
TOTAL	**2592**

Errors in the database exit where two pharmacies' physical location is unknown (undefined = 2). The database was checked for other administrative errors to minimise their impact on the sampling process.

In order to prevent the same pharmacist completing the survey multiple times, the following process was used:

- The unit of analysis was the individual pharmacist.
- The position occupied in the pharmacy was specified, i.e. manager, dispensing pharmacist, or pharmacy intern, other.
- The random selected pharmacies were contacted telephonically beforehand to request participation of individual pharmacists.

The verbal communication with each pharmacy stated that more than one pharmacist could complete the questionnaire.

A random selection process was used to select pharmacies to complete the questionnaires. Within the sampling frame, pharmacists working in Gauteng and

the Free State with telephone numbers and e-mail addresses were given priority over those situated in other provinces without the necessary details. This minimised the logistical complexities and costs of the survey.

3.3 Contacting the research sample

Given the finite population, it was imperative to obtain a high response rate. An iterate approach was applied to contact the research sample. The head office of pharmacies that belong to a group, e.g. Dischem or Medicare, was approached to distribute the questionnaires to its branches. All sampling pharmacies were contacted telephonically, confirming the participation and selected format of communication of the questionnaire with feedback. The number of pharmacists working on site who would be interested to participate was listed with their names for collection (if a questionnaire was hand delivered).

The questionnaire was sent by post, e-mailed (including electronic format of the questionnaire or a copy that could be printed and faxed back), hand delivered at the same time as the introductory letter.

The postal envelopes were marked with the following features:

1. 'Private and confidential' indicated in the left front corner of the envelope.
2. Return postal address indicated on the back of the envelope.
3. A response identification number used.

Faxes were marked with the following features:

1. 'Private and confidential' indicated on the coversheet with pharmacist's name.
2. Return fax number was printed on the coversheet.

3. A response identification number used.

E-mails included the following:

1. ‘Private and confidential’ disclaimer.
2. A copy of the questionnaire that could be printed, completed and faxed back or an electronic version that could be completed online.
3. A response identification number on the questionnaire that could be printed and faxed back.

Included in the postal mail was a postage paid envelope with the return address printed on it.

Door-to-door delivered questionnaires process:

1. Pharmacists were informed that the researcher is a pharmacist and the contact details on the introductory letter emphasised.
2. Pharmacists were informed that participation in the study was voluntary, and that responses were confidential.
3. A mutually convenient future date was agreed upon for collection of the survey, and participants could complete it at their own leisure.
4. The researcher collected the completed questionnaires (checked on site) at the appointed date and time, and thanked the participants.
5. They were informed that they could request the results of the survey from the researcher if they were interested.

If no response was received after two weeks of initial contact and communication, a follow-up telephone call was made to ensure that the non-respondents received the original communication. If any problems were encountered in completing the questionnaire, these issues were addressed. If insufficient responses were obtained four weeks after initial communication, the sample size was increased,

depending on the number of responses received to date.

The estimated sample size was 150 to 200 retail pharmacists. The researcher is a qualified pharmacist and did not foresee any problems in obtaining the required response for this research.

3.4 Demographic impact

The pharmacists' position (e.g. manager, dispensing pharmacist, intern or locum) in the pharmacy was important, as this influenced the feedback on the 'supportive supervisor relations' questions. The questionnaire established the position that the retail pharmacists primarily occupy. Gender differences in engagement and outside activities, like family lives, had been identified in previous research on engagement, and were identified upfront in the questionnaire (Rothbard, 2001). These attributes captured during the survey process, were applied in describing the interpretation and response of the pharmacists.

3.5 Questionnaire

The questionnaire should have taken the average respondent about 10-12 minutes to complete.

The questionnaire (see Appendix A) was divided into two sections:

1 Section A asked the respondent demographic information: gender, role of pharmacist in pharmacy and factors that have an influence on the effectiveness and efficiency of the work.

2 Section B consisted of 59 items designed to measure the eight determinant factors of work engagement. It consisted of some of the revised statements by May *et al* (2004) to measure work engagement

and Hackman & Oldham's (1980) job characteristics suggested questions to determine job enrichment.

The questionnaire and response envelope (for postal correspondence) as well as faxed surveys contained an identification number used for response tracking purposes only.

3.6 Measuring instrument construction

The statements used in the questionnaire were developed by May *et al* (2004), based on research done by Kahn (1990), in order to develop a model. This questionnaire was designed to measure the participants' perceptions about themselves, their jobs, supervisors and co-workers (May *et al*, 2004). The original statements of May *et al* (2004) were adapted for the purpose of this research. The research focused on the determinant factors' (job enrichment, work role fit, co-worker relations, supervisor relations, co-worker norms, self-consciousness, resources and outside activities) effect on work engagement.

Section A

The background information:

- Gender
- Role of pharmacist in the pharmacy (manager, dispensing pharmacist, locum, intern, or other)
- The pharmacists' perception of the determinant factors' influence on their work

The following statements determined the pharmacists' perception of their work:

Job enrichment: 1, 2, 3, 4, 5
Work role fit: 6, 7
Co-worker relations: 9

Supervisor relations: 8
Co-worker norms: 10, 11, 12
Self-consciousness: 13
Resources: 14, 15, 16
Outside activities: 17, 18, 19

Section B

All the items in the questionnaire were linked to a five-point Likert scale, ranging from one to five, where 1 = 'Strongly Disagree' and 5 = 'Strongly Agree'.

Three statements for each of the five dimensions were chosen from Hackman & Oldham's (1980) Job Diagnostic Survey (JDS) as indicated by May *et al* (2004), in order to measure job enrichment.

The following questions measured work engagement:

Cognitive: 1, 10, 22, 34
Emotional: 2, 23, 33, 37
Physical: 3, 12, 24, 30

The following questions measured the determinant factors of work engagement;

Overall job enrichment:

- Skill variety: 45, 50, 55
- Task identity: 46, 48, 51
- Task significance: 47, 52, 57
- Autonomy: 53, 56, 58
- Job feedback: 49, 54, 59

Perceived work role fit: 4, 18, 25, 29
Rewarding co-worker relations: 5, 13, 19, 26, 31, 42
Rewarding supervisor relations: 6, 14, 20, 32, 36, 38, 41, 43
Adherence to co-worker norms: 7, 16, 39

Public self-consciousness:	9, 17, 28,
Adequate physical, emotional	
and cognitive resources:	8, 11, 15, 21, 27, 35, 40
Outside activities:	44

Original statements used in the questionnaire by May, Gilson & Harter (2004:36-37).

A. Engagement:

Cognitive

Performing my job is so absorbing that I forget about everything else.

I often think about other things when performing my job.

I am rarely distracted when performing my job.

Time passes quickly when I perform my job.

Emotional

I really put my heart into my job.

I get excited when I perform well on my job. .

I often feel emotionally detached from my job.

My own feelings are affected by how well I perform my job.

Physical

I exert a lot of energy performing my job.

I stay until the job is done.

I avoid working overtime whenever possible.

I take work home to do.

I avoid working too hard.

B. Mediating factors of work engagement:

Meaningfulness

The work I do on this job is very important to me.

My job activities are personally meaningful to me.

The work I do on this job is worthwhile.

My job activities are significant to me.

The work I do on this job is meaningful to me.

I feel that the work I do on my job is valuable.

Psychological safety

I'm not afraid to be myself at work.

I am afraid to express my opinions at work.

There is a threatening environment at work.

Psychological availability

I am confident in my ability to handle competing demands at work.

I am confident in my ability to deal with problems that come up at work.

I am confident in my ability to think clearly at work.

I am confident in my ability to display the appropriate emotions at work.

I am confident that I can handle the physical demands at work.

C. Determinant factors of work engagement:

Job enrichment

Skill variety, task identity, task significance, autonomy, and feedback from the job itself were all measured using three items each from the Job Diagnostic Survey (Hackman & Oldham, 1980).

Work role fit

My job 'fits' how I see myself.

I like the identity my job gives me.

The work I do on this job helps me satisfy who I am.

My job 'fits' how I see myself in the future.

Rewarding co-worker relations

My interactions with my co-workers are rewarding.

My co-workers value my input.

My co-workers listen to what I have to say.

My co-workers really know who I am.

I believe that my co-workers appreciate who I am.

I sense a real connection with my co-workers.

My co-workers and I have mutual respect for one another.

I feel a real 'kinship' with my co-workers.

I feel worthwhile when I am around my co-workers.

I trust my co-workers.

Supportive supervisor relations (1-6 based on Oldham and Cummings (1996) and 7-10 based on Butler (1991))

My supervisor helps me solve work-related problems.

My supervisor encourages me to develop new skills.

My supervisor keeps informed about how employees think and feel about things.

My supervisor encourages employees to participate in important decisions.

My supervisor praises good work.

My supervisor encourages employees to speak up when they disagree with a decision.

My supervisor treats employees fairly.

My supervisor is committed to protecting my interests.

My supervisor does what he/she says he/she will do.

I trust my supervisor.

Co-worker norm adherence

I go along with the norms in my group of co-workers.

I don't 'rock the boat' with my co-workers.
I do what my co-workers expect of me.

Resources

I feel mentally sharp at the end of the workday.
I can't think straight by the end of my workday.
I feel overwhelmed by the things going on at work.
I feel emotionally healthy at the end of the workday.
I feel like I'm at the end of my rope emotionally.
I feel emotionally drained from my work.
I feel tired before my workday is over.
I feel physically used up at the end of the workday.

Self-consciousness

I worry about how others perceive me at work.
I am afraid others will notice my failings.
I don't worry about being judged by others at work.

Outside activities

A single item 'How many hours per week do you participate in organisations other than (the company's name) (i.e. other jobs, church, school, girl scouts, volunteering, etc.)?' The choices were **1** = 1-5 hours, **2** = 6-10 hours, **3** = 11-15 hours, **4** = 16-20 hours, and **5** = 21+ hours

3.7 Pilot study

The purpose of the pilot study was to establish whether:

- The vocabulary was simple, direct and familiar to respondents.
- Any of the words used had vague or ambiguous meanings.

- Any of the statements were inapplicable to respondents.
- Any of the instructions were potentially confusing.

The questionnaire was first administered to a sample of 20 pharmacists in retail pharmacies, which consisted of managers, dispensing pharmacists, locums and interns. These pharmacists perform similar activities and duties of those intended for the study.

The respondents were asked to provide comment and criticism on any or all the statements and instructions, as well as the layout and the structure of the questionnaire.

Information that emerged during the pilot study indicated that the vocabulary used in the survey questionnaire was simple, direct and familiar to respondent. The words were not vague or ambiguous, and all the statements were applicable to respondents, and the instructions were clear.

3.8 Validity and reliability

Validity (accuracy) and *reliability* (consistency) of the measurement instrument influence the probability that one will obtain statistical significance in the data analysis, and the extent to which meaningful conclusions can be drawn from the data (Leedy & Ormrod, 2005).

3.8.1 Validity

The validity of a measuring instrument is the extent to which the instrument measures what it is intended to measure accurately (Leedy & Ormrod, 2005). The result has to be consistent and reproducible.

Leedy & Ormrod (2005) note four kinds of validity forms, namely face validity, content validity, criterion validity and construct validity. This study was a replicate study; therefore, face validity was applied. According to Leedy & Ormrod (2005:92) "face validity is the extent to which, on the surface, an instrument *looks like* it's measuring a particular characteristic". It relies entirely on the subjective opinion of the participant; it is not always convincing that the measuring instrument measures what the researcher wants to measure.

Face validity is applicable to this research, as the concepts to be measured are clearly defined by Kahn (1990) and May *et al* (2004). The measurement instrument is a bit lengthy but not complex. A pilot study was conducted on six pharmacists to ensure they understood and interpreted each question before the research was commenced. This feedback ensured that all the questions were clearly understood and identified any potentially confusing or ambiguous questions. The responses of the pilot study participants were not included in the final research.

As described in section 3.6, the instrument appears to measure the determinant factors of work engagement applied in this research consistently and repeatedly, and does not seem to measure anything else.

3.8.2 Internal validity

Internal validity is the extent to which the design and data collected enables the researcher to draw accurate conclusions about the relationships within the data (Leedy & Ormrod, 2005). The accuracy, meaningfulness and credibility of the research project as a whole is determined by the validity.

The first part is to confirm that the construct allows the concept of work engagement to be measured accurately. The research study is a replica of existing research (May *et al*, 2004) examining the psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at

work. Thus, a similar version of the instrument was used to examine this particular area of interest.

The second part, of ensuring the internal validity is the design of the measuring instrument and data collected, must allow relationships to be determined. A rating scale was used. The rating scale was developed by Rensis Likert in the 1930's to assess people's attitudes and is called a 'Likert scale' (Leedy & Ormrod, 2005). According to Leedy & Ormrod (2005: 185), a "rating scale is more useful when behaviour, attitude, or phenomenon of interest needs to be evaluated on a continuum", e.g. "Strongly Disagree" to "Strongly Agree". Where rating scales are used, the problem may exist that one simplifies and more easily quantifies people's attitudes and behaviours, and in the process might lose valuable information (Leedy & Ormrod, 2005). The trade-off with the particular research problem should be determined.

The measurement instrument instructs the pharmacist to respond based on their experience as a professional person in a retail environment. The results were gathered based on the positions of the pharmacist in the retail environment. Therefore, the research design was considered internally valid.

3.8.3 External validity

External validity refers to the extent to which the research results apply to situations beyond the study itself – also explained as the extent to which the conclusions drawn can be generalised to other contexts (Leedy & Ormrod, 2005).

Three common strategies enhance external validity, namely a real-life setting, a representative sample, and replication in a different context (Leedy & Ormrod, 2005). In this instance, external validity is assessed by determining whether a real-life setting and a representative sample of the population is being measured.

The study has been limited to the retail pharmacists of South Africa. This research proposed to distribute the questionnaire via postal mail, faxes, e-mail and door-to-door, which allowed a greater proportion of the population to be reached. In addition, the database provided by the South African Pharmaceutical Council is exhaustive as it contains the names of all the registered retail pharmacies in South Africa. The research was considered externally valid as it was a real-life setting and was randomly selected from all retail pharmacies.

3.8.4 Reliability

Reliability is the consistency of a measuring instrument, and the extent to which it yields a consistent result when the specific entity being measured has not changed (Leedy & Ormrod, 2005). According to Leedy & Ormrod (2005) “instruments designed to measure psychological characteristics (insubstantial phenomena) tend to be less reliable than those designed to measure physical (substantial) phenomena”.

Several forms of reliability are of interest in research, namely internal consistency reliability, equivalent forms reliability and test-retest reliability (Leedy & Ormrod, 2005). Reliability of a measurement instrument can be enhanced by ensuring standardisation in the use of the instrument from one person to the next (Leedy & Ormrod, 2005).

Kahn (1990) theorised that there are probably three dimensions of engagement, namely psychological meaningfulness, psychological safety and psychological availability.

May *et al* (2004) conducted an exploratory principle component analysis of 24 items initially developed for the study. Because they did not find three separate and reliable scales representing physical, emotional and cognitive engagement, an overall scale with fewer items was used that demonstrated good reliability (May *et*

al 2004).

Cronbach Alpha is the first measure that should be used to estimate the quality in internal consistency of the instrument. The internal consistencies (Cronbach Alpha coefficients) reported by May *et al* (2004) varied from 0.61 for c*o-worker norm adherence* to 0.95 for s*upportive supervisor relation.*

Psychological engagement was measured by averaging 13 items ([alpha] =0.77). The items reflected each of Kahn's (1990) components of psychological engagement: cognitive, emotional and physical engagement.

Job enrichment was measured by 15 items ([alpha] = 0.85) from the Job Diagnostic Survey (JDS) (Hackman & Oldham, 1980) in order to establish an overall indicator of job enrichment. JDS used three items for each of the five job-related dimensions: skill variety, task identity, task significance, autonomy and feedback.

Work role fit was measured by averaging four items ([alpha] = 0.92) from previous research (May, 2003 cited in May *et al,* 2004) which indicated whether individuals were a perceived fit with their jobs and self-concept (Kirstof, 1996).

Rewarding co-worker relations was measured by averaging 10 items ([alpha] = 0.93) from previous research (May, 2003 cited in May *et al,* 2004). These items indicated whether an individual's input is valued by co-workers, if they trust one another, and whether individuals were valued for who they were (May *et al*, 2004).

Supportive supervisor relations was measured by averaging 10 items ([alpha] = 0.95). Oldham & Cummings (1996) was used for the first six items and the last four from Butler (1991) referred to by May *et al* (2004).

Co-worker norm adherence was measured by three items ([alpha] = 0.61) and indicated the degree to which co-worker norms were expected to be adhered to.

This was developed by May *et al* (2004) for their research.

Self-consciousness was measured by averaging three items ([alpha] = 0.83) and indicated public self-consciousness as opposed to private self-consciousness (May *et al,* 2004).

Outside activities was measured using a single item 'How many hours per week do you participate in organisations other than (the company's name) (i.e. other jobs, church, school, girl scouts, volunteering, etc.)?' The choices were 1 = 1-5 hours, 2 = 6-10 hours, 3 = 11-15 hours, 4 = 16-20 hours, and 5 = 21+ hours (May *et al*, 2004).

A coefficient alpha of 0.8 was suggested to be acceptable for basic research where the size of correlation and difference in means is the concern. Therefore, the measurement instrument was considered sufficiently reliable for the intended research (Albright, Winston & Zappe, 2003).

3.9 Statistical analysis

As suggested by Edmondson (1999) both the antecedent and outcome sections of the model must be examined, which was done by May *et al (*2004). The basic assumption is that the group to be analysed is a random sample.

The statistical analysis was performed in the Statistical Analysis System (SAS/STAT V9.1) computer package. Descriptive statistics analysis was used to summarise the basic features and frequency of the determinant factors of the sample in the research. The ordinal data of the five-point Likert scale was rescaled to interval data by means of correspondence analysis, in order to perform factor analysis.

Exploratory and confirmatory factor analysis was performed and determined how

variables were related and discovered the underlying factor structure (Leedy & Ormrod, 2005:274). This technique is used in psychological research with the construction of scales to measure perception, motivation and so forth. The dimensions, which are psychological states, cannot be measured directly and are called ‘factors’. Factor analysis assessed these dimensions indirectly.

When the optimal number of factors had been determined, the table of factor loadings was used to interpret the meaning of factors. Factor loadings greater than 0.4 (or less than -0.4) are often considered an indication of a close association between a factor and an observed item (Lawler, 2006). Factor rotation may be necessary to provide optimal differentiation among the factors. The goodness-of-fit index was used to asses the model.

Path analysis was performed on the data, and ascertained *relationships* between the determinant factors and work engagement.

4 DATA ANALYSES, FINDINGS AND INTERPRETATIONS

The statistical analyses were performed by using the Statistical Analysis System SAS/STAT® V9.1 computer package. Results were considered as statistically significant on a 5% level for all of the tests and techniques applied.

In order to determine the number of determinant factors of work engagement for retail pharmacists and the construct validity thereof, a survey, addressing this issue, was undertaken by means of a questionnaire. The questions included were firstly of a biographical/demographical nature; secondly, 19 questions on a three-point Likert scale addressed determinant factors perceived by the pharmacists to have an influence on their work effectiveness; lastly 58 items on a five-point Likert scale regarding the respondent's position and experience at work. One item determining "Outside Activities', was measured using a single item 'I am involved in other activities outside my work (e.g. other jobs, church, school, recreation, volunteering, etc.) a few hours a week. Please choose one of the following: 1 = 1-5 hours, 2 = 6-10 hours, 3 = 11-15 hours, 4 = 16-20 hours, and 5 = 21+ hours.

The survey population included 2592 pharmacies of which 700 were targeted for inclusion in the survey. From these 202 completed and usable questionnaires were received. The information from these questionnaires was captured and prepared for further statistical analyses.

4.1 Descriptive Analysis

Table 3: Descriptive analysis

Demographics		
Population	2592	100.00%
Sample	700	27.01%
Respondents	202	28.86%
Gender		
Males	92	45.54%
Females	110	54.46%
Total	202	100.00%
Roles of pharmacists		
Manager	56	27.72%
Dispensing pharmacist	94	46.53%
Locum	33	16.34%
Intern	19	9.41%
Total	202	100.00%

Participation in the survey was voluntary. Participants who were approached in person at the pharmacies yielded a better response rate than those who were contacted by telephone, e-mail, or received surveys via post. The sample size was 27.01% of the population and the percentage of respondents was 28.86%. Males represented 45.54% and females 54.46% of the sample. Managers represented 27.72% of the sample, dispensing pharmacists 46.53%, locums 16.34% and interns 9.41%.

4.2 Factor analysis

4.2.1 Determination of construct of determinant factors for retail pharmacists

To determine the construct and number of determinant factors for retail pharmacists of the 58 questions/items addressing this problem, an exploratory principal component factor analysis based on the correlation matrix, was undertaken.

Only factor loadings of ≥ 0.4 were considered as contributing to a dimension when taking into consideration the total sample of 202. The number of factors considered as possible candidates was six, seven and eight respectively, which in the initial analysis would explain 46.4%, 49.42% and 52.1% of the variance in the data, respectively.

These identified factors were then subjected to an item analysis by calculating Cronbach Alpha coefficients for each of the dimensions separately. Generally a value of at least 0.7 for Alpha is considered as acceptable for the items to be included in a specific dimension/factor. By applying this rule and inspecting the correlation of each item with its particular dimension, the total number of 58 items was further reduced to 42.

A problem was experienced at this stage, in that some of the items considered as contributing to the determinant factors of work engagement were associated with some of the other determinant factors. A decision was made to unite all these items into a single determinant factor, namely work engagement. This was possible, because all the relevant items (of work engagement) were removed from the other determinant factors identified, when the Alpha coefficients were optimised for each individual factor.

The result was that in the end seven factors were retained [see Table 4], consisting of 42 items in total, which would explain 59.2% of the variance of those items used in the final construct.

This exploratory factor analysis was followed by a confirmatory factor analysis (CFA) on the same data, due to a lack of a big enough sample or the availability of other similar data. Resulting from this it could be concluded that the factor analysis model of seven determinant factors of work engagement fitted the data to a satisfactory degree. The unbiased least squares (ULS) method was applied, as the residuals in this case were markedly smaller, as opposed to using the ML (maximum likelihood) approach. The goodness of fit index (GFI) was 0.896, goodness of fit index adjusted for degrees of freedom (AGFI) equalled 0.8872 and root mean square residual (RMR) 0.1057. All these measures are indicative of an acceptable fit and it can be concluded that the proposed determinant factors of pharmacists could be identified to a satisfactorily degree.

Table 4: Exploratory principal factor analysis for determinant factors of retail pharmacists

Determinant factor	**Item / Question Number from questionnaire**	**Wording**	**Cronbach Alpha**
Job enrichment	**47**	The output of my work affects the lives of other people.	0.7954
	48	I can work independently.	
	49	I can figure out how well I am doing in my job.	
	53	My job allows me to make decisions and do the job on my own.	
	54	My job itself gives me clues on my performance.	
	58	My job gives me independence and freedom on how I do my work.	
	59	My job provides me with information about how well I am doing in my job.	

Work role fit	**4**	My job 'fits' how I see myself.	0.8485
	18	I like the identity my job gives me.	
	25	The work I do on this job helps me satisfy who I am.	
	29	My job 'fits' how I see myself in the future.	
Co-worker relations	**5**	My interactions with my co-workers are rewarding.	0.8083
	13	My co-workers value my input.	
	19	My co-workers listen to what I have to say.	
	26	I believe that my co-workers appreciate who I am.	
	31	I sense a real connection with my co-workers.	
	42	I trust my co-workers.	
Supervisor relations	**6**	My supervisor helps me solve work-related problems.	0.8933
	14	My supervisor encourages me to develop new skills.	
	20	My supervisor praises good work.	
	32	My supervisor does what he/she says he/she will do.	
	36	I trust my supervisor.	
	38	My supervisor is committed to protecting my interests.	
	41	My supervisor encourages employees to participate in important decisions.	
	43	My supervisor treats employees fairly.	
Resources	**8**	I feel mentally sharp at the end of the workday.	0.8525
	11(-)	I feel physically used up at the end of the workday.	
	15(-)	I can't think straight by the end of my workday.	
	27	I feel emotionally healthy at the end of the workday.	
	35(-)	I feel emotionally drained from my work.	
	40(-)	I feel tired before my workday is over.	
Skill variety	**45**	My job requires me to use complex skills.	0.7014
	50	My job requires me to use a variety of my skills and talents.	
	55(-)	My job is quite simple and repetitive.	

Work engagement	**2**	I really put my heart into my job.	0.6900
	3	I exert a lot of energy performing my job.	
	10(-)	I often think about other things when performing my job.	
	12	I stay until the job is done.	
	22	I am rarely distracted when performing my job.	
	23	I get excited when I perform well on my job.	
	33(-)	I often feel emotionally detached from my job.	
	34	Time passes quickly when I perform my job.	
(-) = Scores on these items reversed to strengthen determinant factor positively			

Cronbach Alpha is the measure of internal consistency, which confirms that questions/items identifies with or strengthens a particular factor [See Table 4]. If the inter-item correlation is low, the Cronbach Alpha is low, and if the average inter-item correlation increases, Cronbach Alpha increases as well. If the inter-item correlations are high, then there is evidence that the items are measuring the same underlying construct. This is really what is meant when someone says they have 'high' or 'good' reliability. They are referring to how well their items measure a single unidimensional latent construct.

The determinant factors of work engagement for retail pharmacists were identified as job enrichment (0.7954), work role fit (0.8485), co-worker relations (0.8083), supervisor relations (0.8933), resources (0.8525) and skill variety (0.7014) (Cronbach Alpha values in brackets). Supervisor relations' internal consistency was the strongest, with resources and work role fit following. Co-worker norms and self-consciousness could not be identified as separate determinant factors in this sample of the population.

Proposition 1: Accept job enrichment, work role fit, co-worker relations, supervisor relations, resources and skill variety as determinant factors of work engagement in

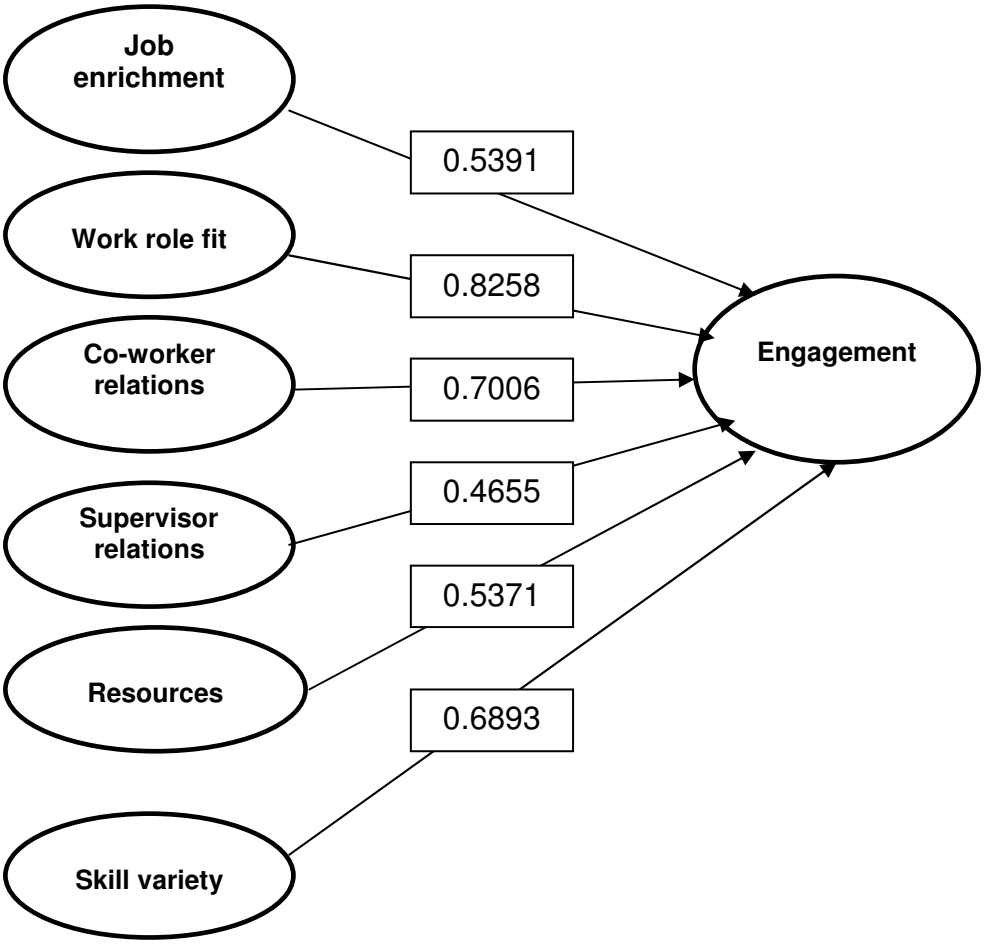
retail pharmacists.

4.3 Path analysis

The objective was to determine whether the determinant factor of pharmacists (as identified with the CFA) possess any meaningful structure/statistical relationship in predicting/causing work engagement. To reach this end a different number of path diagrams were analysed. In one of the proposed diagrams, skill variety was regarded as a cause of job enrichment and this then leading to work engagement. In another approach the roles of skill variety and job enrichment were reversed, as mentioned. All of these models and the final one in Figure 5 resulted in acceptable models in explaining the data. For a parsimonious and easy understandable path diagram it was decided that the path analysis model in Figure 5 below would be acceptable.

The modelling resulted in producing acceptable measures of fit, namely GFI=0.8956, AGFI=0.8869 and RMR=0.1059, which are all very close to the values obtained for the CFA.

Figure 5: Result of path analysis for determinant factors with standardised estimates



Path analysis is an extension of the regression model, which is used to test the fit of the correlation matrix against two or more causal models which are being compared by the researcher. The coefficient is the influence of the determinant factor on work engagement. A higher value has a larger impact. All the identified

determinant factors in this sample had a positive and significant influence of work engagement.

According to the standardised coefficients [see Figure 5], w*ork role fit* (0.8258) was the strongest influence on positive work engagement, with *supervisor relations* (0.4655) the weakest.

Work role fit (0.8258) indicated that pharmacists identify with their jobs. Most comments received from pharmacists were 'I love my job. This is what I want to be', 'The profession is very rewarding, but new legislation makes it impossible to run a profitable business'. 'Considering all the influences on our profession (Department of Health, Medical Scheme Regulations) I tend to get negative (not enjoyable profession anymore).' Another comment was 'Service to the Community is our motto, which is why I have been a retail pharmacist for 33 years, trying to live it out with joy, but for how long?'

According to Butler & Waldroop (1999), three things make people happy at work: ability, values and life interests. Skills, experience and knowledge give people confidence to perform well in their jobs, enable them to be creative and productive. Values are the rewards people seek, like money, prestige, a comfortable lifestyle and intellectual challenges. People who are good at their jobs are not necessarily engaged by it, as only life interests will keep people happy and fulfilled over the long term (Butler & Waldroop, 1999). Deeply embedded life interests determine what *kinds* of activities make people happy, and not what skills they have or what they are doing well. At work, the happiness that certain activities create, often translates into commitment. It keeps people engaged, and keeps them from quitting (Butler & Waldroop, 1999).

The challenge for managers is to recruit pharmacists not merely based on their skills, but to ensure that the person's skills are congruent with deeply embedded life interests that will lead to commitment and job satisfaction (Butler & Waldroop,

1999). Personality type tests like Myers-Briggs should not be the foundation of career development, but through ongoing dialogue between the employee and his boss, the job must be sculpted in such a way that the person can express their deeply embedded life interests (Butler & Waldroop, 1999).

It is pertinent that in these trying times of legislative changes pharmacists grab the opportunity to gain a significant advantage over their competitors by ensuring the job role fit is optimal, and by emphasising the organisations' commitment to career development. Managers should be interested in the motivational psychology of their employees. Managers can undermine the commitment of employees by keeping them in jobs that are not fundamentally interesting to them. Skills do not equal retention or commitment (Butler & Waldroop, 1999).

Co-worker relations had also a strong influence on work engagement (coefficient 0.7006). Pharmacists normally work quite closely with their co-workers. This is to be expected as pharmacies have normally long working hours, and good co-worker relations have benefits for all parties involved. The perception that 'we are all in the same boat' seems to exist. According to Kirpal (2004), those working in caring professions are exposed to stress, emotional involvement, work constraints and role uncertainty. During situations of psychological stress colleagues are the most important source of support, especially when support from the company is lacking. According to Schaufeli & Salanova (2005), work engagement is a collective phenomenon, thus teams may feel engaged when members work together to accomplish specifics tasks. Social support from job autonomy and work colleagues is positively related to levels of engagement (Schaufeli & Salanova, 2005).

Skill variety (coefficient 0.6893) was identified as a determinant factor in this sample, although it would normally form part of job enrichment (Hackman & Oldham, 1980). The influence on work engagement is noticeable. This was a refreshing surprise, but is understandable in this profession, as most pharmacists multi-task. One comment received was: 'This is the only profession where one is

expected to do everything – from sweeping the floor, to cashing up the till at night.' Pharmacists process medical scheme claims, contact medical schemes with queries, 'consult' with patients and recommend medication based on symptoms that present in conjunction with patients' medical history.

Basic clinic procedures are done by pharmacists, like immunisations, weighing of babies, blood pressure monitoring, cholesterol testing, Body Mass Index (BMI) calculations, and special diets for diabetics and other conditions are discussed and recommended. Specific supplements are recommended when required, and manufacturers are contacted regarding specific medication for more information. Providers, e.g. doctors, are contacted to discuss a patient or to obtain a new prescription. Pharmacists often deliver parcels after hours if the drivers did not finish the deliveries during the day, or in an emergency. Other duties include stock control, management of employees and managing the after hour duties. This picture of a 'community pharmacist' who serves the community is slowly changing. Due to new legislation, financial implications are forcing pharmacies to charge for previous 'free' services, like deliveries and clinic consultations.

The numerous avenues in which retail pharmacists can 'specialise' allow for further skills variety. The opportunity to develop one's interest is there. Skills should be congruent with deeply embedded life interests, which will ensure committed and satisfied employees (Butler & Waldroop, 1999).

Job enrichment (coefficient 0.5391) include skill variety (identified as a separate determinant factor - work engagement - in this sample), task identity, task significance, autonomy and feedback. Although the work itself is significant and has a huge impact on people's lives, the perception may exist that it is not so important anymore. Comments received were 'Other people are affected by my work and quality of work'. The negative influence that the new legislation has on pharmacists keeps on being repeated in the comments 'Factors outside my control influence my profession'. 'The influences on our profession make me negative.'

‘The profession is also influenced by the bigger groups of pharmacies, e.g. Clicks, which are not so dependent on the profit margin of the prescription medication.’ ‘It is actually a tragedy that our profession is under threat, due to irresponsible decisions of the Department of Health, Ministers and others involved.’ ‘Earnings from our profession are far too little for the responsibility that we carry.’

It is important to note that work engagement is positively related to social support from supervisors, task identity, and performance feedback and job control (Schaufeli & Salanova, 2005).

Resources (coefficient 0.5371). The physical and cognitive demands on the profession are quite substantial. Working in a service industry is also emotionally draining (Maslach *et al,* 2001). Retail pharmacies’ working hours during the week are normally 08H00 – 18H00 and on Saturdays 08H00-13H00. Most pharmacies stay open after hours for emergencies during the week and weekend. Pharmacists’ work requires them to stand all day and only take a lunch break if there is another pharmacist to take over.

Legislation determines that pharmacists are personally liable for each prescription they dispense. Each prescription has to be checked for drug interactions and correct dosages. Allergic reactions and possible drug interactions have to be discussed with the patient. The patient’s medical history and medication that they are using at the point of dispensing a new prescription (not a repeat of e.g. blood pressure medication) has to be checked for interactions.

Managers should be aware of the support they provide to employees in terms of resources. According to Schaufeli & Salanova (2005), resources are not only important to deal with job demands, but because they stimulate growth, learning and development of employees. Each job has its particular profile of resources that are required. Work engagement is positively related to job resources, and there exists a reciprocal relationship between job resources and engagement (Schaufeli

& Salanova, 2005). Employees' needs and concerns should be addressed in a practical, caring and supportive way that enables employees to reciprocate with high levels of engagement (Saks, 2006). An understanding of the importance of social exchange of engagement could assist organisations to identify resources and benefits that are important to employees to create a sense of greater employee engagement (Saks, 2006).

Supervisor relations had the strongest inner coherent (Cronbach Alpha: 0.8933), but it is not such a strong predictor/cause of work engagement (Coefficient 0.4655) when all other influences are kept constant. Relatively spoken, you need a bigger positive effort in establishing good supervisor relations when e.g., compared with either work role fit or co-worker relations, the same positive effect (degree of improvement) is needed with work engagement.

The weaker influence of s*upervisor relations* is probably due to many pharmacists running a pharmacy on behalf of an owner, with the result that they do not regard supervisor relations as an influence on their work, like locums. Locums take over from fulltime-employed pharmacists after hours. Some respondents commented on the supervisor items as N/A (not applicable) or 'No Supervisor', and marked as the corresponding items '3' (Don't Know).

Some comments received, included 'I see the Pharmacy Council as my supervisor, and do not experience any support from them whatsoever', with the result that the feedback on these items was very negative. Another comment was: 'There is no support system for pharmacists.' According to Maslach *et al* (2001), support of supervisors is more important than co-worker support. In social support literature the 'buffering' hypothesis suggests that social support acts as a moderator between job stressors and burnout (Maslach *et al,* 2001). According to Kahn (1992), supportive, resilient and clarifying management increases psychological safety of employees.

Co-worker norms and s*elf-consciousness* could not be identified as separate determinant factors in this sample, with the result that co-worker norms and self-consciousness could not be included in the path analysis. It is possible that these determinant factors are not relevant to retail pharmacists.

Outside activities was analysed as a separate entity, because it was measured with only one item, determining the amount of hours per week spent on 'outside activities', e.g. hobbies, recreation, sport, church, school activities. *Outside activities* was analysed in conjunction with gender and pharmacists role (manager, dispensing pharmacist, locum or intern). Quite a few participants' comments on these activities were: 'No time for hobbies', 'Working hours are too long', 'Social activities – no time'. The working hours are longer than normal office hours and quite exhausting, as pharmacists stand when they dispense, and walk around in the dispensary when collecting the required medication for each prescription. Working longer hours per day (usually 08H00-18H00) and on a Saturday is regarded as 'normal working hours' because it is a retail business.

Proposition 2: Accept job enrichment, work role fit, co-worker relations, supervisor relations, resources and skill variety having a positive influence on work engagement in retail pharmacists.

4.4 ANOVA

The determinant factors, as perceived by the pharmacists in Section A 'Background' Item 3 of the questionnaire, were used to compare gender and role of the pharmacist and the interaction between these two explanatory groups by the use of ANOVA [see Table 5 and 6]. The statements to determine these factors were constructed to represent all the determinant factors being researched in this study. The data was transformed to comply with the assumptions of normality and homogeneity of variance as prescribed for ANOVA.

Table 5: Results of ANOVA comparing gender by using perceived determinant factors (3-point Likert scale: 1=negative, 3=positive)

Determinant factor	Gender					P-value [1]
	Male (n =92)			Female (n=110)		
	Mean		SD	Mean	SD	
Job enrichment	2.79	A	0.34	2.79 A	0.31	0.3112
Work role fit	2.91	A	0.3	2.9 A	0.31	0.9610
Co-worker relations	2.93	A	0.33	2.82 A	0.55	0.2809
Supervisor relations	2.83	A	0.45	2.87 A	0.47	0.4345
Co-worker norms	2.64	A	0.51	2.56 A	0.6	0.0576
Self-consciousness	2.86	A	0.43	2.64 A	0.65	0.2414
Resources	2.66	A	0.55	2.64 A	0.64	0.7073
Outside activities	2.34	A	0.67	2.35 A	0.64	0.5267
Involvement in outside activities (time) [+]	1.82	A	1.01	1.87 A	1.22	0.8730

A = Means with common characters do not differ significantly [interpret row-wise]

[+] = 5-Point scale

[1] = Exceedance probability

No significant differences for gender using the determinant factors were found on a 5% level. Co-worker norms (P=0.0576) differed on a 10% significance level [see Table 5] with males (2.64) significantly more positive than females (2.56). This may be more of an accent/numerical difference as both genders are positive regarding co-worker norms, but males only marginally more so.

Table 6: Results of ANOVA comparing role of pharmacist by using perceived determinant factors (3-point Likert scale: 1=negative, 3=positive)

Determinant factor	Role of Pharmacist (n=202)										
	Manager (n=56)			Dispensing (n=94)			Locum (n=33)			Intern (n=19)			P-value
	Mean		SD	Mean		SD	Mean		SD	Mean		SD	
Job enrichment	2.8	A	0.33	2.81	A	0.33	2.74	A	2.74	2.79	A	0.3	0.9338
Work role fit	2.9	A	0.28	2.93	A	0.25	2.86	A	2.86	2.84	A	0.5	0.6355
Co-worker relations	2.85	A	0.49	2.88	A	0.47	2.94	A	2.94	2.79	A	0.6	0.9787
Supervisor relations	2.79	A	0.53	2.86	A	0.44	2.81	A	2.81	3	A	0	0.6598
Co-worker norms	2.64	A	0.51	2.61	A	0.53	2.38	A	2.38	2.81	B	0.5	0.0107*
Self-consciousness	2.86	A	0.45	2.73	A	0.56	2.61	A	2.61	2.74	A	0.7	0.0979
Resources	2.65	A	0.62	2.68	A	0.55	2.53	A	2.53	2.72	A	0.6	0.5992
Outside activities	2.24	A	0.68	2.4	A	0.61	2.28	A	2.28	2.48	A	0.6	0.3161
Involvement in outside activities (time) +	1.84	A	1.12	1.74	A	1.03	2.3	A	2.3	1.58	A	0.8	0.7021

* = Significant on the 5% level

A, B = Means with common characters do not differ significantly [interpret row-wise] [Multiple comparisons by LSMEANS]

+ = 5-Point scale

It was found that in the case of the role of the pharmacist, the groups differed significantly regarding co-worker norms (P=0.0107) [see Table 6]. In this instance locums (2.38) were significantly less positive than either managers (2.64), dispensing pharmacists (2.61) or interns (2.81) which did not differ. This is understandable, as locums are not regarded as permanent staff, but professional people that are normally not influenced by the norms and regulations set by co-workers at any specific pharmacy.

Table 7: Results of ANOVA comparing gender by using determinant factors (5-point Likert scale: 1=negative, 5=positive)

Determinant factor	Gender				P-value
	Male (n =92)		Female (n=110)		
	Mean	SD	Mean	SD	
Supervisor relations	3.54 A	0.77	3.56 A	0.76	0.8154
Resources	2.96 A	0.89	2.83 A	0.88	0.3564
Work role fit	3.5 A	0.86	3.48 A	0.92	0.6399
Co-worker relations	3.92 A	0.42	3.77 A	0.6	0.4738
Job enrichment	4.07 A	0.54	3.93 A	0.55	0.1579
Skill variety	3.77 A	0.85	3.66 A	0.83	0.6108
Work engagement	3.82 A	0.54	3.89 A	0.54	0.1502

A, B = Means with common characters do not differ significantly [interpret row-wise]
[Multiple comparisons by LSMEANS]

No significant statistical differences were obtained for gender when using determinant factors of work engagement (P≥0.1502, [see Table 7]). Generally, all the used determinant factors of work engagement displayed a positive tendency; it is only for resources that both gender groups scored somewhat negative.

Table 8: Results of ANOVA comparing role of pharmacist by using determinant factors. (5-point Likert scale: 1=negative, 5=positive)

Determinant factor	Role of Pharmacist (n=202)												P-value	
	Manager(n =56)			Dispensing pharmacist n=94)			Locum (n=33)			Intern (n=19)				
	Mean		SD	Mean		SD	Mean		SD	Mean		SD		
Supervisor relations	3.52	A	0.71	3.61	AB	0.84	3.23	C	0.64	3.91	B	0.43	0.0031	**
Resources	2.90	A	0.88	3.01	A	0.92	2.60	A	0.75	2.75	A	0.84	0.1412	
Work role fit	3.66	A	0.86	3.59	A	0.87	2.96	B	0.96	3.39	AB	0.72	0.0012	**
Co-worker relations	3.90	A	0.56	3.84	A	0.56	3.74	A	0.41	3.79	A	0.47	0.2557	
Job enrichment	4.21	A	0.55	3.98	AB	0.54	3.82	B	0.47	3.77	AB	0.58	0.0032	**
Skill variety	4.07	A	0.82	3.59	B	0.81	3.45	B	0.82	3.75	B	0.79	0.0006	**
Work engagement	4.00	A	0.48	3.84	AB	0.56	3.66	B	0.60	3.87	AB	0.42	0.0288	*

* = Significant on the 5% level
** = Significant on the 1% level
A, B = Means with common characters do not differ significantly [interpret row-wise] [Multiple comparisons by LSMEANS]

Comparing the different roles of the pharmacist by way of determinant factors resulted in the locums (3.23) being significantly less positive in respect of supervisor relations (P=0.0031, [see Table 8]) than all the other groups. The interns (3.91) were significantly more positive than the managers (3.52), but did not differ from the dispensing pharmacists (3.61), the latter did not differ statistically from the managers.

In the case of work role fit, locums (2.96) were again significantly less positive than managers (3.66) and dispensing pharmacists (3.59), with interns (3.39) not differing from any group. With job enrichment, the locums (3.82) were significantly less positive than the managers (4.21). On work engagement, locums (3.66) and managers (4.00) differed from the other groups. No significant differences were

reported for resources and co-worker relations. In managers' job descriptions job enrichment, skill variety, work role fit and work engagement were more positive than the other pharmacists' roles.

Generally all groups scored positive for all determinant factors with locums showing a negative tendency in one or two of the determinant factors.

4.5 Friedman Procedure

Intra work determinant factors comparisons were undertaken to establish whether in general or in particular significant differences exist between them. These comparisons were done for the total sample, gender as well as for the different pharmacist role groups.

The Friedman non-parametric two-way ANOVA was used to investigate these differences with individuals used as the block factor. Figure 5 also applies. The data must be completed for each and every respondent's determinant factor when applying the Friedman procedure, so in the calculations only two records (of 202) could not be used, which is minimal and thus should have almost no influence on the results obtained (n=200). Therefore, Tables 7 and 8 were reproduced (with minor adjustments), but adding on the total group to Table 7 resulting in Tables 9 and 10 respectively. Comparisons should be made vertically, between the determinant factors for pharmacists within each cohort.

Table 9: Results of Friedman procedure comparing determinant factors of pharmacists for total and gender groups. (5-point Likert scale: 1=negative, 5=positive)

Determinant factor	Total (n=200)			Gender					
				Male (n =90)			Female (n=110)		
	Mean		SD	Mean		SD	Mean		SD
Supervisor relations	3.55	A	0.76	3.54	A	0.77	3.56	A	0.76
Resources	2.89	B	0.89	2.96	B	0.89	2.83	B	0.88
Work role fit	3.48	A	0.9	3.5	A	0.86	3.48	A	0.92
Co-worker relations	3.84	C	0.53	3.92	CD	0.42	3.77	CD	0.6
Job enrichment	3.99	D	0.55	4.07	D	0.54	3.93	D	0.55
Skill variety	3.71	C	0.84	3.77	C	0.85	3.66	A C	0.83
Work engagement	3. 86	C	0.54	3.82	C	0.54	3.89	D	0.54
P-Value	**<0.0001**	**		**<0.0001**	**		**<0.0001**	**	
A, B, C, D = Means with common characters do not differ significantly [interpret column-wise] [Multiple comparisons by LSMEANS]									

For all the groups considered (total, gender and pharmacist role) resources (2.89) scored significantly lower than all the other determinant factors (neutral to negative) [see Table 9]. Job enrichment scored the highest (3.99) and significantly higher than supervisor relations (3.55), resources (2.89) and work role fit (3.48). Overall, the males scored higher on the determinant factors of work engagement. Females scored higher in work engagement and supervisor relations.

Table 10: Results of Friedman procedure comparing role of pharmacist by using determinant factors of work engagement. (5-point Likert scale: 1=negative, 5=positive**)**

Determinant factor	Role of pharmacist (n=200)											
	Manager (n =55)			Dispensing (n=93)			Locum (n=33)			Intern (n=19)		
	Mean		SD	Mean		SD	Mean		SD	Mean		SD
Supervisor relations	3.52	A	0.71	3.61	A	0.84	3.23	A CD	0.64	3.91	A	0.43
Resources	2.9	B	0.88	3.01	B	0.92	2.6	B	0.75	2.75	B	0.84
Work role fit	3.66	A	0.86	3.59	A	0.87	2.96	AB	0.96	3.39	C	0.72
Co-worker relations	3.9	C	0.56	3.84	C	0.56	3.74	DE	0.41	3.79	A	0.47
Job enrichment	4.21	D	0.55	3.98	C	0.54	3.82	E	0.47	3.77	A	0.58
Skill variety	4.07	CD	0.82	3.59	A	0.81	3.45	CD	0.82	3.75	A	0.79
Work engagement	4	C	0.48	3.84	C	0.56	3.66	DE	0.6	3.87	A	0.42
P-value	**<0.0001**	**		**<0.0001**	**		**<0.0001**	**		**<0.0001**	**	

** = Significant on the 1% level
A, B, C, D = Means with common characters do not differ significantly [interpret row-wise]
[Multiple comparisons by LSMEANS]

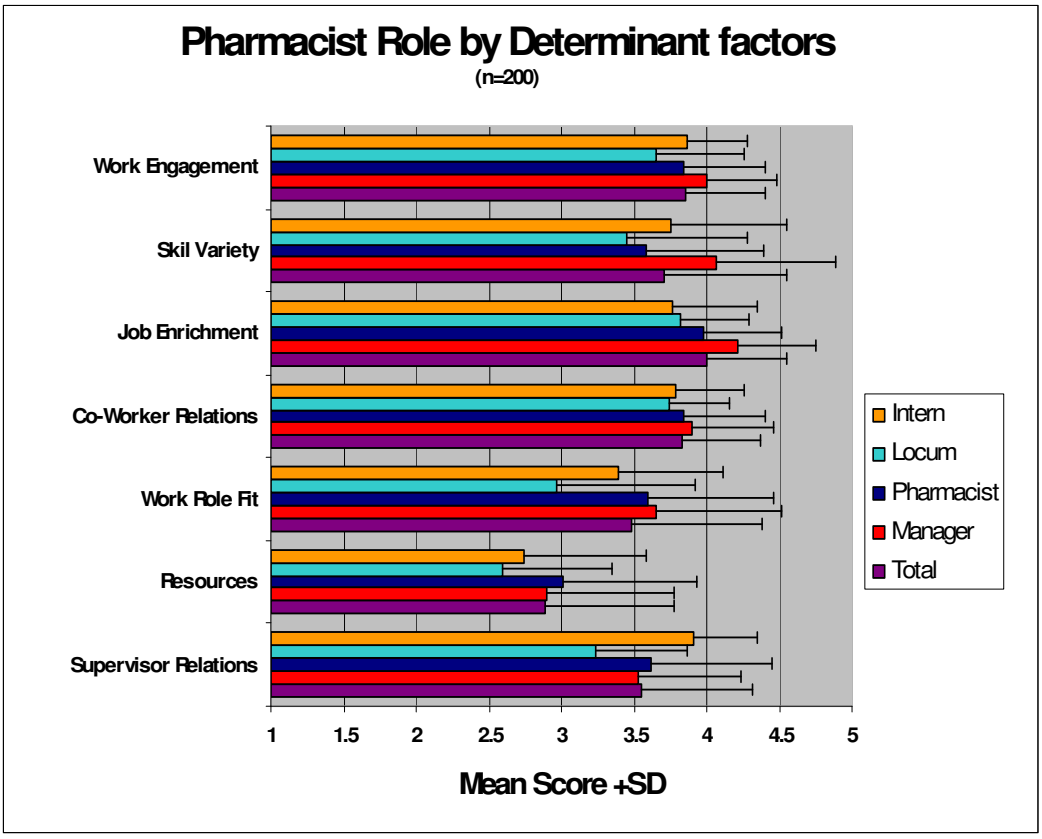
Referring to the intern group [see Table 10], supervisor relations (3.91) scored the highest, significantly higher than work role fit (3.39), which was in turn significantly higher than resources (2.75), but with supervisor relations not different from the other determinant factors. Interns' positions require close supervision; therefore supervisor relations will play an important part in these pharmacists' work.

Managers tested high on job enrichment (4.21), skill variety (4.07) and work engagement (4.00). This was expected, as a manager's role is varied and requires more skills and multi-tasking. Co-worker relations tested high in all the roles as

well. It is pertinent that an environment is created to enhance these relations.

Locums tested overall the lowest on determinant factors. They are normally not influenced by rules and regulations, and do not form close relationships with peers. The dispensing pharmacists seem to be happy with the resources (3.01) in place. Work role fit (2.96) for the locums was noticeably different in relation to the supervisors (3.66) and dispensing pharmacists (3.59). Job enrichment (3.82) for the locums was similarly different for the supervisors (4.21) and dispensing pharmacists (3.98).

Figure 6: Pharmacist role by determinant factors



4.6 Pearson correlation analysis

Pearson correlations were calculated to describe the strength of the linear relationship between the determinant factors [see Table 11].

Table 11: Pearson correlations between determinant factors

Determinant factor	Supervisor relations	Resources	Work role fit	Co-worker relations	Job enrichment	Skill variety	Work engagement
Supervisor relations	1 . 200						
Resources	0.2469 [1] 0.0004 [2] 200 [3]	1 . 202					
Work role fit	0.2883 <.0001 200	**0.4858** <.0001 202	1 . 202				
Co-worker relations	**0.4665** <.0001 200	**0.3023** <.0001 202	**0.4255** <.0001 202	1 . 202			
Job enrichment	0.219 0.0018 200	**0.3104** <.0001 202	**0.5231** <.0001 202	**0.4334** <.0001 202	1 . 202		
Skill variety	0.2616 0.0002 200	0.1582 0.0245 202	**0.4671** <.0001 202	**0.3649** <.0001 202	**0.4288** <.0001 202	1 . 202	
Work engagement	**0.3256** <.0001 200	**0.3178** <.0001 202	**0.5992** <.0001 202	**0.4119** <.0001 202	**0.4801** <.0001 202	**0.4338** <.0001 202	**1** . 202

1 = Pearson correlation coefficient (BOLD indicating value of 0.3000 and above)
2 = P = Exceedance Probability (Significant on 5% level)
3 = Number of paired observation

All correlations calculated were positive, indicating the tendency that all of the

determinant factors of pharmacists do co-variate. Work engagement and co-worker relations relatively were strong with all of the other determinant factors. On the other hand, supervisor relations only had a relatively strong correlation with co-worker relations besides that with work engagement.

The strongest linear correlation was between work engagement and work role fit (0.5992). This is important to managers, as they have to ensure the person fits their work role. People that are good in their jobs are not necessarily engaged by their jobs (Butler & Waldroop, 1999). Maslach *et al* (2001) indicate that the greater the fit (match) between the person and the job, a greater chance of engagement with work exist. According to Kristof (1996) the person-organisational fit consists of the constructs of values, goals, climate and culture-variables. An individual's perception also plays a role in work role fit (Kristof, 1996).

Job enrichment and work role fit linear correlation is also very strong (0.5231). These two concepts compliment each other as the components of job enrichment enhances job role fit namely, task identity, task significance, autonomy, feedback.

Work role fit is also strongly correlated to resources (0.4858). This makes sense, as a pharmacist needs certain resources to perform properly in the job. Work engagement correlates with co-worker relations (0.4119), which is an important fact for managers to take cognisance of. Communication will play an important role in maintaining this relationship and work engagement.

Skill variety correlation is strong with work role fit (0.4671), which indicates that the role of a pharmacist requires different skills and further enhancement thereof. Skill variety is strongly correlated to work engagement (0.4338). This confirms research by Schaufeli & Salanova (2005) that work engagement is positively related to social support from supervisors, task identity, and performance feedback and job control.

5 CONCLUSION

5.1 Summary

This research is an adapted version of May *et al* (2004) model [see Figure 3] of work engagement focusing only on the determinant factors of work engagement [see Figure 4]. May *et al's* (2004) research built onto Kahn's (1990) research, which explored the determinant and mediating effects of three psychological conditions - meaningfulness, safety and availability - on employees' engagement in their work. May *et al* (2004) focused on the psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work.

May *et al's* (2004) research shows that all three psychological conditions exhibited positive relations with work engagement. The determinant factors were all fully mediated by the psychological conditions, namely meaningfulness, safety and availability, except self-consciousness and resources that were partially mediated by psychological safety and availability. Co-worker norms, self-consciousness and outside activities were negatively associated with psychological safety and availability.

Results of this research exhibit significant positive relations of all the determinant factors of pharmacists, with work engagement. All the determinant factors had a *direct* influence on work engagement, which is an important finding. In the retail pharmacist sample, the determinant factors of work engagement were identified as job enrichment, work role fit, co-worker relations, supervisor relations, resources and skill variety [see Table 4 and Figure 5].

5.2 Recommendations

The Pharmaceutical Council and the Pharmaceutical Society should take the

opportunity to research reimbursement models of countries that have a similar healthcare regulatory environment, like Australia, Canada, New Zealand and Spain. The South African Government currently uses these countries as a benchmark for its Healthcare Model.

The Pharmaceutical Council and the Pharmaceutical Society should be better 'guard-dogs' and spokesperson for the profession and be in touch with the reality of being a pharmacist in the different sectors of the profession. The Pharmaceutical Council and the Pharmaceutical Society should be more pro-active rather than reactive, in that alternative reimbursement models should have been presented to the Department of Health after the initial announcement of the legislative changes were made. The Pharmaceutical Council and the Pharmaceutical Society should address the standing of the profession in society, as pharmacists are not perceived to be 'professional' people that add value, but rather 'workers' that have to justify their work role and knowledge, as well as the right to make a living.

Universities with Pharmacy Schools should incorporate business skills, human resources and economic courses in their curricula. These skills will assist managers of retail pharmacies and pharmacists working in other sectors in numerous ways. The different avenues of pharmacy should be taught in detail to ensure a proper work role fit. More skill development should be incorporated in the course, e.g. how to consult a patient, interpretation of clinical trials, conflict management, and different management styles.

Managers of retail pharmacies must familiarise themselves with the determinant factors of work engagement in retail pharmacists. They should focus more on the 'stronger' determinant factors, like work role fit and co-worker relations.

Management must take the recruitment of potential pharmacists seriously. When interviewing a potential pharmacist, the focus should not be merely skills, but the motivational psychology of the employee. Managers must ensure that the person

fits the role. The most important aspect of attracting and retaining skilled employees is to ensure the person has the opportunity to express their deeply embedded life interests (Butler & Waldroop, 1999).

The manager can play a phenomenal role in identifying these deeply embedded life interests and sculpting the job accordingly. Performance reviews create the opportunity for the manager to ask the employee probing questions and to actively participate in job sculpting. Employees should express what they want from work in the short and long-term, as they can be unaware of their deeply embedded life interests. A company's most important asset is the loyalty, energy and intellectual capital of its people (Butler & Waldroop, 1999).

Managers should empower themselves on developing the potential of the employees. Managers must be able to identify the business core functions that represent the deeply embedded life interests of employees (Butler & Waldroop, 1999). If it is *application of technology*, the pharmacist can focus on analysing how customers perceive the new legislation and relate to the pharmacy. *Quantitative analysing* pharmacists can analyse the trend in prescriptions. *Theory development and conceptual thinking* pharmacists can think of a new model in attracting more customers. *Creative production* pharmacists can develop an immunisation awareness campaign in the community or relationship building with the old age homes.

Counselling and mentoring pharmacists can liaise with the pharmaceutical companies for additional information on products and coaching the other employees or informing the customers. *Managing people and relationships* pharmacists must be in charge of a division of employees, like the locums. *Enterprise control* must take ownership of a specific project. Job sculpting will ensure that the pharmacists' job matches their deeply embedded life interest (Butler & Waldroop, 1999).

Work engagement is as collective phenomenon (Schaufeli & Salanova, 2005), therefore managers should create a work environment that is conducive to good relationship building. An interactive management approach should be used to manage conflict. The emotional contagion seems to be responsible for transmitting work engagement among co-workers and spouses, and forming collective engagement in work teams (Schaufeli & Salanova, 2005).

Resources play an important role in organisational outcomes, and managers should ensure the availability thereof. A positive upward spiral exists of resources, self-efficacy, work engagement and success. If resources are available and high levels of self-efficacy, employees are motivated to be engaged, therefore successful (Schaufeli & Salanova, 2005). Job redesign in order to enhance work engagement may mean increasing job resources. Managers should consider job rotation as it stimulates learning and professional development.

Coaching, task variety, autonomy, social support and performance feedback are positively related to work engagement (Schaufeli & Salanova, 2005). Managers must adjust their leadership style varying from high directive and low autonomy to low directive and high autonomy, depending on the position of the pharmacist. An intern needs more supervisor support and coaching than a locum. A dispensing pharmacist will benefit from autonomy and feedback, which will in turn enhance the work engagement.

Managers should take cognisance of the fact that work engagement consequently leads to individual results, for instance the quality of work, as well as the organisational benefit of higher productivity and subsequent growth of the organisation (Kahn, 1992).

Managers should understand that “employee contribution becomes a critical business issue because in trying to produce more output with less employee input, companies have no choice but to try to engage not only the body but the mind and

soul of every employee" (Ulrich, 1997:125).

Work engagement is associated with good mental health (Schaufeli & Salanova, 2005), which will in return contribute to a healthy organisation.

5.3 Implications of this study

5.3.1 Theoretical implications

May *et al's* (2004) model (Figure 2) confirmed what Kahn (1990) said, that the psychological factors play a role in work engagement. In May *et al's* (2004) revised model (Figure 3), the determinant factors had an indirect influence on work engagement, except for self-consciousness and resources, which had a partial direct influence on work engagement.

It is significant that this study shows that all the determinant factors of this sample had a *direct* influence on work engagement. The determinant factors of retail pharmacists are job enrichment, work role fit, co-worker relations, supervisor relations, resources and skill variety. It is important to notice that skill variety was identified as a separate determinant factor for this sample, although it would normally form part of job enrichment. A pharmacist's job description is quite varied, and it corresponds with the practical aspects of being a pharmacist. Work role fit and co-worker relations had the most influence on work engagement, which is important to build on in this sector.

All the determinant factors had a positive influence on work engagement. The determinant factors that are has the most significant influence on work engagement in retail pharmacists, are work role fit and co-worker relations.

5.3.2 Managerial Implications

Managers should guard against their pharmacists and employees becoming desponded and withdrawn during all the legislative changes. Workers' lack of commitment and motivation is the core problem of alienation or disengagement at work (Aktouf, 1992). Managers should endeavour to motivate their employees, especially the pharmacists, as work engagement has an 'infectious' nature, and so does burnout. Positive and negative moods spread among employees, as emotional contagion of engagement and burnout mirror each other (Schaufeli & Salanova, 2005).

Work role fit and co-worker relations are the determinant factors that have the most significant influence on work engagement in this sample. Managers need to focus on the above determinant factors by enhancing continuous communication with the employees. Managers have to recruit with the intension to identify the deeply embedded personal interests (Butler & Waldroop, 1999). Managers should be trained to provide more autonomy and feedback and to create a greater sense of support they give to the pharmacists. Skill variety was identified as a separate determinant factor of work engagement. Managers should focus on ensuring that the role that the pharmacists has offers opportunity for growth and provide appropriate training and development of skills.

The work environment must strengthen co-worker relations, support, as these forms a 'buffer' against stress and burnout (Maslach et al, 2001). This positive environment creates an atmosphere where teams may feel engaged when members work together to accomplish specifics tasks. According to Schaufeli & Salanova (2005), a positive upward spiral seems to exist of work engagement, self-efficacy, resources and success. High levels of self-efficacy and resources enable employees to be engaged and successful. In turn, resources are accumulated and work engagement and self-efficacy further enhanced. Work engagement produces commitment, job satisfaction, performance and job tenure, which is to the benefit of

the organisation and employee.

Managers should understand that work engagement is an on-going long-term process, and continued interaction and communication is required to create a sense of 'reciprocal interdependence' (Cropanzano & Mitchell, 2005 cited in Saks, 2006). Engaged employees are committed to perform on a high quality level, which usually generates positive feedback from the organisation and supervisors (e.g. praise, promotion, fringe benefits), as well as from customers (e.g. satisfaction, gratitude and appreciation) (Schaufeli & Salanova, 2005). This is to the benefit of the organisation and the individual.

Work engagement has positive consequences for organisations and business results (Harter *et al*, 2002; Saks, 2006). In these highly legislated times managers should focus on the areas on which they have a direct impact, and that is their employees. When managers encourage work engagement, it is to the advantage of the organisation and the individual.

Work engagement is important for employee well-being and work behaviour for the following reasons: work engagement is a positive experience of self (Schaufeli, et al, 2002) and it is related to good health and positive work affect (Rothbard, 2001; Saks, 2006). Work engagement assists individuals in deriving benefits from stressful work (Britt, Adler & Bartone, 2001), is positively related to organisational commitment (Sonnentag, 2003) and is expected to affect employee performance (Kahn, 1990; May *et al*, 2004).

5.4 Future research

Different avenues could be considered in this field of research. Future research could include more variables that might be important to work engagement, like skills development training, flexible working hours, compensation and incentive restructuring and work experience.

Future research could include the psychological factors, namely availability, safety and meaningfulness (Kahn, 1990; May *et al*, 2004) with job satisfaction and burnout.

Future research could also take into account the thinking preferences of people, using the Herrmann Brain Dominance Instrument (HBDI) developed by Ned Herrmann (Herrmann, 1996).

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Appendix A: Introduction letter and questionaire

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25 May 2006 REF [ID]

Dear Pharmacist [Name])

Research on Retail Pharmacists' perception of their work.

Your details were obtained from the South African Pharmacy Council who supports this study by providing information on all registered retail pharmacies. I am a student at the Wits Business School completing my MBA degree. As part of my studies, I am conducting research into pharmacists' perceptions about themselves, their jobs, supervisors and co-workers.

Kindly complete all the questions of the survey in your capacity as retail pharmacist. The validity of the research is dependant on the response rate and every response is crucial. Please note that there are no right or wrong answer. **For research completion and graduation purposes, would you be so kind as to return the completed questionnaire before 30th of August 2006**.

The questionnaire is attached and comprises of two sections. Section A is demographic information and in Section B you are requested to strongly disagree to strongly agree in varying scale, with different statements.

Your reply by fax **(Fax: 0866 590 646)** and personal contact details will be treated as **strictly confidential** and all respondents will remain anonymous in the final report. Any queries relating to this study and questionnaire may be directed to the researcher at salmariv@resomed.co.za.

Thank you in advance for your participation.

Salmari Viljoen
MBA Student
Wits Business School
083 300 3655

Prof. Rasoava Rijamampianina (Supervisor)
Head of the Academic Department
Wits Business School

Section A: Background

Note: All information is strictly confidential. As behavioural research is influenced by demographic characteristics, you are kindly requested that all questions be completed.

1. Gender (please tick):

Male	
Female	

2. What role as a pharmacist do you primarily occupy at the pharmacy (please tick):

Manager	
Dispensing Pharmacist	
Locum	
Pharmacy Intern	
If other, please describe	

3. Which of the following factors do you think have an influence (negative or positive) on your work effectiveness and efficiency (you may tick more than one)

Determinant factors	Influence			
	Positive	Negative	None	N/A
1. Required variety of skills				
2. Work independence				
3. The range of the job				
4. Association with the work output				
5. Importance of the job				
6. Knowing my work performance				
7. My fit in my work role				
8. My relationship with my supervisors				
9. My relationship with my co-workers				
10. Workplace ambience				
11. Workplace rules				
12. Patterns of behaviour at work				
13. How others perceive me at work				
14. My energy level to do the work				
15. My mood and emotion at work				
16. My concentration level at work				
17. Family life				
18. Social activities outside work				
19. Hobbies				

Section B: Questionnaire

In this section you are completing the questions based on your position and experience at work (stated in the cover letter).

Please answer **all** the questions, as it is important that all questions be completed to process the data.

Strongly Disagree	**Disagree**	**Don't Know**	**Agree**	**Strongly Agree**
1	**2**	**3**	**4**	**5**

1	Performing my job is so absorbing that I forget about everything else.	1	2	3	4	5
2	I really put my heart into my job.	1	2	3	4	5
3	I exert a lot of energy performing my job.-	1	2	3	4	5
4	My job 'fits' how I see myself.	1	2	3	4	5
5	My interactions with my co-workers are rewarding.	1	2	3	4	5
6	My supervisor helps me solve work-related problems.	1	2	3	4	5
7	I go along with the norms in my group of co-workers.	1	2	3	4	5
8	I feel mentally sharp at the end of the workday.	1	2	3	4	5
9	I worry about how others perceive me at work.	1	2	3	4	5
10	I often think about other things when performing my job	1	2	3	4	5
11	I feel physically used up at the end of the workday.	1	2	3	4	5
12	I stay until the job is done.	1	2	3	4	5
13	My co-workers value my input.	1	2	3	4	5
14	My supervisor encourages me to develop new skills.	1	2	3	4	5
15	I can't think straight by the end of my workday.	1	2	3	4	5
16	I don't 'rock the boat' with my co-workers.	1	2	3	4	5
17	I am afraid others will notice my failings.	1	2	3	4	5
18	I like the identity my job gives me.	1	2	3	4	5
19	My co-workers listen to what I have to say.	1	2	3	4	5
20	My supervisor praises good work.	1	2	3	4	5
21	I feel overwhelmed by the things going on at work.	1	2	3	4	5
22	I am rarely distracted when performing my job.	1	2	3	4	5
23	I get excited when I perform well on my job.	1	2	3	4	5
24	I avoid working overtime whenever possible.	1	2	3	4	5
25	The work I do on this job helps me satisfy who I am.	1	2	3	4	5

Strongly Disagree	**Disagree**	**Don't Know**	**Agree**	**Strongly Agree**
1	**2**	**3**	**4**	**5**

26	I believe that my co-workers appreciate who I am.	1	2	3	4	5
27	I feel emotionally healthy at the end of the workday.	1	2	3	4	5
28	I don't worry about being judged by others at work.	1	2	3	4	5
29	My job 'fits' how I see myself in the future.	1	2	3	4	5
30	I take work home to do.	1	2	3	4	5
31	I sense a real connection with my co-workers.	1	2	3	4	5
32	My supervisor does what he/she says he/she will do.	1	2	3	4	5
33	I often feel emotionally detached from my job.	1	2	3	4	5
34	Time passes quickly when I perform my job	1	2	3	4	5
35	I feel emotionally drained from my work.	1	2	3	4	5
36	I trust my supervisor.	1	2	3	4	5
37	My own feelings are affected by how well I perform my job.	1	2	3	4	5
38	My supervisor is committed to protecting my interests.	1	2	3	4	5
39	I do what my co-workers expect of me.	1	2	3	4	5
40	I feel tired before my workday is over.	1	2	3	4	5
41	My supervisor encourages employees to participate in important decisions.	1	2	3	4	5
42	I trust my co-workers.	1	2	3	4	5
43	My supervisor treats employees fairly.	1	2	3	4	5
44	I am involved in other activities outside my work (e.g. other jobs, church, school, recreation, volunteering, etc.) a few hours a week. Please choose one of the following: **1** = 1-5 hours, **2** = 6-10 hours, **3** = 11-15 hours, **4** = 16-20 hours, and **5** = 21+ hours	1	2	3	4	5
45	My job requires me to use complex skills.	1	2	3	4	5
46	I have a chance to complete any work I have started.	1	2	3	4	5
47	The output of my work affects the lives of other people.	1	2	3	4	5
48	I can work independently	1	2	3	4	5
49	I can figure out how well I am doing in my job	1	2	3	4	5
50	My job requires me to use a variety of my skills and talents	1	2	3	4	5

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1	2	3	4	5

51	I do not have the chance to complete my work from beginning to end.	1	2	3	4	5
52	Many people can be affected by the quality of my work	1	2	3	4	5
53	My job allows me to make decisions and do the job on my own.	1	2	3	4	5
54	My job itself gives me clues on my performance.	1	2	3	4	5
55	My job is quite simple and repetitive.	1	2	3	4	5
56	My job requires me to work closely with other people (e.g. clients, peers)	1	2	3	4	5
57	My job itself does not make an important impact on other people's lives.	1	2	3	4	5
58	My job gives me independence and freedom on how I do my work.	1	2	3	4	5
59	My job provides me with information about how well I am doing in my job	1	2	3	4	5

Comments: (If there is anything else you would like to add about your work experience)