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Psychosocial and Biographical factors in Career Burnout

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ABSTRACT

The objectives of this research report aimed to produce a model to understand how psychosocial work conditions affect burnout, the significance of the effects, the consequences for burnout, specifically with regard to *Health* and the *Intention to Quit* consequences. A further question that needed to be answered was what role biographical factors play in the development of Burnout.

A snowball sampling technique was used to administer a quantitative self-report questionnaire (Copenhagen Psychosocial questionnaire, the Copenhagen Burnout Inventory and an Intention to Quit questionnaire). The internet was the delivery mechanism. Five hundred and ninety six emails for responses were sent; of which 353 started and 240 ended the survey.

Psychosocial work factors proved to be a significant predictor of burnout and the results were consistent with some findings in previous research. Large correlations between burnout and *Health* were observed as well as moderate correlations with the *Intention to Quit*. Results from biographical hypothesis proved to be insignificant which concurs with research that found burnout is essentially a work related condition. *Health* and the *Intention to Quit* had no significant relationship, so in essence healthy employees are leaving the workplace (dysfunctional turnover), and ill workers are staying and are unproductive because of ill health sickness absence, lack of motivation and disengagement.

The value to reverse or prevent burnout in South Africa will depend on an integrated approach by government, private enterprise and researchers to devise intervention strategies.

DECLARATION

I declare that this research project proposal is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other university.

_____ _____

Collin Williams Date

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1 Introduction to the Research Problem

1.1 Introduction

Growth in the global economy and developments in information technology have resulted in continuous changes in structure and management techniques that have radically changed long tem employment relationships and have brought the market and the service provide closer than previously experienced (Dau-Schmidt, 2001).

In this constantly changing environment, manifested by increased customer demands, pursuit of efficiency and productivity, supervising management may become unaware of the pressure employees are experiencing. Coupled with being unaware they may not be present to provide acknowledgement, support and additional resources, which may be needed at the time and place when it is needed (Moore, 2000). Capital mobility has increased in the world economy and this has meant that workers must now compete with workers in other countries merely to retain the allegiance of the employer (Dau-Schmidt, 2001). As the 24 hour , 7 days a week economy evolves, non standard work schedules are becoming more common (Davis, Crouter and McHale 2006).

Technological changes, opening up of global markets, growth in the service industry and labour market deregulation, have reshaped the very nature of when people work (Sparks and Cooper, 2001). Apart from weekends and holidays, people spend half of their time awake at work. It is therefore obvious that work will have a major influence on lives. Work on the other hand has posed high demands that are not always well suited to the knowledge, skills and abilities of workers. Improperly designed tasks can contribute to stress, burnout and ill- health (Kompier, 2005). “For example in Denmark employees who answered “yes” when asked the question “ Is your work unevenly

spread so that work piles up?" increased from 36% in 1995 to 61% in 2000. In France, in 2004, 49% of employees reported to have "not enough time to finish the work"," (Kompier, 2005 p. 405). Economic efficiencies and competition are increasing work pressures and this has led to a hard management style that may unconsciously lead to undue criticism and intimidation of employees (Djurkovic, McCormack and Casimir, 2005).

The unrelenting and complex changes in the workplace will mean that employees will lose their quest for meaning, which according to Densten (2005) is one of the root causes of burnout. This view is shared by Cherniss (1993) who noted that research indicated that organisational conditions are a more significant cause of job burnout, than are personality factors. Without organisation problems, burnout is unlikely to occur in employees (Hallsten, 1993). Schaufeli and Enzmann (1998) propose that for burnout to occur three themes are normally present (1) an initial strong motivation as a precondition (2) relative to an unfavourable work environment and (3) it is a self-perpetuating process because of inadequacies in strategies we develop to cope.

Burnout is a very hurtful experience for employees that are accompanied by an array of physical, emotional and mental symptoms (Pines, 2002). Burnout is recognised as a work-related stress induced condition and has associations with depressed moods, sense of inadequacy, fatigue and memory problems (Eriksson and Wallin, 2004). It is a very costly phenomenon for organisations, because it manifests in a number of ways, namely, low morale, absenteeism, job turnover, poor performance, vandalism and lack of organisational commitment (Pines, 2002).

"Attracting and retaining intellectual capital, a cadre of highly skilled, independent, internationally marketable and mobile individuals, is a critical feature of globalisation" (Paul, 2000) p.1. "In order to burn one has to be on fire" (Pines 1993. p. 57), this assertion assumes that being highly motivated is a necessary precondition to burnout and therefore only highly motivated people burnout. If this holds true and burnout is a predictor of the intention to quit (Maslach, Jackson and Leiter, 1996), then most companies have dysfunctional turnover because of burnout. Dysfunctional turnover is characterised by highly productive and motivated staff leaving and poor performers staying (Sutherland and Jordaan, 2004). Allen and Griffeth (1999) described functional turnover is when poor performers leave the organisation and high performers stay.

Financial cost estimates on labour turnover of knowledge workers is equal to more than one year's salary (Michaud, 2000). Indirect costs are loss of turnover for the company, knowledge losses, productivity impacts, lower morale of remaining staff, loss of momentum, loss of corporate memory and customer dissatisfaction (Sutherland et al., 2004).

1.2 Strengths and Weakness of recent mainstream Burnout research

Despite calls for intervention studies in nearly every review of burnout literature, few have been completed. This is primarily driven by

1. The cost of invention research
2. It requires sufficient stability between the participants and the researcher to measure the long term impact of interventions
3. It requires the necessary authority to make consequential impact on the work life of participants

(Maslach et al., 1996)

Burisch (2002) summarizes the state of the art in burnout research as follows: “In 1986 (p. 637) Jackson, Schwab, and Schuler envisioned a bleak future for burnout research, namely ‘that twenty years from now we will have more data but not much more knowledge’. Although their forecast period has not yet elapsed, there is a definite likelihood that they will turn out to be right. As one metaindicator, an excellent state-of-the-art summary of empirical studies, Schaufeli et al. (1998) recent Burnout Companion to Study and Practice – A Critical Analysis is forced to refute one popular belief about burnout after another. Are idealistic workers more burnout-prone than others? Inconsistent results. Social support buffers against burnout? Equivocal results. Workload and time pressure lower feelings of personal accomplishment? Virtually unrelated. Burnout is linked to emotionally taxing client contact? Refuted. Burnout increases drug abuse? Very weak relationships with at best one burnout component. Burnout tends to spill over to private life? No conclusive evidence. Burnout causes absenteeism, turnover, and low performance? At best small effects, when self-report measures are used, at worst inconsistent and disappointing results; and so on.”

Table 1 Strengths and Weaknesses of Burnout Research

(Engelbrecht, 2006)

Strengths	**Weaknesses**
“Clear operational definition leads to good comparability of research results.	Tautology problem: burnout is what the MBI measures, the MBI measures what burnout is.

Burnout is a well-recognized problem in modern society and is a serious problem both for the individual suffering from burnout and for work organizations.	Burnout research takes a distanced position to the individual suffering from burnout. A healthy worker effect is most probable, because most investigations take only those into account who are still working. Moreover, burnout is measured with self-ratings in form of paper-pencil-tests. The individual attributions, thoughts, feelings, and emotions in a particular situation embedded in a greater context are not in focus (Pedersen, 2002).
There exists a tremendous body of work (Schaufeli & Enzmann, 1998 name 5.500 publications) in burnout research. Replications of research outcomes can be referred to.	More of the same “leads to a boring, monotonous and irrelevant research area that is self-perpetuating but not at all developing (Rösing, 2003).”
There is a “general frame of reference” in burnout research, giving the possibility for comparison and relation to the same reality.	The same frame of reference creates blindness toward new developments and other observations. The construction of reality is done on the basis of established knowledge. Scientific development grows out of questioning the already known and not out of common agreement.
There is a tremendous body of research one can relate to	Most of the work is cross-sectional and does not make causal inferences possible. Single case

when investigating burnout.	investigations to look at the phenomenon in depths are not existent.”

A lot more work still needs to be done in order to understand the nature of burnout in full and develop effective interventions (Maslach et al., 1996). Ninety percent of published studies have used the Maslach Burnout Inventory (MBI) and not many of these studies have criticised this questionnaire to evaluate burnout, nor has this vast amount of research studies on burnout created much knowledge about complex causes and consequences (Engelbrecht, 2006). New instruments, like the Copenhagen Burnout Inventor (CBI) have questioned the validity of the MBI and needs further discussion to develop the burnout concept from a one dimensional research approach (Engelbrecht, 2006).

The theoretical foundation of burnout needs to be developed in a much deeper and more structured way (Engelbrecht, 2006).

1.3 Implications for South Africa

The P-E Corporate Services survey of 2001 indicate that of 700 South African companies surveyed the turnover rate in general has risen from 7% in 1994 to 14% in 2001(Sutherland et al., 2004).

In a recent article in a leading South African Sunday newspaper, an article appeared to be superficially dealing with burnout and drug abuse. “South Africans are drugging

themselves to deal with anxiety sleeplessness and impotence". Statistics from 2002 - 2006 indicate:

- "25.3 % jump in sedatives and sleeping pills since
- 28.6% increase in prescriptions for anti-depressants
- 17,7% increase in prescriptions for impotence"

Carita McCallum an independent leadership development specialist and executive coach said more and more people in the business world are suffering from burnout. Impacts such as socia-political transformation are inherently stressful. South Africans are impatient with rate of change with aspects like affirmative action and empowerment. "There is speculation that there was particular pressure on any black super-achiever". "Burnout is not often as a result of overwork, but work not fitting in with the person's values. Because stress levels are so high, we want an immediate fix (Shevel, 2007 p. 7)".

In research done in the education sector it was found that black teachers are highly susceptible to developing burnout. Most people who experience burnout start out having high ideals but some realise that lack of resources is preventing the task they are performing, to have little effect. Even though socio-political conditions are important contributors, high failure rate for amongst black pupils (in 1990 35% of matriculants passed) represents failure by black teachers as well (Pretorius, 1994)

Published research in South Africa has mainly been focused on the Human Services Workers (Pretorius, 1994, Bhana and Haffejee, 1996 and van Wijk, 1997) from the research the author did on Burnout in South Africa. So far, it can almost be confidently

assumed that the Copenhagen Burnout Inventory has not been used in a published South African journal.

2 Literature Review

2.1 Introduction

The format of the Literature review will be a journey through the history of burnout, the demographics and psychographics. We will explore the definition of burnout over the last 30 years. We will examine the antecedents of burnout as well as the characteristics of burnout. Lastly, we will explore the consequences of burnout.

2.2 The History of Burnout

Burnout was a term introduced in the 1970s to refer to what happened to social workers, as an explicit outcome of work related stress, where they could not reach the high expectations they had set for themselves. They showed symptoms of fatigue, headaches, sleeplessness, low resistance, irritation, suspicion, overconfidence, drug abuse, negative attitudes, boredom and lack of challenge (Freudenberger, 1974).

Freudenberger (1974) began to use the tem to describe the experience of emotional depletion and loss of motivation. Almost at the same time Christina Maslach (1976) began to research how people in emotionally demanding jobs cope with everyday work. Since the beginning of the 1980's more than 5500 studies on burnout have been published (Schaufeli et al., 1998). Burnout has never reached the status of being classified as a disease (ICD-10 or DSM-IV) nor does it have the status of an institutionalised field of research (Rösing, 2003).

Burnout research is therefore regarded as a process, developing (and re-developing) with differential properties after 30 years of being discovered (Engelbrecht, 2006).

2.3 The Definition of Burnout

Burnout is most commonly defined as a syndrome of feelings of emotional exhaustion, depersonalization, and reduced personal accomplishment, where repeated research shows that with high job demands (e.g. workload, physical and emotional demands) and low job resources (e.g. job control, coaching and social support) are precursors of burnout (Demerouti, Bakker , Nachreiner and Schaufeli, 2000)

Burnout as a term is imprecise and difficult to define and measure, however we know it when we see it. It is a syndrome characterised by symptoms of chronic fatigue, anger and a sense of being trapped in a job that has ceased to have personal meaning (Berglas, 2006). It has been recognised as chronic and as an extensive problem in the mental health field (Geurts, Schaufeli and Rutte, 1999).

Table 2: History of Burnout Definitions

Year of publication	Author	Burnout definition
1974	Freudenberger (in Engelbrecht , 2006, p. 33)	"to fail, wear out, or become exhausted by making excessive demands on energy, strengths or resources."
1980	Freudenberger and Richelson, 1980 (in Engelbrecht	"a state of fatigue or frustration, brought about by devotion to a cause, way of life or relationship that failed to produce the

	, 2006, p. 33)	expected reward."
1980	Cherniss, 1993 (in Engelbrecht , 2006, p. 33)	The first stage involves an imbalance between resources and demands (stress). The second stage is the immediate, short-term emotional tension, fatigue, and exhaustion (strain). The third stage consists of a number of changes in attitude and behaviour, such as a tendency to treat clients in a detached and mechanical fashion, or a cynical preoccupation with gratification of one's own needs (defensive coping).
1981	Pines, Aronsson and Kafry, 1981 (in Engelbrecht, 2006, p. 33)	"a state of physical, emotional, and mental exhaustion caused by long term involvement in situations that are emotionally demanding."
1986	Maslach and Jackson 1986 (in Engelbrecht, 2006, p. 33)	Burnout is a syndrome of emotional exhaustion, depersonalisation, and reduced personal accomplishment that can occur among individuals who do 'people work' of some kind.
1988	Kahill, 1988 in (Little, Simmons and Nelson, 2007, p. 246)	Burnout is a negative affective state caused by recurring distress
1989	Burisch, 1989 (in Engelbrecht, 2006, p. 33)	Burnout has a certain gestalt quality, including configurations of symptoms, lifestyles, modes of thinking, job situation, and so on. Burnout embraces one, several, often all of the following signs: over – or under activity; feelings of helplessness, depression and exhaustion; inner restlessness; reduced feeling of self-

		confidence and demoralization; declining social contacts; active effort to change the condition
1993	Cordes and Dougherty, 1993 (in Advani, Jagdale, ,Garg and Kumar, 2005 p. 3) Gold and Roth, 1993 (In Densen, 2005 p. 106)	Burnout thus refers to negative psychological response to interpersonal stressors and contains three separate dimensions: emotional exhaustion, depersonalization and reduced personal accomplishment It is characterised by progressive disillusion, with related psychological and physical symptoms which diminish one's self-esteem, and develops gradually over a period of time
1997	Maslach and Leiter (in Engelbrecht, 2006, p. 33)	(Burnout)…represents erosion in values, dignity, spirit, and will – an erosion of the human soul. It is a malady that spreads gradually and continuously over time, putting people into a downward spiral from which it's hard to recover.
1998	Schaufeli and Enzmann (in Engelbrecht, 2006, p. 33)	Burnout is a persistent work related state of mind in 'normal' individuals that is primary characterised by exhaustion, which is accompanied by distress, a sense of reduced effectiveness, decreased motivation, and the development of dysfunctional attitudes and behaviours at work. This psychological condition develops gradually but may remain unnoticed for a long time by the individual involved. It

		results from a misfit between intentions and reality in the job. Often burnout is self-perpetuated because of inadequate coping strategies that are associated with the syndrome.
	Maslach et al., 1998 (p. 20)	"Burnout is a state of exhaustion in which one is cynical about the value of one's occupation and doubtful of one's capacity to perform"
2001	Maslach, Schaufeli, and Leiter, 2001 (in Engelbrecht, 2006, p. 33)	In the process of burning out, "energy turns into exhaustion, involvement turns into cynicism, and efficacy turns into ineffectiveness"
	Hobfoll, 2001 (in Borritz et al, 2006, p. 105)	"Hobfoll considers burnout as a special form of psychological stress, emerging when a significant investment of time and energy does not lead to the gain of new resources"
2005	Kristensen, Borritz, Villadsen and Christensen, 2005.	"The core of burnout is fatigue and exhaustion, which is attributed to specific domains or spheres of a person's life. Personal burnout is the degree of physiological and psychological fatigue and exhaustion experienced by the person. Work-related burnout is the degree of physiological and psychological fatigue and exhaustion which is perceived by the person as related to his/her work. Client-related burnout is the degree of physiological and psychological fatigue and exhaustion which is perceived by the person as related to his/her work with clients."

2006	Engelbrecht, 2006 (p.45, 156)	".. because burnout processes are slowly developing, most of the times first recognized when serious limitations have occurred. Burnout research has a poor theoretical foundation. This is due to the complexity of the phenomenon and the in some parts existing overlap to other concepts. Burnout and engagement are described to be the ends of the same continuum"

This comprehensive list of definitions all share common basic assumptions (Engelbrecht, 2006):

1. Three dimensions of burnout as a state namely emotional exhaustion, depersonalisation and resulting in a reduced feeling of personal accomplishment.
2. Burnout is work related , however work has not been defined
3. Burnout is a process discovered over a period of time and often not stopped because of ineffective coping strategies
4. A misfit between expectations and job realities

2.4 Demographics, Biographics and Burnout

2.4.1 Introduction

Research that has been done trying to link personality with burnout has had limited success (Byrne, 1996). Studies done by Maslach yielded the following results.

Demographic norms for the Maslach Burnout Inventory (MBI) results in the following trends;

1. emotional exhaustion has a higher score for woman
2. Single people have a higher disposition for emotional exhaustion
3. as far as age is concerned the highest score for emotional exhaustion is in the age group under 30 followed by 31- 40 and
4. from an educational point of view less educated (high school equivalent) are more likely to burnout than more educated people (Maslach et.al, 1996)

DeRobbio and Iwanicki's (1996) found in a study of urban teachers, a small but significant variance in burnout sub scales. However, Newman and Rucker-Reed (2004) found that demographic characteristics did not create a significant difference in stress experiences when assessed with other organisational factors.

Schaufeli, Taris and Rhenen (2007) research indicates that social-biographical background does not play an important role in burnout results.

2.4.2 Gender and Burnout

Spickard, Gabbe and Christensen, (2002) found that female physicians were 60% more likely to show signs of burnout compared to their male counterparts.

In line with this finding (Leontaridi and Ward, 2002) found that female employees are more inclined to experience work stress when compared to their male colleagues. This

was further supported by (Blake, Bloemendaal and Hoogstraten, 2003) who reported gender differences in the manifestation of burnout in different occupational groups.

In contrast Gorter, Albrecht, Hoogstratenn and Eijkman (1999) found no overall differences in gender, men showed high scores and depersonalisation and no significant different on emotional exhaustion and depersonalisation (Ku Fan and Cheng 2007)

2.4.3 Personality and Burnout

Negative affectivity in the individual disposition suggest that, in addition to organisation and role demands placed on individuals, some of these demands may be amplified by personal expectations for achievement (Cordes et.al, 1993)

Personality factors (Extraversion, Conscientiousness, Openness, Agreeableness and Neuroticism) do not appear to explain an incremental variance in burnout (Zellars, Perrewe and Hochwarter, 2000). Although personality factors have an important role in its association with burnout, no hypothesized relations were conclusively proved (Zellars et al., 2000). As far as neuroticism is concerned, it failed to produce a significant relationship with depersonalization or personal accomplishment, although it did significantly predict emotional exhaustion (Zellars et al., 2000).

2.4.4 Geographical Location and Burnout

"One-way analysis of variance showed no statistically significant differences, thereby confirming the hypothesis that levels of burnout do not differ per region (in the Netherlands) (Gorter et al., 1999, p. 112)."

Winfree and Taylor (2004) similarly found that across many jurisdictions of different size in New Zealand, officer attitudes including job stress do not change significantly.

2.4.5 Occupation and Burnout

Maslach et al. (1996) found significant statistical differences in the levels of burnout in occupations, which indicates occupational differences in culture, work settings and occupational groups; however, they pointed out that the sample used was a convenience sample that could not be considered representative of nations and occupational groups.

Toppinen-Tanner, Kalimo and Mutanen (2002) found that the burnout phenomenon is similar in white and blue- collar jobs. Kristensen et al. (2005) refuted this view, findings in the PUMA study (Danish acronym for Project of Burnout, Motivation and Job Satisfaction) suggests that employees in different jobs have very different burnout levels.

2.4.6 Job Tenure and Burnout

There appears to be some correlations between job tenure and burnout in that new workers develop distinct from workers who have adapted to the environmental factors of the job (Burke, 1989).

2.4.7 Career progression and Burnout

Cordes et al. (1993) found that studying burnout at different levels of organisations could be problematic because employees who have more upward career progress may experience less burnout because they consider advancement as evidence of personal accomplishment.

2.4.8 Age and Burnout

There are four schools of thought:

2.4.8.1 Younger

Higher levels of burnout is consistently reported in younger individuals, because they have possibly not learned to effective deal with work demands compared to older workers who are more stable, mature and have a more balanced perspective on life (Schwab and Iwanicki, 1982 and Maslach 1993).

Cherniss (1992) after a 12 year follow up study found that workers who entered the workplace with high levels of burnout, were more mature, stable and had higher levels of job satisfaction, however the consequence of burnout may be higher for workers who have been working for some time. “It is well documented that younger teachers are more likely to evidence signs of burnout, than older teachers” (Schwab, 1995, p. 31). A study of teachers found younger, single urban teachers have the tendency for high levels of burnout (DeRobbio et al., 1996). A study of physicians reported higher levels of commitment and job satisfaction and their reported burnout decreased with age and

length of service (Spickard et al., 2002). Burnout seemed to be more prolific in the under <35 age category in a study by Borritz et al. (2006).

2.4.8.2 No Difference in Age

Schaufeli, Leiter and Kalimo (1995) found no substantial difference between Finnish and Dutch civil servants in relation to age. Levels of personal accomplishment seem to diminish with age, however there was no significant difference found in emotional exhaustion and depersonalization (Van Horn, Schaufeli, and Enzmann, 1999).

2.4.8.3 Middle Aged

No statistically significant differences were found, but from a tentative analysis, it appears that Dentists between the ages of 40 – 54 have the tendency to show higher levels of emotional exhaustion and depersonalization (Gorter et al, 1999). Burnout can appear at any stage; however, it might be more prolific in mid career along with midlife crisis (Cannon, 2006).

2.4.8.4 Older

Biological age is believed to be responsible for playing a significant role in the development of burnout. Burnout develops over a length of time and because of a changing, faster moving work environment, workers are unable to react to the change because of reduced flexibility (Engelbrecht, 2006).

It would seem from the literature that age and burnout have conflicting results from various studies and later in my research, I will attempt to prove which school of thought is most likely to hold true.

2.4.9 Marital Status

Married people seem to be less likely to experience burnout (Maslach, 1993).

2.5 The relationship between burnout and stress

It is evidenced that individuals who are stressed suffer from adverse health conditions, such as, ulcers, high blood pressure, heart conditions or even death. Behavioural sciences have proved that stress is linked to poor performance, absenteeism and high labour turnover (Porter and Steers, 1973). “Chronic Stress can be emotionally draining and can lead to burnout” (Maslach 1996, p. 3**).** Arnold, Cooper and Robertson (1998, p. 300) “defined work stress as any force that pushes a psychological or physical factor beyond its range of ability, producing strain within an individual.”

Maslach and Schaufeli (1993) discussed the relationship between burnout and stress and suggested that stress is a consequence of unsuccessful adaptation with work demands whereas burnout occurs during long, unsuccessful attempts to adapt to work demands. Because workers are unable to derive a sense of significance through unmet expectations, they burnout; however anyone can experience stress (Pines, 1993). Numerous self-reported measures of personal distress are correlated with burnout (Schaufeli et al., 1998). Prolonged exposure to a stress (e.g. negative job demands) can deplete the body’s reserves and lead to physical exhaustion when repeated unsuccessful attempts to adapt, fail (Demerouti et al., 2000). Prolonged stress is associated with psychological disorders such as anxiety and depression at work (Weinberg and Creed, 2000). In the European Union, 28% of workers report stress-related health problems. There is an optimal point when is stress is considered

beneficial, any deviation from that point is considered undesirable (Leontaridi et.al, 2002).

Burnout is considered a special class of occupational stress (Borritz et al., 2006).

Proxies for stress are somatisation, depression and anxiety causing physical or psychological discomfort (Buker et al., 2007). Psychological stress occurs when an employee losses a resource, fails to gain new resources after an investment in existing resources, or when the employee is threatened with a loss of a resource (Borritz et al., 2006).

Burnout is a developmental process and not simply a reaction to a stressful event (Densten, 2005). Stress at work is becoming increasing important because of continual changes in the work environment, with job insecurity and job demands on the increase.

2.6 Burnout Characteristics

2.6.1 Introduction

"Burnout is a syndrome of emotional exhaustion, depersonalisation and reduced personal accomplishment that can occur in individuals who work with people, in some capacity" (Maslach et al, 1996, p. 4).

Workaholism may be a root cause of burnout, in that frantic and excessive behaviour leave workers feeling depleted and burnt out (Maslach, 1986). The main component of the burnout syndrome is a feeling of *emotional exhaustion* and because of depleted resources; they are no longer able to give of themselves at a psychological level (Maslach et al., 1996). Another aspect in the development of burnout is a negative,

cynical attitude and feeling towards ones' client; this is called *depersonalisation*. A third characteristic of the burnout syndrome is *reduced personal accomplishment*, which refers to the propensity to evaluate oneself negatively, predominantly to ones' work with clients (Maslach et al., 1996).

The development of depersonalisation is highly correlated to the experience of emotional exhaustion (Maslach et al., 1996), but is very distinct. Personal accomplishment is more directly correlated to a control-oriented coping (Maslach et al., 1996).

2.6.2 Emotional or Mental Exhaustion

Emotional exhaustion is associated with mental and physical strain, work overload, roles conflict at work and is a clear signal of distress in an emotionally demanding work environment (Maslach et al., 1996). "Physical exhaustion is characterized by low energy, chronic fatigue, and weakness . . . Emotional exhaustion, the second component of burnout, involves primarily feelings of helplessness, hopelessness, and entrapment . . . Mental exhaustion, the third component, is characterized by the development of negative attitudes toward one's self, work, and life itself" (Pines and Aronson, 1988, p. 332).

Mental or emotional exhaustion is the key feature of burnout (Gorter et al., 1999). Different views exist regarding the relative importance of the three burnout characteristics however, emotional exhaustion is seen as the core element of burnout (Gorter et.al, 1999). "Emotional exhaustion refers to energy depletion or the draining of emotional resources" (Demerouti et al., 2000, p. 455).

"Exhaustion is defined here as intensive physical, affective and cognitive strain, as a long-term consequence of prolonged exposure to work stressors" (Demerouti et al., 2000, p. 455).

"Emotional exhaustion is the burnout component that is most responsive to the nature and intensity of work stressors", (Leiter, 1991, p. 12). In a study by Greenglass, Burke, and Konarski (1998), they found bureaucratic interfering led to higher levels of emotional exhaustion. Emotional exhaustion is the only constituent of burnout that led to somatisation and it further supports the view that emotional exhaustion is the burnout component that most bears a resemblance to the prototype of stress (Greenglass et al., 1998). The more discord there is between the demanded feelings of the work environment and ones' own feelings, the more the possibility of an employee being emotionally exhausted (Kruml and Geddes, 2000).

Only age and occupational tenure had a considerable positive significant relationship with exhaustion (Demerouti et al., 2000). Emotional work demands have hardly ever been considered as a predictor of burnout (Brotheridge and Grandey, 2002).

2.6.3 Depersonalization or Cynicism

Cynicism reflects indifferences or distant attitude towards work (Maslach et.al, 1996). "Detachment and an emotional callousness towards clients and peers", Advani et.al, (2005) define cynicism in their research on software professionals.

Cynicism is when employees develop indifference about their work in order to distance themselves from its exhausting demands (Maslach et al., 1996). Cynicism reduces the energy to perform work and for developing creative solutions to problems presented

(Maslach et al., 1996). Cynicism also diminished the persons' potential to build professional efficacy (Maslach et al., 1996). Emotional exhaustion and cynicism share the same related constructs (Maslach et al., 1996).

Depersonalisation has a high correlation with frequent complaints about customers and is highly correlated with complaints about co-workers in peer review surveys (Maslach et al., 1996). Demerouti et al. (2000) defined depersonalization as one form of disengagement. There are strong relationships between job resources and depersonalization (Demerouti et al., 2000).

In industrialised countries (confined to western countries) the work realm is where important growth needs can be fulfilled, however when an organisation fails to provide enough or the right resources employee will withdraw (Demerouti et al., 2000).

2.6.4 Reduced Professional Accomplishment or Efficacy

Reduced personal accomplishment is the third burnout characteristic, which refers to the propensity to evaluate oneself negatively, predominantly to ones' work with clients (Maslach et.al, 1996) and includes feelings of insufficiency (Schaufeli and Buunk, 1996). *"Reduced personal accomplishment* represents a deterioration of self-confidence, and dissatisfaction in one's achievements. Reduced personal accomplishment thus involves low motivation and self-esteem", (Advani et al., 2005).

Personal Accomplishment emphasises efficacy and success as having a beneficial impact on people, while it includes satisfaction, the past and current actions unequivocally assesses an individuals' expectations of continued effectiveness at work (Maslach et al., 1996). Organisational characteristics, such as work overload or role

conflict worsen emotional exhaustion, and at the same time, organisations ignore participative decision-making and social support that enhance *Personal Accomplishment*. A lack of participative decision-making and social support and adverse organisational characteristics develop simultaneously within a problematic organisational context, without any major causal links between *Emotional Exhaustion* and *Personal Accomplishment* (Leiter, 1993). Weisfelt's (1993) contention was that prolonged deficiency in positive student feedback generated a sense of ineffectiveness resulting in energy depletion for teachers.

Professional Efficacy is correlated to satisfaction, organisation commitment, job involvement and access to resources; however the correlations between the other burnout subscales are low (Maslach et al., 1996).

2.6.5 Conclusion

Burnout as a concept combines feelings of exhaustion with an employees' involvement in their work (especially with those they work with) and their sense of efficacy or accomplishment. Burnout is therefore complex and specific occurrence that is characterised by a diminished sense of engagement with work (Maslach et al., 1996).

2.7 New Burnout Characteristics using the CBI Burnout Questionnaire

2.7.1 Work Related Burnout

Work- related burnout is burnout caused by work conditions when an imbalance occurs between resources, work demands, reward and responsibility (Engelbrecht, 2006).

Demerouti et al. (2001) contends that exhaustion increases when job demands are high, whereas disengagement is higher with low resources. Disengagement is not an outcome of exhaustion but is associated with a shortage of resources (Engelbrecht, 2006). "…Exposure to adverse psychosocial work characteristics leads to an unfavourable psycho-physiological arousal (distress), which in the long run will lead to a state of exhaustion, which we label burnout" (Borritz, 2005, p. 233). High job demands coupled with low reward and low recognition and at the same time, low resources are thought to cause burnout (Engelbrecht, 2006). Job demand flexibility is declining together with reducing job stress tolerance because of declining resources and as soon as an employee feels overstrained, extra demands cannot be met as they did before (Engelbrecht, 2006). High job demands coupled with low job control is linked to negative health and well being consequences (Engelbrecht, 2006).

Siegrist, Starke, Chandola, Godin, Marmot, Niedhammer, and Peter (2004) describe how human beings endeavour to balance demands and rewards (i.e. Job security, income and rewards from supervisors and co-workers); therefore, a prolonged imbalance is thought to lead to negative health consequences.

2.7.2 Client Related Burnout

Reduced personal accomplishment is the third burnout characteristic, which refers to the propensity to evaluate oneself negatively, predominantly to ones' work with clients (Maslach et al., 1996).

Zapf, Seifert, Schmutte, Mertini and Holz (2001) found that client related stressors and qualitative aspects of the service provider-client relations are important in predicting the

advancement of burnout. Low client service expresses itself in a number of ways, namely; tiredness, a lost sense of responsibility and offering a service at a bare minimum level (Engelbrecht, 2006). High work demands together with missing rewards from clients and family is thought to be unhelpful for the feeling of being engaged.

Emotionally strong experiences (positive and negative) are taken home, which can be to the detriment of personal resources of the personal network (husband, children, friends, and relatives) (Engelbrecht, 2006).

2.7.3 Personal Related Burnout

Personal related burnout is defined "... the degree of physical and psychological fatigue and exhaustion experienced by the person (Kristensen et al., 2005, p. 197)." This part of the Copenhagen Burnout Inventory (CBI) might as well have been called fatigue or exhaustion because it tries to measure the relative tiredness or exhaustion experienced by an individual (Kristensen et al., 2005). Personal burnout is a general scale, which corresponds to general exhaustion and applies to everyone regardless of whether they in the workforce or not (Borritz, 2005). In a three year follow up study, personal related burnout was associated with poor possibility for development, poor role-clarity, high level of role-conflicts, as well as high level of meaning of work and high level of good leadership (Borritz, 2005).

2.7.4 Conclusion

While some psychosocial factors such as emotional demands at work and role conflicts, predicted all three CBI scales, other factors only predicted one or more. They were demands for hiding emotions (client-related burnout), high work pace (work-related burnout), and role clarity (personal and client-related burnout) (Kristensen et al., 2005).

2.8 Antecedents of Burnout

2.8.1 Introduction

Research has led us to believe that work stressors, which include the work setting, unmet expectations and quality of supervision, determine the degree of burnout experienced (Greenglass et al., 1998).

Himle, Jayaratne, and Thyness (1991) suggest that possession of knowledge and practical help to complete a task may cause less burnout and therefore burnout not only depends on stressful events at work , but also the availability of resources (social support from colleagues and supervisors) as well as coping strategies.

Burnout research has thus far focused on the environmental factors of some jobs, including working hours, facilities, physical danger, rule inflexibility and perceptions about organisational politics (Zellars et al., 2000).

2.8.2 Excess working time and non standard work schedules

2.8.2.1 Excess working time

Time based demands limit the participation in one or other domain because of resource drain in one or other domain, thereby limiting time or involvement within either domain (Tenbrunsel, Brett, Maoz, Stroh and Reilly, 1995). Managers today face increasing time pressure with little time to recover. Even though flexible working hours and holiday breaks offer some relief, overall, the workday is long and hard and the more complex organisations become the longer it takes to get things done (Levinson, 1996).

A study on the working hours of managers in Britain has revealed that poor time management skills causes stress and inefficiency, therefore if improved, it would be one alternative to avoid early burnout (Industrial and Commercial training,1992). According to Bakker, Groenewegen, Jabaaij, Meijer, Sixma and de Veer (1996) the number of hours worked was a poor predictor of burnout. "..Observed correlation between work hours and burnout may seem low, it is reasonable to assume that burnout is not a direct consequence of the number of hours worked per se" (Barnett, Brennan, Gareis, 1999a, p.74). In Japan, the magnitude of working hours has been suggested to be the cause of death by overwork (24% of Japanese men work 60 hours and greater on average in 1988) (Nishiyama and Johnson, 1997). A study by Simpson (1998) on the impact of organisational change and the implications for workloads and working hours, between 61% (female) and 67 % (males) chose longer hours as the pressure increased and the most popular work pressure was" long working hours."

A positive relationship between working time and burnout is almost exclusively detected for perceived time pressure and very rarely for objective measure such as workload or number of working hours (Schaufeli et al., 1998). The ability for an employee to develop a strategy to optimise family and work needs is called fit, in the research conducted by (Barnett, Gareis, and Brennan, 1999b) they found fit mediated the relationship between

working hours and burnout. Long working hours has a significant correlation with job stress levels, according to Leontaridi et al. (2002), those working between 20 – 40 hours a week are 10% more stressed than those working less than 20 hours. This number jumps to 45% of those working greater than 40 hours. Schaufeli et al. (2007) found none of the burnout scales were correlated to excess working time.

Perhaps is most appropriate to conclude that burnout research and the correlation with excess working time remains inconclusive.

2.8.2.2 Non Standard Work schedule

“Direct competition with developing countries and the global movement of capital have increased the need for flexible labour and exerted a downward pressure on wages. Working on the weekend and the evening has become part of the job and, at the same time domestic demand for services, has extended business operating hours” (Presser 2003, p. 395).

“In Canada, a third of all employees work evenings, nights, or rotating shifts, and 17% of full-time employees work weekends , in the United States, two in five employees work on the weekends, evenings, or nights and more than half the Australian labour force works some or most of their hours outside a standard nine to-five weekday. In the European Union, nearly half of all employees work at least one Saturday out of four, whereas a third work one Sunday or more per month” (Strazdins et al., 2006, p.395).

Among dual income earner families as many at three quarters, have one or more parents working nights or on weekends and this is the time normally reserved for family time (La Valle, Arthur, Millward, Scott and Clayden, 2002).

Tausig and Fenwick (2001) found that low control of the work schedule was implicated as a source for frustration and burnout. “Two thirds of parents, however, work non-standard times because it is a requirement of the job—not because they choose to—and many would rather not work these times” (Strazdins et al., 2006, p.396). Non-standard work schedules contribute to parents’ depressive symptoms because of fatigue and disruption to biological systems as well the trying to maintain social and family relations (Taylor, Briner and Folkard, 1997). When mothers or both parents worked at non- standard times, parents report more depressive symptoms and less effective parenting (Strazdins et al., 2006).

“In contrast to previous findings, no significant effects emerged predicting parental involvement, related to parents’ work schedule”, (Davis et al., 2006, p. 455).

2.8.3 Job Characteristics

2.8.3.1 Job Demands

*Defined: “*Demands are structural or psychological claims associated with role requirements, expectations, and norms to which individuals must respond or adapt by exerting physical or mental effort”, (Voydanoff 2005, p. 823). In general, it is assumed that workload and time pressure are the most important work-related stressors (Karasek, 1979).

Increasing job demands, due to the introduction of sophisticated technologies and budget cuts, insufficient job resources; report a positive relationship between stress and lack of co-worker support (Schaufeli, Keijsers and Reis Miranda, 1995b). Inability to resolve chronic goal conflict is associated with an individuals' reduced well –being (Emmons, 1996). Job demands on burnout could not be replicated in a longitudinal study; they assume however that it might be due to methodological problems (Schaufeli et al., 1998).

Moore (2000) found that perceived workload is clearly the most definitive predictor of work exhaustion. Managers who reported high job demands were six times more likely to have high work stress, than managers that did not have high demand jobs and may have become too high to be buffered by ordinary support mechanisms (Lindholm, 2006).

2.8.3.1.1 Roles Stressors

Role conflict is defined as "conflicting, incompatible or unclear expectations about one's professional or occupational role" (Harrison 1980, p. 431). *"Role conflict* arises on the job when a role incumbent is confronted with incompatible or incongruous expectations that are difficult or impossible to satisfy simultaneously. Role Conflict was significantly associated with the emotional exhaustion" (Zellars et al., 2000, p. 1573).

Role ambiguity can be defined as ***"***Lack of clarity as to what is expected, appropriate or effective behaviour" (Harrison 1980, p. 431). Roles ambiguity refers to a situation encountered on the job in which certainty or predictability is required to accomplish goals (Zellars et al., 2000). It may arise from unclear, inadequate information or it could

be unclear responsibilities, authority as well as the absence of clear policies. Role ambiguity is a significant predicator of burnout in social workers (Zellars et al., 2000).

"Quantitative *role overload* occurs on the job when one is expected to do more than time permits" (Pines and Maslach, 1978, p. 1574). Role overload has been consistently associated to increased burnout (Zellars et al., 2000).

2.8.3.1.2 Client Demands

"Several studies have shown that burnout is positively correlated with the amount of time nurses spend with their patients" (Cronin-Stubbs and Brophy, 1985, p. 455).

Because solutions for clients' problems are not always obvious and easy to obtain, the situation becomes more unclear and frustrating. For the person who constantly works with clients, in such circumstances, the chronic stress can be emotionally draining and can lead to burnout (Maslach et al., 1996). Burnout can lead to the deterioration of care and service and appears to be a factor in low morale, turnover and absenteeism (Maslach et al., 1996).

2.8.3.1.3 Conclusion

Most burnout studies have included job characteristics as they are considered the root cause of the burnout syndrome. Consistent and convincing correlations with burnout were obtained from job demands, namely, work overload and poor resources (lack of social support from co-workers and superiors) and lack of job control (Schaufeli et al., 2007).

2.8.3.2 *Job Control*

Greater job control was found to be associated with enhanced personal accomplishment (Landsbergis, 1988).

The ability to influence organisational policies, especially those that have a direct impact on an employees' work, reduces susceptibility to burnout (Leiter, 1991a). In a study of burnout among physicians, the factors that predict professional satisfaction, organisational commitment and burnout, it was found that the simple most important predictor for these outcomes was a sense of control over the practises' work environment (Maslach et al., 1996). Three other factors were co-worker support, perceived work demands and satisfaction with resources (Maslach et al., 1996).

A source of stress for workers in the workplace is the level of demand and the degree of control they have over their decisions (Leontaridi et al., 2002). Emotional work control is operationalised as particular form of job control (Engelbrecht, 2006). Emotional work control is the extent to which an employee can make a decision whether or not to, and at what point to show a certain emotion (Engelbrecht, 2006).

2.8.3.3 *Support Network (co-workers and organisational)*

Berkman (1995, p. 301) "described social networks and social support as psychosocial resources available to the worker when confronting job demands. The social network was defined as a web of social relationships that surround an individual and the characteristics of those linkages, while social support was defined as the emotional, instrumental or financial support that was obtained from a person's social network."

The various social support structures have definitive relationships with aspects of burnout. Negative contact with supervisors was positively related to *Depersonalisation*, unpleasant supervisor contact was positively related to *Emotional Exhaustion* and pleasant co-worker contact was positively related to *Personal Accomplishment* (Leiter and Maslach, 1988). In a study of nurses by Pick and Leiter (1991), they found that interpersonal conflict with colleagues, to be a more significant cause of burnout than contact with clients. Human service staff that score low on peer and co-worker satisfaction surveys, score high on *Emotion Exhaustion* and *Depersonalisation* and low on *Personal Accomplishment* (Maslach et al., 1996 and Greenglass et al., 1998). Byrne (1994) found that peer support for teachers was correlated to enhanced *Personal Accomplishment* and conflict in the classroom was related to increased exhaustion. Lack of reciprocity in social exchange relationships at interpersonal and organisational levels are related to higher burnout (van Horn et al., 1999). “When the ratio between investments and outcomes does not match the ratio for the other party, lack of reciprocity (inequity) is experienced” (van Horn et al., 1999, p. 93). High burnout correlated significantly with employees who do not know how they are performing in the jobs (Maslach et al., 1996). Zunz (1998) argues that social support increases resiliency on the job and is associated with lower burnout in human service managers. Job demands seem to be more stressful when nurses lacked a good support network to discuss patient care (Demerouti et al., 2000).

Yukl (2001) described, “Professional networks (a variant of social network) in an organisational perspective as major sources about what was happening inside or outside organizations. They could be used for obtaining assistance and political support for plans and proposals, for helping implement changes and innovations, for obtaining

advice from fellow professionals and for facilitating coordination with people in other parts of the organization. Exchanges of information within these networks are built on trust." Van Dierendonck, Schaufeli, and Buunk (1996), found that inequity is an antecedent for burnout and not the other way round. Buker et al. (2007) summarise organisational support stressors i.e. supervision (management practices), promotional practices and work conditions. More specific to support stressors include:

1. Lack of participation in daily organisation practices
2. Lack of administrative support
3. Unfair discipline or a punitive philosophy
4. In addition, alienation resulting from a militaristic nature.

2.8.3.3.1 Workforce Bullying

Workforce Bullying has not been specifically mentioned in burnout literature, however its close association with organisational stressors makes it appropriate to include in a discussion about organisations support and more specifically an extreme case of no organisational support from supervisors.

Einarsen, Hoel, Zapf, and Cooper (2003) define workforce bullying as a behaviour, which adversely affects the work of the victim. It includes harassing, offending or socially excluding a victim. In order for it to be classified as bullying, it needs to occur continually over an extended period.

Djurkovic et.al (2006) categories five elements of workforce bullying "based predominantly on a review of the English-language bullying literature namely;

(1) Destabilisation (e.g. assigning meaningless tasks or repeatedly reminding the victim of his/her mistakes);

i) Shifting of goal posts without telling you

ii) Constant undervaluing of your efforts

iii) Removal of areas of responsibility without consultation

(2) Isolation (e.g. preventing access to training or deliberately withholding important work-related information);

i) Withholding necessary information from you

ii) Freezing out, ignoring, or excluding you

iii) Unreasonable refusals for leave, training, or promotion

(3) Overwork (e.g. setting impossible deadlines or disrupting the victim unnecessarily);

i) Undue pressure to produce work

ii) Setting of impossible deadlines

(4) Threat to personal standing (e.g. insulting or teasing the victim);

i) Undermining your personal integrity

ii) Destructive innuendo and sarcasm

iii) Making inappropriate jokes about you

iv) Persistent teasing

(5) Threat to professional status (e.g. publicly humiliating or accusing the victim of lack of effort).

1) Persistent attempts to belittle and undermine your work

ii) Persistent and unjustified criticism and monitoring of your work

iii) Persistent attempts to humiliate you in front of your colleagues

iv) Intimidatory use of discipline or competence procedures" (p. 74, 78)

2.8.3.4 Conclusion

"Low levels of psychosocial resources such as weak social networks and low social support have emerged as risk factors in health-related research" (Lindholm, 2006, p. 301). In the final analysis, the increased risk for a high level of work stress in relation high job demands is not mitigated by whether an employee is part of a professional network or not (Lindholm, 2006). Buker et al (2007) reported that less stress is likely to be felt when employees are more satisfied with their supervisors, co-workers and with work itself.

2.8.3.5 Resources

Resources defined "Resources are structural or psychological assets that may be used to facilitate performance, reduce demands, or generate additional resources" (Voydanoff, 2004, p. 823).

Previous research has concluded that a loss of resources contributed to burnout (Leiter, 1993). "In the conservation of resources theory, resources are defined as those objects and personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions, or energies and according to the conservation of resources theory, stress is

caused by a threat of resource loss" (Hobfall, 1998, p. 233). Job resources are for example performance feedback, tasks variety, participation in decision making, job control, social support and financial rewards and the lack of job resources are important in predicting disengagement (Demerouti et al., 2000). Work relations resources have high correlations with cynicism and lack of professional efficacy (Toppinen-Tanner et al., 2002). A stressful appraisal occurs when resources are less than the demands of the environment as perceived by workers, which leads to endangering their well-being (Voydanoff, 2005).

"Fit occurs when the individual has the abilities needed to meet the demands of the environment. Strain is expected to increase as demands exceed abilities. Fit exists when the environment provides the resources required to satisfy the person's needs, whereas stress occurs when needs exceed supplies. Misfit, occurring when demands and needs exceed abilities and supplies, results in strains and illness as well as coping behaviour and cognitive defence to improve fit, whereas fit can create positive mental and physical health outcomes" (Voydanoff, 2005, p. 823). Where the individual perceives, the challenge is greater than the skill, anxiety is present (Engelbrecht, 2006).

Organisational bureaucracy, such as excessive workload, inadequate staff, inadequately specific policies/procedures, inadequate supervision/direction and too much "red tape" within the department is a strong predictor of the individual level of stress in the organisation (Buker et al., 2007).

2.8.3.6 Work Outcomes

2.8.3.6.1 Job Satisfaction

Definition: “Job satisfaction is defined as the source of need fulfilment and contentment “(Engelbrecht, 2006, p. 54).

Pines’ (1993) argument is that burnout only occurs in highly motivated people and that loss of meaning in life can cause burnout. She further continues to argue that work has becomes a religion in the secularised world and that existential significance is measured by the significance of doing a job. The experience of burnout in relation to lowered feeling of job satisfaction suggests that they are the same thing, however low correlations between burnout scales and job satisfaction has been reported (Maslach et.al, 1996). An employee who has had their autonomy undermined because of organisational factors, reduce their potential for significant accomplishments and also become cynical and distant at work (Maslach et al., 1996).

Schaufeli, Salanova, González-Romá and Bakker (2002, p. 63) “Reformulated burnout as an erosion of engagement with the job”. Job satisfaction is a strong predictor of stress among job satisfaction measures with workers and supervisor (Buker et al., 2007).

Overall job satisfaction correlates negatively with the intention to quit, most notably to the components relating to promotion opportunities and the nature of work being carried out (Sutherland et al., 2004). Schaufeli et al. (2007) found that job satisfaction is negatively correlated to exhaustion, which contradicts Maslach et al. (1996) earlier finding.

2.8.3.6.2 Task Significance

"Task significance assesses the degree to which the job has a substantial impact on the lives of other people. High scores on this dimension were positively related with personal accomplishment, as predicted," (Maslach et.al 1996, p. 14).

2.8.3.6.3 Organisational Commitment

"*Organisational commitment* can be described as the strength of one's identification with and involvement in a particular organisation", (Mowday, Steers and Porter, 1979, p. 255). "Organisational commitment can most concisely be described as a psychological state, linking employees to their organisation" (Meyer and Allen, 1997, p. 49). Re-engineering, right sizing and downsizing whichever terms you may use to describe it, have redefined the psychological contract (Maslach et al., 1996). Employees are unable to predict opportunities, stable jobs or predictable career paths and as organisation capacity for job creation diminishes, emphasis is on short-term goals and objectives (Maslach et al., 1996).

Absenteeism and turnover are a means available to employees through which they can restore equity in the employ employment relationship (Geurts et.al, 1999). Poor organisation commitment is a psychological withdrawal, which can result in behavioural withdrawal (Geurts et al., 1999). Inequity is when contributions are not equal to benefits and is considered a violation of the psychological contract (Geurts et al., 1999). From a social exchange perspective, when employees feel their investments into an organisation outweigh the returns, they feel less attached and reduce their commitment

(Geurts et al., 1999). Poor organisational commitment is one of the strongest predictors of turnover intention (Geurts et al., 1999).

"Commitment can be described by (a) the employee's *relationship* to the organisation (affective commitment), (b) the awareness about the *costs of leaving* the organisation or the need to remain there (continuance commitment), and (c) the *felt obligation* to continue employment in the organisation (normative commitment)" (Engelbrecht, 2006. p. 49). The benefits of organisational commitment are better performance and less absenteeism (Engelbrecht, 2006).

From the research done by Advani et al. (2005), it is evident that organisational politics influences emotional exhaustion and depersonalisation subscales of burnout in software professionals.

2.8.3.7 Quality of Social Relationships

"Since burnout is considered a negative mental state, it is expected to have an adverse impact on home and family life. Although associations have been found between employee burnout and marital dissatisfaction and family stress on each other, causal direction is still unclear and that there is no conclusive evidence on negative spill- over of burnout to private life" (Schaufeli and Enzmann, 1998, p. 7 and Kompier, 2005).

Role Balance defined "the extent to which individuals' experience equal time, involvement, effectiveness, and satisfaction in work and family roles" (Greenhaus, Collins and Shaw, 2003, p. 827). Social support from family members may serve as an important resource to increase the capacity to deal with emotional demands on the job.

Managing the home and work divide have been positively correlated to exhaustion and depersonalisation (Leiter and Durup, 1996). Work and family relationships are flexible and permeable: some aspects in one or other domain influence each other (Ashforth, Kreiner, and Fugate 2000). “Work-family balance is considered as a global assessment that work and family resources are sufficient to meet work and family demands such that participation is effective in both domains” (Voydanoff 2005, p. 825).

Work–family conflict has been defined as a stressor experienced when “general demands of, time devoted to, and strain created by the job interfere with performing family-related responsibilities” (Netemeyer, Boles and McMurrian, 1996, p. 248)
Similarly, family–work conflict has been defined as a stressor that is experienced when family interferes with performing work-related responsibilities (Netemeyer et al., 1996). Grzywacz and Bass (2003) found work-family conflict and family-work conflict was significantly and positively related to depression, anxiety disorder and problem drinking. Work-family conflict was considered to be a predictor of psychosomatic symptoms such as coffee consumption, cigarettes smoked, absence and taking of medication (Burke, 1994). The strongest correlation was between burnout and work–family conflict, however neither of the demands, family–work conflict nor work–family conflict was significantly related to health (Little et al., 2007). Data gathered by La Valle et al. (2002) point towards that fact that time together (family outings and companionship) can be damaged when parents work evenings and weekends, because of trade offs made with leisure time.

Burke and Greenglass (2001) could show that work-family concerns accounted for significant increments in explained variance on all three psychological burnout

subscales. Kirkpatrick Johnson (2005), study illustrated how employment conditions shape work values which in turn shape parenting values and ultimately child outcomes. Lindholm (2005) found that probability of work stress doubled in relation to low emotional support. A study by Borritz et al. (2006) revealed the following mean burnout scores, cohabiting with children (36.8), single with children (40.0), cohabiting without children (36.3) and single without children (36.70). Children below 7 years (37.6) were found to be greater than no children or older children at home (36.7). Therefore is can be concluded the highest mean work burnout score is for single people with children. Consistent findings are found between negative family relationships, work hours, job demands and work-family balance (Voydanoff, 2005)

“Parental involvement was not significantly different for shift working versus standard working families was particularly surprising given the number of studies that have shown that atypical schedules interfere with family time. Perhaps in adolescence the key issue is not the amount of time spent but how that time is spent” (Davis et al., 2006).

2.8.3.8 Perceived Health

Research has shown that working lengthy hours is associated with increased levels of strain and ill health (Van Der Hulst, 2003).

Burnout is associated with positive relationships with various mental and physical health related problems (Shirom, Melamed, Toker, Berliner and Shapira, 2005). Sickness without the presence of illness might be caused by burnout. If sickness absence is chosen as a method to save energy and recover from exhaustion, even though they do

not have a medical disease, they nevertheless feel limited in their health (Borritz et.al, 2006). Burnout is considered the grey area in between good health and medical disease (Borritz et al., 2006).

The burnout subscales of exhaustion are strongly related to health problems (Schaufeli et al., 2007)

2.8.3.9 Conclusion

Burnout is associated with lower career satisfaction, turnover intentions, turnover, job-role quality, higher psychological distress, ill health consequences and lower levels of positive affect and life satisfaction (Barnett et al., 1999a). Kristensen et al. (2005) suggested similar consequences, namely; musculoskeletal disorders, cardiovascular diseases, mental disorders, reduced quality of life, sickness, absence, labour turnover, decreased motivation and productivity.

Intention to leave is as an excellent predictor of turnover (Sutherland et al., 2004). There is also an interdependence of job satisfaction, organisational commitment, job demands and intention to leave, although it would seem this link is diminishing (Sutherland et al., 2004).

2.9 Evaluating Burnout

Burnout measurement is on a continuum; less to more burned out, and is not measured as burned out and not burned out (Pretorius, 1994). The MBI (Maslach Burnout Inventory) does not give a single burnout score and three dimensions represent different aspects of burnout and are not equivalent.

Using the Copenhagen Burnout inventory, low burnout was defined by < 50 points and high burnout > 50 points on the work related burnout scale (Borritz et al., 2006). “The CBI has scales on personal burnout (six items on general exhaustion without a specific attribution), work related burnout (seven items on exhaustion attributed to work in general), and client related burnout (six items on exhaustion attributed to work with clients). All items have five response categories, ranging either from ‘‘to a very low degree’’ to ‘‘to a very high degree’’ or from ‘‘never’’ to ‘‘always’’. Each scale ranges from 0 to 100 points, with high scores indicating high levels of burnout”, (Borritz et al., 2006, p. 99).

Some interesting burnout rates from the literature, burnout affects 25% of all European nurses (Landau, 1992) and 40% – 70% of health care workers have been documented with burnout depending on the speciality or region of the United Sates (Creagan, 2004).

2.10 Consequences of Burnout

2.10.1 Introduction

Employees withdraw from service recipients and even abuse them verbally or physically (Kahill, 1988). Behavioural problems associated with burnout include absenteeism, increased turnover, over reliance on rules and decreased job performance (Lowenstein, 1991).

The perception of defeat or hopelessness is perhaps why researchers have linked burnout to a variety of mental and physical health problems, including decreased self-esteem, depression, irritability, anxiety, fatigue, insomnia and frequency of headaches (Kahill, 1998). Burnout seems to be correlated with various self reported illnesses of personal dysfunction, including physical exhaustion, insomnia, increased alcohol, medication and drug misuse, marital and family problems (Maslach et al., 1996) coronary heart disease (Barnett et al., 1999), worthlessness or excessive guilt ,clinical depression, and weight loss or gain (Cannon, 2006).

The last person to realise they are burning out is the person themselves and commonly, rather than admit the impairment, they blame other people and circumstances for their unhappiness. Dealing with a friend or colleague who is burned out, is met with denial or hostility (Cannon, 2006). Some of the symptoms of the this non -realisation is (1) withdrawal from family then friends (2) overwork (3) anxiety (4) dread (5) isolation (6) martyrdom (7) risk taking and (8) depression even leading to suicide (Cannon, 2006).

Alcohol is used to lessen the feelings of distress and hopelessness; and at the end of the spectrum is clinical depression and suicide (Cannon, 2006).

2.10.2 Somatisation Disorder

2.10.2.1 Introduction

Research has identified a significant consistent relationship between emotional exhaustion and self-reported somatic symptoms, such as sleep disturbances and headaches (Leiter, Clark and Durup, 1994).

"The list consists of more than 130 symptoms of burnout. These symptoms are far from being specific for burnout and refer to a rather broad range of symptoms. Nevertheless, the description of symptoms is the first step towards a practical concept of a phenomenon (Schaufeli et al., 1998, p. 30).

Table 3 List of symptoms of burnout

	Affective	Cognitive	Physical	Behavioural	Motivational
Personal	Depressed mood, tearfulness, emotional exhaustion, changing moods, decreased emotional control, undefined fears, increased tension, anxiety	Helplessness, loss of meaning and hope, fear of 'going crazy', feelings of powerlessness and impotence, feelings of being trapped, sense of failure, feelings of insufficiency, poor self-esteem, self preoccupation, guilt, suicidal ideas, inability to concentrate, forgetfulness, difficulty with complex tasks, Rigidity and schematic thinking, difficulties in decision making, daydreaming and fantasising, intellectualisation, loneliness, diminished frustration	Headaches, nausea, dizziness, restlessness, nervous tics, muscle pains, sexual problems, sleep disturbances (insomnia, nightmares, excessive sleeping), sudden loss or gains of weight, loss of appetite, shortness of breath, increased pre-menstrual tension, missed menstrual cycles, chronic fatigue, physical exhaustion, hyperventilation, bodily weakness, ulcers, gastric intestinal disorders, coronary disease, frequent prolonged colds, flare-ups of pre-existing disorders (asthma, diabetes), injuries from risk-taking behaviour, increased heart rate, high blood pressure, increased electro	Hyperactivity, impulsivity, procrastination, increased consumption of: caffeine, tobacco, alcohol, tranquillisers, illicit drugs, over- and under eating, high risk-taking behaviours (e.g. sky-diving), increased accidents, abandonment of recreational activities, compulsive complaining	Hyperactivity, impulsivity, procrastination, increased consumption of: caffeine, tobacco, alcohol, tranquillisers, illicit drugs, over- and under eating, high risk-taking behaviours (e.g. sky-diving), increased accidents, abandonment of recreational activities, compulsive complaining

		tolerance	dermal response, high level of serum cholesterol		
Interpersonal	Irritability, being oversensitive, cool and unemotional, lessened emotional empathy with recipients, increased anger	Cynical and dehumanising perception of recipients, negativism with respect to recipients, lessened cognitive empathy with recipients, stereotyping of recipients, labelling recipients in derogatory ways, 'blaming the victim', air of grandiosity, air of righteousness, 'martyrdom', hostility, suspicion, projection, paranoia		Violent outbursts, propensity for violent and aggressive behaviour, aggressiveness towards recipients, interpersonal, marital and family conflicts, social isolation and withdrawal, detachment with respect to recipients, responding to recipients in a mechanical manner, isolation or over bonding from other staff, sick humour aimed at recipients, expression of hopelessness, helplessness and meaninglessness towards recipients, using distancing devices, jealousy, compartmentalisation	Loss of interest, discouragement, indifference with respect to recipients, using recipients to meet personal and social needs, over involvement
Organizational	Job dissatisfaction	Cynicism about work role, feelings of not being appreciated, distrust in management, peers and supervisors		Reduced effectiveness, poor work performance, declined productivity, tardiness, turnover, increased sick leave, absenteeism,	Loss of work motivation, resistance to go to work, dampening of work initiative, low morale

				theft, resistance to change, being over dependent on supervisors, frequent clock watching, 'going by the book', increased accidents, inability to organize, poor time management	

Schaufeli et.al, (1998, p. 30) summarize the following problems in regard to the "laundry lists" of symptoms:

1. Most symptoms result from uncontrolled observations rather than from empirical studies. Validity might be low.
1. Symptoms listed are rather indefinite.
2. Throughout the process of development of burnout symptoms may change from one symptom into the opposite, e.g. over- or under-involvement
3. Different patterns of burnout are assumed, showing different groups of symptoms
5. Symptoms, precursors, and consequences of burnout are confused."

(Schaufeli et al., 1998, p. 30 -31)

2.10.2.2 Somatisation Disorder

Definitions of somatisation disorder:

Somatisation disorder was first validated an extreme form of the syndrome originally designated as hysteria, it was then renamed Briquet syndrome and finally somatisation

disorder (Escobar, Hoyos-Nervi and Gara, 2002). Somatisation disorder is a chronic, disabling syndrome presenting itself as physical symptoms associated with significant psychopathology (the study of the causes and development of psychiatric disorders) and functional disability (Escobar et al., 2002). Psychological distress is manifested as unexplained physical symptoms (Escobar et al., 2002). This disorder is often diagnosed as chronic fatigue to substantiate and identify the ailment to conform to more medicalised labels (Escobar et al., 2002).

The syndrome has a few unique features not shared by many other conditions, namely:

- In the absence of a gold standard against which a specific diagnosis can be confirmed or ruled out.
- The presence of multiple unexplained physical symptoms originating from several different organ systems.
- No consistent explanation emanating from physical and laboratory assessments.

(Escobar et al., 2002)

Table 4: Functional somatic syndrome in various medical specialities

(WHO, 1992, p. 632)

Specialty area	**Functional syndromes**
Allergy	Food allergies
Cardiology	Atypical chest pain, noncardiac pain, mitral valve prolapse
Dentistry	Temporomandibularjoint syndrome,atypical facial pain
Ear, nose, and throat	Tinnitus,dizziness, globus syndrome

Gastroenterology	Irritable bowel, nonulcer dyspepsia
Internal medicine	CFS, chronic Lyme disease, hypoglycemia,chronic candidiasis
Military medicine	Gulf (Persian)War syndrome
Neurology	Tension headache, pseudoseizures
Obstetrics and gynaecology	Premenstrual syndrome,chronic pelvic pain
Occupational medicine	Multiple chemical sensitivity,sick building syndrome
Orthopaedics	Carpal tunnel syndrome,low back pain, herniated disc
Plastic surgery	Silicone- associated connective tissue disease
Pulmonary medicine	Dyspnea, habit cough, laryngeal dysfunction,hyperventilation
Rehabilitation medicine	Repetitious stress injury, chronic whiplash
Rheumatology	Fibrositis, fibromyalga

2.10.2.3 Psychological Symptoms

Lowenstein (1991) found that burnout among teachers burnout was related to feelings of hopelessness, irritability, impatience, and alcohol and drug abuse.

Burnout is primarily a state encompassing depression, anxiety and anger. Important distinction must be made between depression and burnout;

1. Depression is a clinical syndrome whereas burnout describes a persons relations with work
2. Depression is global, pervasive in every aspect of persons life , whereas burnout is relative to the quality of the social environment at the workplace

Therefore the two concepts are fundamentally different psychologically (Maslach et al., 1996)

In the Netherlands, psychological factors explain more than 30% of incapacity related cases annually (Gorter et al., 1999), this figure is 53% for Dutch teachers (almost all had developed gastroenteritis, migraine, or depression) (van Horn et al., 1999). Professional burnout, which is a long-term consequence of occupational stress, is thought to be a major contributor to psychological incapacitation and is receiving growing scientific attention (Gorter et al., 1999).Since 1992, the number of women with psychiatric diagnoses has increased four fold and in a considerable number of these cases the cause is stress related. This has resulted in health care cost for this group increasing in Sweden over the last 10 years (Eriksson et al., 2004). “Despite inherent limitations, one could speculate that the impaired neurogenesis is an important component of the burnout syndrome. Neurogenesis is the formation of new neurons in the human adult brain, provides a newly discovered dimension of brain plasticity” (Eriksson et al., 2004, p.275).

Research by Schaufeli et al. (2007) concluded that burnout and workaholism were positively related to perceived ill health, particularly to distress and psychosomatic complaints.

2.10.2.4 Physical Symptoms

Prolonged stress leads to chronic cardiovascular over activity, which is a cause for cardiovascular disease and hypertension (McEwen, 1998).

Berglas (2006) described that “A” players' who suffer burnout start acting out unconventional personality traits to express their inner conflict by engaging in activities such as extramarital affairs, chemical dependencies or gambling disorders. The strong association between burnout and sleep problems is particularly concerning since fatigue/burnout and lack of sleep has shown to predict cardiovascular diseases and mortality (Prescott, Holst, Grønbæk, Schnohr, Jensen and Barefoot, 2003).

2.10.2.5 Life satisfaction and interpersonal relationships

Working conditions are precursors of burnout, which further influences overall life satisfaction. A consequence of burnout is the impairment of a person’s relationship with people in general (Maslach et al., 1996) which include the deterioration of family and social relationships (Demerouti et al., 2000).

In a survey on police, high emotional exhaustion was correlated to coming home frequently upset and angry, tense or anxious, physically exhausted and complaining about problems at work, spending time alone instead of with the family (Maslach et al., 1996). High on personal accomplishment was correlated to coming home frequently in a

cheerful mood and doing police work, was a source of pride and prestige for the family (Maslach et al., 1996). If the score was high on depersonalisation, the police officer would miss family celebrations and the spouses' would not share common friends (Maslach et al., 1996).

In an article on executives it was found that burned out managers inappropriately vent anger at subordinates and family, or may withdraw from those whose support they need the most (Levinson, 1996). There is evidence that work has an influence on a person's self-concept and self-esteem (Demerouti et al., 2000).

"Burnout components have significant, negative relationships with life satisfaction". (Demerouti et al., 2000, p. 460)

2.10.3 Behavioural Consequences

2.10.3.1 Absenteeism

"The percentage of highly stressed individuals who report being absent from work in the last six months is between 4 and 15 percent higher than that of their counterparts with almost non-existent levels of stress" (Leontaridi et al., 2002, p.9).

Sickness absence is a major societal problem, for the individual it marks the beginning of social decline because long instances lead to job dismissal and even permanent exclusion from the labour market (Borritz et al., 2006). For the organisation, it means loss of workers, the cost of temporary labour, reduced productivity and increased

turnover (Borritz et al., 2006). For society, it means supporting sick benefits and reduced productivity (Borritz et al., 2006). “In fact, there appeared to be a strong direct linkage between perceived inequity and absenteeism, suggesting that absenteeism should be considered as a direct attempt to restore an equitable exchange relationship rather than a way of coping with an unpleasant emotional state” (Geurts et al., 1999, p. 263)

Burnout can make an individual more prone to illness, for example infections such as the common cold (Borritz et al., 2006). In a three year follow up study the following results were found in relation to burnout and demographic and biographic factors, lower educated people had more sickness absence than higher educated groups, heavy smokers had more sick days than non,-ex and light smokers (Borritz et al., 2006). Women had more sick days and spells than men and higher age was responsible for more sick days but not more sick day spells (Borritz et al., 2006). The mean number of sick days was 17.4 for high burnout occurrences and 8.1 low for low burnout occurrences (Borritz et al., 2006). Burnout is therefore a strong predictor of sickness absence days but is only responsible for length and not frequency of absences (Borritz et al., 2006).

“These results indicate not only that burnout levels were associated with absence levels but also that changes in burnout over time were associated with corresponding changes in absence” (Kristensen et al., 2005, p. 203). A possible reason for being absent from work is correlated to an emotionally demanding job situation (Engelbrecht, 2006).

2.10.3.2 Turnover Intention

The statistics and results from surveys done on turnover intention to actual turnover vary, but remains a significant predictor of turnover (Sutherland et al., 2004), for example

(Mercer, 1979) found that 79% of workers reporting an intention to quit had done so within the following year. Research done at a later stage indicated a smaller more realistic number; Tett and Meyer (1993) found that turnover intention accounts for only 27% of turnover variance.

Maslach et al. (1996) found a significant correlation between high burnout scores and the expressed intention to leave employment within a year. In the burnout research on technology professionals, the strongest predictors of turnover intention were perceived fairness of rewards, work exhaustion, organisational tenure, and perceived workload (Moore, 2000). Very strong positive relationships were found between stress levels and quitting intentions, with 14% more likely to quit that those without high levels of stress, with corresponding linear relationships with increases in stress levels (Leontaridi, et.al, 2002) .For gender difference 4% more women intended to quit because of high stress than men (Leontaridi et al., 2002). Psychosomatic effects of bullying lead victims to consider leaving their organizations. Turnover is costly and arguably, turnover due to bullying is avoidable (Djurkovic et al., 2005).

Employees who feel burned out or underappreciated at one organisation often think they can solve the problem by changing jobs (Berglas, 2006)

2.10.3.3 Work related injuries

"A Study conducted by Trimpop, Kirkcaldy, Athanasou, Cooper (2000, p. 216) revealed that work-related injuries/accidents during the past 12 months were significantly related to individual differences in job-related stress and job satisfaction."

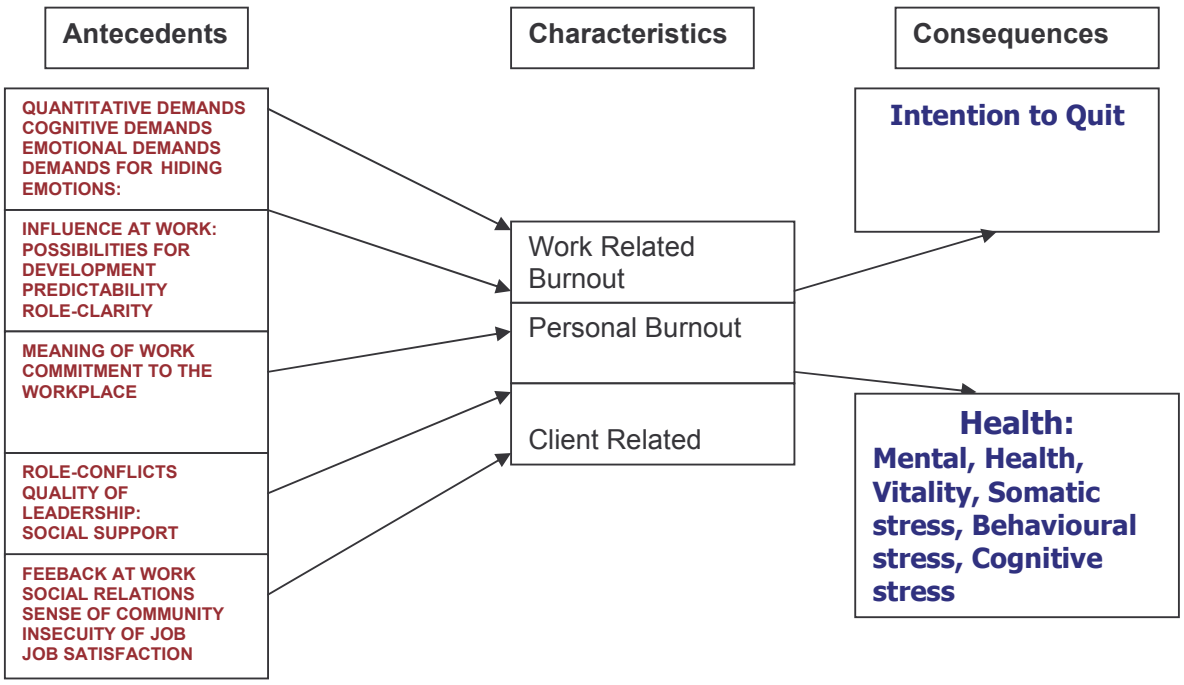
2.10.3.4 Conclusion

Managers high on burnout are characterised exclusively by negative qualities; their social functioning is impaired, they suffer from health problems, and they work in demanding jobs with poor resources and poor work outcomes (Schaufeli et al., 2007).

3 Research Questions

3.1 Research Question 1

Figure 1: A Diagrammatic Representation of the Burnout Phenomenon conceived for this Research Report



Adapted from Borritz, 2005 (p. 47)

The research question as diagrammatically represented seeks to understand which antecedent will have the most significant impact on the burnout scales. If they have an association, which one will influence all the burnout scales and will it be more significant than the others will. Having established the magnitude of burnout the next question will

be to distinguish how it is manifesting itself i.e. in either intention to quit, or health, or both.

3.2 Hypothesis 1

From the literature, it is clear that age and burnout have different research findings over the last 30 years of burnout research (see discussion 2.4.8). Even the most recent research articles differ from one study to the next.

Hypothesis 1 There is no significant difference between the mean age of High burnout victims and the mean age of Low burnout victims.

3.3 Hypothesis 2

Borritz et al. (2006) found in there research that single parents have a higher burnout score than single persons. My research question seeks to test if this holds true in a South African context or have single parents with children having a different coping strategy to that in Europe.

Hypothesis 2 There is a significantly higher incidence of burnout among single parents with children than single persons without children are.

3.4 Hypothesis 3

Nothing in the literature studied by the author has tested this hypothesis. The assumption is that dual income couples have full time employment and added responsibilities at home that may aggravate marital conflict and work-family conflict.

Hypothesis 3 There is a significantly higher incidence of burnout among dual income couples with children than single income couples with children are.

3.5 Hypothesis 4

Winfree and Taylor (2004), found no differences in territories within a country and perhaps this will hold true over national boundaries.

Hypothesis 4 There is a significantly higher incidence of burnout among South African employees and those studies that have been done in other countries using the Copenhagen Burnout Inventory.

3.6 Hypothesis 5

Burke (1989) found a difference for time in the job and burnout. Not much else was found on the subject with the exception of age in the workplace.

Hypothesis 5 There is a significantly higher incidence of burnout among employees who have shorter job tenure and those who have longer job tenure, while controlling for age.

4 Research Methodology

4.1 Research Methodology

A non-probability sampling technique, snowball sampling was used exploring the conditions, attitudes and the prevalence of burnout in South Africa, although no inferences can been made on the general population. Snowball sampling identifies a few individuals from the relevant population in the first phase. Thereafter these "informants" identify other members (friends, colleagues and acquaintances) from the population for inclusion in the sample. Therefore, a rolling snowball effect occurs whereby the latter may in turn identify a further set of relevant individuals (Huysamen, 2001). The research method was a quantitative and took the format of a questionnaire. Questionnaires are considered suitable measuring instruments for obtaining information from respondents about attitudes, opinions or beliefs (Welman and Kruger, 2001).

A Likert (Copenhagen Burnout Inventory, Copenhagen Psychosocial Questionnaire and the Intention to Quit Index) scale was used so that answers could be aggregated and sub-samples analysed. The questionnaire was sent out to all GIBS MBA students 2006/7, 2005/6, 2007 /8, PDBA 2007, and 2006 as well as all the people whom I have an email address for in my network. This included a significant amount of people from South African Breweries, my previous employer. They were asked to forward it on to a few colleagues or friends. The internet was delivery method, respondents were given a brief explanation of the intention of the survey, and an internet hyperlink was inserted within the email. Problems that were experienced were slow response times from the server and because of the length of the questionnaire, many respondents did not complete.

4.2 Population of Relevance

The population sampled consisted of all MBA 2005/6, 2006/7 and 2007/8 and whoever they choose to forward it onto. Not all MBA's, PDBA's, their colleagues or friends responded to the survey, resulting in a non-probability sampling approach. It cannot be guaranteed that the responding sample was a representation of the population. The population of relevance can be defined in this case as a subset of the population.

Five hundred and ninety six e-mails were sent to potential respondents together with a brief explanation as to the purpose of the study, the estimated time it would take to complete and the completion date. The respondents who started the questionnaire numbered 353 and as low as 240 finished the entire survey. The questionnaire was set up on a website so that respondents were assured of confidentiality. The only nominal data that was collected were for age, marital status, parental status, children and children's age, single or dual income, tenure in position, and qualification status. In this way, respondents were assured of anonymity to avoid the effect of measurement reactivity. Respondents felt free to express their feelings than if they suspected the survey was associated with them.

4.3 Data Collection

The quantitative approach to burnout has become the predominant burnout measure. Instruments developed were for example the Burnout Measure (BM) (Pines et al., 1981) and the Oldenburg Burnout Inventory (OLBI) (Rösing, 2003); however, these instruments never reached the same popularity as the Maslach Burnout Inventory (MBI). In the past ninety percent of the publications on burnout used the Maslach Burnout Inventory (MBI) (Rösing, 2003).

After careful consideration and testing, the National Institute of Occupational Health, Denmark decided to not use the MBI but to develop a new measurement tool (Kristensen et.al, 2005a) for the following reasons

1. "The MBI is based on a circular argument by stating that burnout is restricted to persons in human service job. Even though extended versions exist, the main feature of the test stayed the same.
2. The relationship of the MBI to the concept of burnout is unclear. Burnout research has been engaged in a lively discussion about burnout being constituted of three independent dimensions (as proposed by the measurement with the MBI) or of burnout being a phenomenon with the exhaustion, depersonalisation, and diminished personal accomplishment as characteristics.
3. The understanding burnout being a syndrome with the three constituting characteristics is neglecting the possible interpretation of depersonalisation being a coping strategy and diminished personal accomplishment being an effect".

(Engelbrecht, 2006, pg 37)

The benefits for the use of the CBI are the following (Kristensen, Hannerz, Høgh and Borg 2005b, p. 439)

1. "to development valid and relevant instruments for the assessment of psychosocial factors at work
2. to make national and international comparisons possible
3. to improve evaluations of interventions
4. to facilitate surveillance and benchmarking

5. to improve the communication between workplace, work environment professionals and researchers
6. to make it easier for the users to understand difficult concepts and theories."

The CBI has three scales, (1) scales to measure general exhaustion is called personal burnout and the questions were inspired by Burnout Measure questionnaire. (2)The subscale of the MBI/MBI-GS questionnaires inspires the work-related burnout scales. (3) A newly formulated client-related burnout scale. The burnout scales of the CBI correlate with each other but only partially, supporting the idea of three independent burnout scales (Borritz et al., 2005).

Winwood and Winefield (2004) compared outcomes measured with the MBI and the CBI and report that the basic psychometric properties for the CBI appear to be equivalent to those of the MBI. By limiting themselves to well validated questionnaires many researchers have missed specific interesting dimensions in the development of burnout for many years now (Kristensen et al., 2005b).

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The Copenhagen Psychosocial Questionnaire (COPSOQ) is a concept aiming at describing a large number of variables within the field of psychosocial work environment, health, well-being and personality was used in conjunction with the CBI (Kristensen et al., 2005b). A questionnaire used by Moore (2000) was used for measure turnover intention.

4.4 Data Analysis

Frequency distributions and descriptive statistics of the biographical variables were used to see if the target population had been sampled effectively.

There were three aspects looked at in this questionnaire. The most important was definitely the occurrence of burnout. The other was looking at organisational factors impacting on issues pertaining to employees work and social environment. The third factor was to assess whether or not burnout manifested in the *Intension to Quit* and/or had lead to adverse *Health* consequences.

As far as the burnout scoring goes, there is a point scale (Scoring: Always: 100, Often: 75, Sometimes: 50, Seldom: 25, Never/almost never: 0). Total score on the scale is the average of the scores on the items, which was used to determine if you are in fact suffering from burnout. If your average burnout score is above 50 points, you are considered to be “High” on the burnout scale. The three burnout scales Personal Burnout, Work Burnout, and Client Burnout were evaluated separately. Factor analysis (Kaiser-Meyer-Olkin Measure of Sampling Adequacy; KMO greater than 0.5) and reliability analysis (Cronbach's Alpha greater than 0.7) was evaluated on both aspects of the questionnaire, to determine if our sample was reliable and to try and reduce the data we had.

Once the dimensions were validated, t - tests, chi square testing (Fishers Exact test and Pearson Chi Square) and Pearson Correlation were used to look for differences in the key variables of the study. The tests were done at a 5% level of significance. A comparison was made on the responses of singles and couples, with and without

children, levels of education and tenure for the purposes of looking for influencing factors in burnout and perceived levels of stress.

T - Tests were done to establish whether high burnout occurs at an age which is significantly different from low burnout occurrence.

4.5 Research Limitations

As with all research, if one group is under-represented the results may not be an accurate representation of the population. The mix of representation was dependent on the respondents that replied. Also, because of the nature of the research, a certain amount of measurement reactivity may enter the research. Because participants are aware they are completing a questionnaire about their attitudes and behaviours they might be tempted to answer in way that they feel is expected as opposed to their actual attitudes and behaviours i.e. social desirability bias. Another possible limitation is that Healthy Worker effect which assumes those in employment are more healthy than those unemployed and this could mean that people with a high degree of burnout have already left the labour market (Borritz, 2005). This will lead to an underestimation of the possible effects.

Another limitation of this research was that GIBS MBA's were used to fill in the survey and asked them send it to colleagues and friends. It may have influenced the quality of the responses because doing the MBA could be an influencing factor on burnout, verses non-MBA. Another limitation is that the work is evolving over time and so a longitudinal study best captures changes in independent variables and causality over

time. Snowball sampling also has a high bias because the sample units are not independent and therefore it would be difficult to extrapolate the findings of this research to a wider population. The race of respondents is not being measured at this stage and may represent fundamental differences.

5 Results

5.1 Questionnaire Factor Analysis and Reliability

The Kaiser-Meyer- Olkin measure of sampling adequacy tests whether the partial correlations among variables are small. Bartlett's test of sphericity tests whether the correlation matrix is an identity matrix, which would indicate that the factor model is inappropriate. The KMO measures the sampling adequacy, which should be greater than 0.5 for a satisfactory factor analysis to proceed (University of Newcastle, 2007). Of importance is the retest reliability, which indicates that scores obtained from one occasion may be generalised to those than can be obtained on another comparable occasion (Huysamen, 2001).

Table 5: Copenhagen Burnout Inventory Factor Analysis and Reliability Summary

	Factor Analysis		**Reliability Statistics**
	KMO	**Initial Eigen values**	**Cronbach's Alpha**
Personal Burnout	**0.902**	**69.908**	**0.910**
Work Burnout	**0.843**	**54.186**	**0.857**
Client Burnout	**0.847**	**63.763**	**0.879**

The individual components of the Copenhagen Burnout Inventory have factored well together using the Kaiser-Meyer-Olkin Measure of Sampling Adequacy and have very high reliability (Cronbach Alpha > 0.70). The initial Eigen value for Work Burnout suggests that perhaps two or more factors can be constructed. Instead, this was ignored and reported on because of its high measure of sampling adequacy and

cronbach's alpha. The low communality (0.227) (see table 31: Factor analysis of Work Burnout) of question 6 "Do you feel that every working hour is tiring for you?" is probably responsible for the low cumulative explained variance. Communality is the proportion of item variance accounted for by the factor and small numbers indicate less than expected shared variance (Zikmund, 2003).

Table 6: Copenhagen Psychosocial Questionnaire Factor Analysis and Reliability Summary

Psychosocial working conditions	Factor Analysis		Reliability Statistics
	KMO	Initial Eigen values	Cronbach's Alpha
Possibilities for Development	0.781	61.847	0.793
Meaning of work	0.742	82.768	0.895
Commitment to the workplace	0.670	54.809	0.719
Role-clarity	0.769	68.373	0.842
Role-conflicts	0.736	62.250	0.792
Quality of leadership	0.808	76.203	0.895
Sense of community	0.706	77.064	0.840
Job satisfaction	0.812	70.834	0.860
General health	0.729	65.066	0.792
Mental health	0.788	62.911	0.856
Vitality	0.723	72.194	0.885
Behavioural stress	0.750	59.111	0.758
Somatic stress	0.761	61.875	0.786
Cognitive stress	0.832	75.064	0.889
Sense of coherence	0.812	43.489	0.780

Quantitative demands	0.736	56.683	0.741
Cognitive demands	0.727	55.691	0.731
Emotional demands	0.622	69.717	0.776
Influence at work	0.643	63.552	0.714
Feedback at work	+		
Social relations	+		
Social support	+		
Demands for hiding emotions	+		
Predictability	+[1]		

All the factors of the Copenhagen Psychosocial Work (COPSOQ) questionnaire factored well and have a high reliability evidenced by a KMO value greater than 0.5 and reliability greater than 0.70 (cronbach's alpha).

Table 7: Evaluating the KMO value and Degree of Common Variance (Friel, 2004)

KMO Value	Degree of Common Variance
0.90 to 1.00	Marvellous
0.80 to 0.89	Meritorious
0.70 to 0.79	Middling
0.60 to 0.69	Mediocre
0.50 to 0.59	Miserable
0.00 to 0.49	Don't Factor

Table 8: Intention to Quit Factor Analysis and Reliability Summary

[1] Indicates not enough questions to form a factor as only two questions were asked under each heading

	Factor Analysis		Reliability Statistics
	KMO	Initial Eigen values	Cronbach's Alpha
Intention to quit	0.784	71.087	0.864

From table 7 it can be safe to assume the factor validity of the *Intention to Quit* section of the questionnaire factored well and are reliable.

5.2 Research Question 1

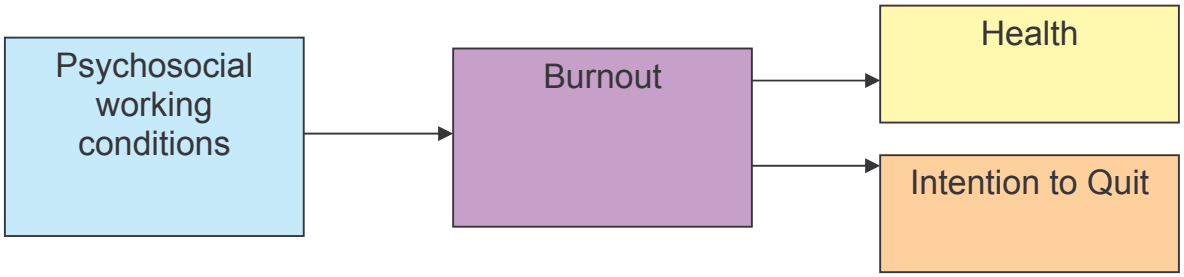


Table 9: Psychosocial Pearson Parametric Correlations with Burnout - Summary

	Antecedents	Personal Burnout Mean	Work Burnout Mean	Client Burnout Mean
1	Meaning of work	-.372	-.457	-.330
2	Role-conflicts	.321	.439	.379
3	Quantitative demands	.458	**.593**	.424
4	Sense of coherence	-.410	-.455	-.410
5	Emotional demands	.407	.425	.313
6	Predictability	-.352	-.390	
7	Role-clarity	-.330	-.416	
8	Quality of leadership	-.357	-.340	
9	Social support	-.308	-.341	
10	Feedback at work	-.342	-.340	
11	Sense of community	-.324	-.377	
12	Job satisfaction	-.397	-.464	
13	Influence at work	-.345	-.355	

14	**Demands for hiding emotions**		.365	
15	**Commitment to the work place**		-.341	
16	**Possibilities for development**			
17	**Cognitive demands**			
18	**Social relations**			
All correlations evaluated at a Significance level of p<0.05 (2-tailed)				

“The correlation between two variables reflects the degree to which the variables are related. The most common measure of correlation is the Pearson Product Moment Correlation (called Pearson's correlation for short). When measured in a population the Pearson Product Moment correlation is designated by the Greek letter rho (ρ). When computed in a sample, it is designated by the letter "r" and is sometimes called "Pearson's r." Pearson's correlation reflects the degree of linear relationship between two variables. It ranges from +1 to -1. A correlation of (+1) means that there is a perfect positive linear relationship between variables” (Zikmund, 2003, p 551). An assumption is made around the use of parametric correlations in that, the data is longer a simple categorical variable; it has "turned" continuous. Because of this assumption, you can calculate a proper mean, standard deviation and other descriptive stats. For this reason, Pearson’s r correlation coefficient was used, and one would only really use the non-parametric correlations if there had been a small sample size and the normality in the data could not be assumed. The Pearson correlation coefficient assumes underlying distributions are normally distributed (Byrne, 2002). Five Psychosocial working conditions have a relationship with all the burnout factors. The most prevalent is *Quantitative Demands of the Job*. Eight factors have associations with *Personal Burnout* and *Work Burnout*. The reason is that not all respondents to the survey work directly with clients. Two factors only have an association with *Work Burnout* and three factors have a small association with burnout. All associations in the table above indicate a

moderate correlation, with the exception of *Quantitative Demands of the Job* on the *Work Burnout* factor, in which the strength of the correlation is large.

Table 10: Health consequences: Pearson Parametric Correlations with Burnout - Summary

	Antecedents	Personal Burnout Mean	Work Burnout Mean	Client Burnout Mean
1	Mental health	**.695**	**.668**	.469
2	Vitality	**-.734**	**-.732**	-.466
3	Behavioural stress	**.598**	**.667**	**.503**
4	Somatic stress	**.558**	**.507**	.334
5	Cognitive stress	**.585**	**.626**	.424
6	General health	-.417	-.366	
All correlations evaluated at a Significance level of p<0.05 (2-tailed)				

Most of the health consequences of burnout have large correlations *Personal Burnout and Work Burnout* with the exception with *Client Related Burnout*. *General Health* is the only health consequences in which the strength of the correlation with *Client Burnout* is small.

Table 11: Intention to Quit: Pearson Parametric Correlations with Burnout - Summary

	Antecedents	Personal Burnout Mean	Work Burnout Mean	Client Burnout Mean
1	Intention to quit		0.343	
All correlations evaluated at a Significance level of p<0.05 (2-tailed)				

Intention to quit is only moderately correlated to the *Work Burnout* Factor.

Note: see Table 79 in Appendix A for all the complete statistical analysis.

Assumptions about correlations	
0.00 - 0.10	No Association
0.10 - 0.30	Small Association
0.30 – 0.50	Moderate association
0.50 - >	Large association

In summary the model (figure 1) is not entirely inaccurate and although not perfect correlated (which is unlikely in statistical inquiry, Rowntree, 1981), it does infer association. The relationships emphasise strength of association and not so much significance (Byrne, 2002).

5.3 Hypothesis 1

There is no significant difference between the mean age of High burnout respondents and the mean age of Low Burnout respondents.

Table 12: T-Test: Hypothesis 1: Difference in the mean age of High burnout victims and Low burnout victims

Group Statistics					
	Work Burnout	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Age	**Not Burnt Out**	180	34.88	7.454	.556
	Burnout	107	33.99	5.861	.567

Independent Samples Test									
		Levene's Test for Equality of Variances		**t-test for Equality of Means**					
		F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**	**Mean Diff.**	**Std. Error Diff.**	**95% Confidence Interval of the Difference**

									Lower	Upper
Age	**Equal variances assumed**	4.713	**.031**	1.053	285	.293	.887	.843	-.772	2.546
	Equal variances not assumed			1.118	263.552	.265	.887	.794	-.675	2.450

T - Tests are used to test the hypotheses that that mean scores will be significantly different for two independent samples or groups. It is mainly used when the sample size is small and the population standard deviation is unknown. It assumes a normal distribution and the use of interval data. In most comparisons, it is used for comparisons of sample means (Zikmund, 2003). Levene's test for equal variances was rejected. Levene's test is used to test if samples have equal variances. Equal variance across samples is known as homogeneity of variance. Some statistical tests, for example the analysis of variance, assume that variances are equal across groups or samples. The Levene's test can be used to verify that assumption (Levene, 1960). Therefore a t - test for equality of means was used. A probability level of 0.265 which is greater than a significance level of 0.05 equality of means we fail to reject the null hypothesis that there are no significant differences in the means of respondents with high incidence of burnout and those without. Tests for Hypothesis 1 were conducted against the work burnout scale.

5.4 Hypothesis 2

There is a significantly higher incidence of burnout among single parents with children than single persons without children are.

Table 13: Hypothesis 2: Single people only: Is there a higher incidence of burn out in people with Children

Children Work Burn Out Cross tabulation					
			Work Burn Out		Total
			Not Burnt Out	Burnt Out	
children	No Children	Count	41	30	71
		% within children	57.7%	42.3%	100.0%
	Children	Count	16	10	26
		% within children	61.5%	38.5%	100.0%
Total		Count	57	40	97
		% within children	58.8%	41.2%	100.0%
		% within Work Burnout	100.0%	100.0%	100.0%

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Fisher's Exact Test				.818	.462
N of Valid Cases	97				

Using the Fishers Exact test Hypothesis 2 is rejected (0.818) in that at a significance level of $P<0.05$ no statistically significant differences we found between single parents and single persons in the prevalence of work burnout.

Fisher's exact test: "This test was designed to test the hypothesis that the two column percentages in a 2-by-2 table are equal. It is especially useful when sample sizes are small (even zero in some cells) and the chi square test is not appropriate. Exact probability levels are given for one-sided and two-sided alternatives. You would reject the null hypothesis of equality of proportions when the reported probability level is less than a stated level, such as 0.05. The calculation of these probability levels is made by

calculating how many of the possible tables that may be constructed from the marginal totals given in this table support the alternative hypothesis" (Hintze, 2005, pg 44).

5.5 Hypothesis 3

There is a significantly higher incidence of burnout among dual income couples with children than single income couples with children are.

Table 14: Hypothesis 3: Married people only: Is there a higher incidence of burn out in people with dual incomes verses single incomes

What forms of income does your family receive?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single salary	34	15.3	15.5	15.5
	Dual salary	186	83.8	84.5	100.0
	Total	220	99.1	100.0	
Missing	System	2	.9		
Total		222	100.0		

What forms of income does your family receive? * Work Burnout Cross tabulation					
			Work Burn Out		Total
			Not Burnt Out	Burnt Out	
What forms of income does your family receive?	Single salary	Count	17	11	28
		% within What forms of income does your family receive?	60.7%	39.3%	100.0 %
	Dual salary	Count	105	56	161
		% within What forms of income does your family receive?	65.2%	34.8%	100.0 %
Total		Count	122	67	189

	% within What forms of income does your family receive?	64.6%	35.4%	100.0 %
	% within Work Burnt Out	100.0%	100.0 %	100.0 %

Chi-Square Tests					
	Value	**df**	**Asymp. Sig. (2-sided)**	**Exact Sig. (2-sided)**	**Exact Sig. (1-sided)**
Fisher's Exact Test				.672	.398

Using the Fishers Exact test Hypothesis 3 is rejected (0.672) in that at a significance level of P<0.05 no statistically significant differences we found between dual income families and single income families in the prevalence of work burnout. Again, tests were conducted against the work burnout scale. It should be noted that the number of single salaried couples was small in comparison to dual income families.

5.6 Hypothesis 4

There is a significantly higher incidence of burnout among South African employees than those studies that have been done in other countries using the Copenhagen Burnout Inventory (CBI).

Table 15 : Burnout Survey International averages (non-probability samples)

Country/ Sample	Reference	N	Worker Related Burnout	Personal Burnout	Client Related burnout
Canadian Nurses	Bourbonnais, Brission, Vinet, Vézina, Abdous and Gaudet, 2006	302	48.11	43.62	36.06
Human Service Workers Denmark	Borritz and Kristensen, 2004	1917	33.0	35.9	30.90
SA White collar	This Study	287	42.23	44.60	32.93

workers					(N=240)

Table 16: Burnout Survey International averages (non-probability samples): Significant differences to South African Study

Country/ Sample	Reference	N	Worker Related Burnout	Personal Burnout	Client Related burnout
			Significantly different p<0.05 (Y/N)		
Canadian Nurses	Bourbonnais, Brission, Vinet, Vézina, Abdous and Gaudet, 2006	302	Yes	No	No
Human Service Workers Denmark	Borritz and Kristensen , 2004	1917	Yes	Yes	No

The results from Hypothesis 5 are inconclusive for *Work Burnout* because although there is a significant difference; the South Africa is simultaneously both higher and lower. The results from Hypothesis 5 are inconclusive for *Personal Burnout* because the result of the significance testing is significant for one and insignificant for the other. The results from Hypothesis 5 are rejected for *Client Burnout* because there are no significant differences (See tables' 81 - 83 in Annexure A).

5.7 Hypothesis 5

There is a significantly higher incidence of burnout among employees who have shorter job tenure and those who have longer job tenure, while controlling for age.

Table 17: Hypothesis 5: 30 – 35 year old people only: Is there a higher incidence of burn out in people with longer tenure, than those with shorter tenure

How long have you been working in your current position?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 - 2 years	81	52.3	52.3	52.3
	3 - 5 years	35	22.6	22.6	74.8
	More than 5 years	39	25.2	25.2	100.0
	Total	155	100.0	100.0	

		Work Burnout		Total
		Not Burnt Out	Burn Out	
0 - 2 years	Count	41	24	65
	% within How long have you been working in your current position?	63.1%	36.9%	100.0%
3 - 5 years	Count	16	12	28
	% within How long have you been working in your current position?	57.1%	42.9%	100.0%
More than 5 years	Count	15	17	32
	% within How long have you been working in your current position?	46.9%	53.1%	100.0%
Count		72	53	125
% within How long have you been working in your current position?		57.6%	42.4%	100.0%
% within Work Burnt Out		100.0%	100.0%	100.0%

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.308(a)	2	.315
a 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.87.			

In assessing this hypothesis, we grouped the respondents between the age of 30 – 35 and thus held age constant (which made up 43.9% of the sample respondents). The Pearson chi square goodness of fit statistic was the test performed. Pearson's chi-square is used to assess two types of comparisons: tests of independence and tests of goodness of fit. A test of goodness of fit establishes whether or not an observed frequency distribution differs from an expected distribution. A test of independence assesses whether observations on two variables are independent of each other (Hintze, 2005). Using the Pearson Chi-Square test Hypothesis 5 is rejected (0.315) in that at a significance level of P<0.05 no statistically significant differences we found between the three tenure groups holding age as a constant.

Table 18: Chi Square Test: Tenure < 2 years and Tenure > 5 Years

Data Section					
Sample	**Sample Size**	**Not Burned out**	**Burnout**	**Proportion Positive**	**Proportion Negative**
0 - 2 years	65.0	41.0	24.0	0.6308	0.3692
More than 5 years	32.0	15.0	17.0	0.4688	0.5313
Total	97.0	56.0	41	0.5773	0.4227

Confidence Intervals of Difference (P1-P2)			
Confidence Interval Method	**Estimated value**	**Lower 95% Confidence Limit**	**Upper 95% Confidence Limit**
Quasi-Exact (Chen)	0.1620	-0.0466	0.3632
Score (Farrington & Manning)	0.1620	-0.0458	0.3601
Score (Miettinen & Nurminen)	0.1620	-0.0469	0.3611
Score w/Skewness (Gart-Nam	0.1620	-0.0476	0.3641
Score (Wilson)	0.1620	-0.0443	0.3545
Score (Wilson C.C.)	0.1620	-0.0603	0.3696
Chi-Square C.C. (Yates)	0.1620	-0.0702	0.3943
Chi-Square (Pearson)	0.1620	-0.0469	0.3710

Two-Sided Tests of Zero Difference (H0: P1 = P2 versus H1: P1 <> P2) **Estimated Difference (P1 - P2) = 0.1620**				
Test Name	**Test Statistic's Distribution**	**Test Statistic's value**	**Probability level**	**Conclude H1 at 5% Significance level**
Fisher's Exact	Hyper geometric		0.1893	No
Chi-Square Test	Chi-Square(1)	2.307	0.1288	No
Chi-Square Test (C.C.)	Chi-Square(1)	1.691	0.1935	No
Z-Test	Normal	1.519	0.1288	No
Z-Test (C.C.)	Normal	1.300	0.1935	No
Mantel-Haenszel Test	Normal	1.511	0.1308	No
Likelihood Ratio	Chi-Square(1)	2.294	0.1298	No
T-Test using 0's and 1's	Student's T(95)	1.448	0.1508	No

Again using the Fishers Exact test (used for a 2 x 2 table) it can be concluded that there are no significant difference between tenure less than two years and tenure greater than 5 years holding age as a constant.

6 *Discussion of Results*

6.1 Research Question 1

The research question set out to prove whether the strength of the correlations of the psychosocial work conditions (COPSOQ), with the Copenhagen Burnout Inventory (CBI), was a significant predictor of burnout and that the consequences thereof lead to mental and physical health consequences, in addition to intentions to quit. Both of these consequences have serious implications for productivity in the workplace.

6.1.1 Psychosocial Work conditions: Factor Correlation with all Burnout scales

Consistent with research done by Borritz (2005) *emotional demands* (PB = 0.407, WB= 0.435, CB= 0.313)[2] , *quantitative demands* (PB = 0.458, WB = 0.593, CB = 0.424) and *role conflicts* (PB 0.321, WB 0.439 and CB 0.379) are correlated with all three burnout scales. Additionally this research has included two more constructs namely; *sense of coherence* and the *meaning of work*, which were also correlated with all three burnout scales (see table 74 in Annexure A). *Qualitative demands of the job* have the largest correlation followed by *sense of coherence*. *Emotional demands* are characterised by emotionally disturbing situations in the work place, emotional demands and emotional involvement at work. *Quantitative demands* are based on the inability to slow the work pace without adverse consequences, often falling behind schedule and not enough time to complete tasks. *Role conflicts* are characterised by unnecessary tasks, contradictory

[2] PB = Personal Burnout, WB= Work Burnout, CB = Client Burnout)

instructions, a lack of appreciation by all for the work effort and better ways of completing tasks.

Sense of coherence (PB = -0.410, WB= -0.455, CB= - 0.410) is negatively correlated to burnout and in essence respondents who are likely to have high optimism for the future, clear personal goals and purpose are less likely to experience burnout. Question five "I believe I can cope with most situations in life" and question nine "Often things happen around me that I do not understand" we dropped from the *Sense of Coherence* factor due to low communality (0.198 and 0.116 respectively).

The *meaning of work* factor is best explained the by perception that tasks performed are important to you together with motivation and involvement in the work being performed (PB= -0.372, WB -0.457, CB -0.330).

6.1.2 Psychosocial Work conditions: Factor Correlation with two Burnout Scales

Predictability (PB = -0.352, WB= -0.390), was associated with work and personal burnout which is consistent with Borritz (2005). Additional psychosocial factors inconsistent with Borritz (2005) is *Role Clarity* (PB = -0.330, WB= -0.416), Quality *of leadership* (PB = -0.357, WB= -0.340), *Social support* (PB = -0.308, WB= -0.341), *Feedback at work* (PB = -0.342, WB= -0.340)*, Sense of community* (PB = -0.324, WB= -0.377)*, Job Satisfaction* (PB = -0.397, WB= -0.464), and *Influence at work* (PB = -0.345, WB= -0.355). Of interest is how *Quality of Leadership* and *Feedback at Work* have a stronger correlation with *Personal Burnout* than with *Work Burnout*.

Role clarity is characterised by job control, clear unambiguous goals, defined areas of responsibility and knowing exactly what is expected. *Quality of leadership* as a factor is associated with good developmental opportunities; concern about fulfilment with the job,

good planning and execution and management is excellent at resolving conflicts. *Feedback at Work* is regarded as on the job coaching concerning how the task should be executed and the being able to get help from an immediate supervisor. A *Sense of community* is all about the atmosphere, cooperation, and a sense of belonging between a worker and his/her colleagues. *Job Satisfaction* is characterised by growth prospects, physical working conditions, adequate use of abilities and a holistic evaluation of the job as a whole.

Influence at Work is considered the degree of influence concerning work, the ability to choose who your team-mates are, influencing the amount of work assigned and how you influence what you do at work.

6.1.3 Psychosocial Work conditions: Factor Correlation with one Burnout Scale

Demands for Hiding Emotions (WB= 0.365) and *Commitment to the Workplace* (WB= -0.341) are only associated with Work Burnout scales and are inconsistent with Borritz (2005) who had *Possibilities for Development* and *Quality of Leadership* correlated with the *Work Burnout* Scale.

Demands for hiding emotions are characterised by the ability to state your opinion and the requirement that you do not always show your feelings. *Commitment to the Workplace is* associated with how long you intend to stay at the current employer, do enjoy sharing conversation about the workplace with others, taking joint accountability for problems (together with the organisation) and believing that the place of work is of great importance to you.

6.1.4 Psychosocial Work conditions: Factor Correlation with none of the Burnout Scales

Possibilities for development, Cognitive demands and Social relations had a small association with the burnout scales.

Possibilities for development are associated with varied work, requirement of one to show initiative in the job, learning and development (both formally and informally) and the use of skills and expertise in the workplace. *Cognitive demands* are defined by having to juggle many tasks at the same time, a requirement for you to remember many things, an implicit demand that you come up with good ideas and a requirement to make difficult decisions. *Social relations* are associated with being isolated from colleagues and the ability to interact socially while working.

None of the psychosocial work factors were only associated with client and work burnout scales, which is inconsistent with Borritz (2005).

6.1.5 Health Consequences: Factor Correlation with all of the Burnout Scales

Mental Health (PB= 0.695, WB= 0.668 and CB= 0.469), *Vitality* (PB= -0.734, WB= -0.732 and CB= -0.466), *Behavioural stress* (PB= 0.598, WB= 0.667 and CB= 0.504), *Somatic stress* (PB= 0.558, WB= 0.507 and CB= 0.334) *and Cognitive stress* (PB= 0.585, WB= 0.626 and CB= 0.424) have a large correlation with all three burnout scales. *General Health* (PB= -0.417, WB= -0.366) is only moderately correlated to the Work Burnout and Personal Burnout scale. Question one “I seem to get sick a little

easier than other people" was dropped from the *General Health* factor due to low communality (0.169).

It is interesting to note that with the exception of *Behavioural stress* and *Cognitive stress* all adverse *Health consequences* have a stronger correlation with the *Personal Burnout* scale than with the *Work Burnout* scale. This is probably because *Personal Burnout* is essentially a general exhaustion scale whereas *Work Burnout* measures exhaustion generally attributed to work (Borritz, 2005).

The highest impact of burnout on health is on the *Vitality* factor thus indicating high incidence of tiredness, loss of energy and a sense of being worn out. The second largest health consequence is *Mental Health*, which is characterised by nervousness, feeling down, a diminished sense of peace and an unhappy state. The lowest correlation is with somatic stress; however, somatic stress is highly correlated with all the heath consequences, which are consistent with Escobar et.al, (2002).

Table 19 : Somatic stress and its correlation with all the Health Factors

		GENERAL HEALTH	MENTAL HEALTH	VITALITY	BEHAVIOURAL STRESS	COGNITIVE STRESS
SOMATIC STRESS	**Pearson Correlation**	-.318(**)	.537(**)	.549(**)	.497(**)	.523(**)
	Sig. (2-tailed)	0	0	0	0	0
	N	248	248	248	240	287

6.1.6 Intention to Quit:: Factor Correlation with One of the Burnout Scales

Intention to Quit is only moderately correlated to the Work Burnout Factor (0.343). It is interesting to note than none of the Health consequences of Burnout are strongly correlated with the *Intention to Quit* factor.

Table 20: Intention to Quit Correlations with all other Factors

Correlations		
		Intention to Quit
General Health	**Pearson Correlation**	-.054
	Sig. (2-tailed)	.408
	N	240
Mental Health	**Pearson Correlation**	.162
	Sig. (2-tailed)	.012
	N	240
Vitality	**Pearson Correlation**	.231
	Sig. (2-tailed)	.000
	N	240
Behavioural Stress	**Pearson Correlation**	.206
	Sig. (2-tailed)	.001
	N	240
Somatic Stress	**Pearson Correlation**	.102
	Sig. (2-tailed)	.114
	N	240
Cognitive Stress	**Pearson Correlation**	.149
	Sig. (2-tailed)	.021
	N	240

In conclusion, it was proved the majority of the psychosocial working conditions are strong predictors of all or most of the burnout scales. The significance of health not being strongly correlated with the *Intention to Quit* is that victims of burnout who have consequential health related problems do not have the *Intention to Quit* at the same time. It could therefore be assumed that this may lead to levels of Presenteesim in the workplace. The consequences for a high burnout worker who does not have adverse health related symptoms is that they will be more inclined to leave the current employer.

The consequences of burnout as hypothesised are significantly associated with burnout, with the exception of the *Intention to Quit*, which is only correlated with the Work Burnout scale.

6.2 Hypothesis 1

There is no significant difference in the mean age of the High Burnout respondents and the mean age of Low Burnout respondents, which is consistent with the findings of Schaufeli et al. (1995) and Van Horn et al. (1999). The significance of this finding is that essentially burnout is influenced by psychosocial work factors which are work specific and by implication can affect any worker irrespective of age.

6.3 Hypothesis 2

No statistically significant differences we found between single parents and single persons in the prevalence of work burnout. This is inconsistent with research done by Borritz et al. (2006) where the work burnout prevalence mean was (40.0) for single persons with children and (36.7) singles without children on the work burnout scale.

This however could not be verified to be a statistically significant difference from the study done by Borritz et al. (2006). The significance of the finding could be that family responsibility may have less of an impact on burnout as opposed to burnout having a greater effect on family relations (Demerouti et al., 2000). Family work-conflict and work-family conflict was not researched in this research report.

6.4 Hypothesis 3

No statistically significant difference was found between dual income families and single families in the prevalence of work burnout. The significance of this finding is that essentially burnout is influenced by psychosocial work factors that are work specific and by implication can affect any worker irrespective of marital status and whether within the marriage, the income is dual or single.

6.5 Hypothesis 4

There is a significantly higher incidence of burnout among South African employees and those studies that have been done in other countries using the Copenhagen Burnout Inventory.

This hypothesis can be as best described as inclusive because of the lack of available benchmarks to enable us to make sense of the results and give a valid interpretation for these results (see results in table 81 – 83 in Annexure A).

6.6 Hypothesis 5

No statistically significant differences we found between the three tenure groups holding age as a constant. This is inconsistent with the findings by Burke (1989) in which he found some correlation between tenure and burnout. In the table below an interesting observation is that, the number of burnout victims in the greater than 5 year tenure category seem to increase relative to the less than 5 years tenure group, although this is statistically insignificant (see table 18).

Table 21: Burnout and Tenure Prevalence

		Work Burn Out		Total
		Not Burnt Out	Burn Out	
0 - 2 years	Count	41	24	65
	% within How long have you been working in your current position?	63.1%	36.9%	100.0%
3 - 5 years	Count	16	12	28
	% within How long have you been working in your current position?	57.1%	42.9%	100.0%
More than 5 years	Count	15	17	32
	% within How long have you been working in your current position?	46.9%	53.1%	100.0%

7 Conclusion

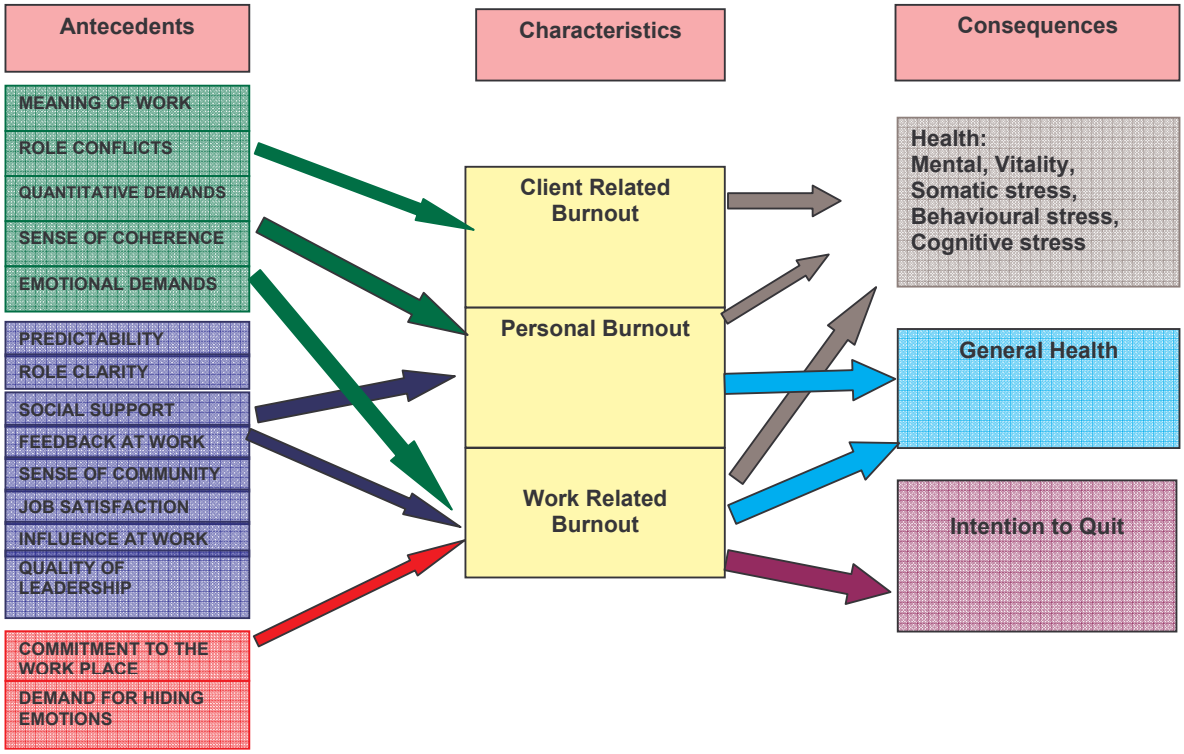
Up until the present day over 5500 research articles have been written about (Schaufeli et al., 1998). Little was known about causes and consequences for burnout until the new millennium because many of the studies have been cross-sectional in design (Borritz, 2005). Recent studies have however found that burnout is indeed preventable (Borritz, 2005). In a study by Engelbrecht (2006), it has been empirically proved that burnout is reversible.

Consistent with research done by Cherniss (1993), this report confirmed that organisational conditions are a more significant cause of job burnout, than are personality and biographical factors. Without organisation problems, burnout is unlikely to occur in employees (Hallsten, 1993). No significant relationships were found between burnout and age, tenure, parental status and marital status: income sources, which is consistent with the research by Cherniss (1993) and Hallsten (1993). Biographical factors without testing for psychological characteristics have no direct cause for the burnout phenomenon. Zellars et al., (2000) found that personality did not appear to explain any additional variance in burnout. Schaufeli et al., (2007) research indicates that social-biographical background did not play an important role in burnout results.

Workers, who are high on the burnout scale suffered from health related problems, diminished social functioning and work in demanding job with poor resources (Schaufeli et al., 2007). In South Africa, there is little understanding about the burnout phenomenon, little is being done to mitigate it and very little help is available to those suffering from high burnout, in comparison to countries such as Denmark (evidenced by limited published research in South Africa).

7.1 A Model for demonstrating the Burnout Phenomenon

Figure 2: A Model for demonstrating the Burnout Phenomenon



7.2 Recommendations for the Reduction Burnout

It is acceptable that employees will have to “burn the midnight oil” to finish a task, however this should be the exception rather than the rule if workers are to maintain a health balance between work and their personal life (Thomas, 1991).

Workers will experience less burnout through a reduction in role conflict and role clarity (Lee and Ashforth, 1993). Adamson (1987) suggested that a sense of coherence and meaning of work should reduce work burnout. Densen (2005) concluded that visioning behaviour by leaders (Quality of Leadership) could reduce burnout and assist

employees in the quest for meaning and according to Leiter (2003) the loss of meaning is a substantial cause of burnout.

Burnout is a complex phenomenon not curable with simple recommendations in the marketplace (Engelbrecht, 2006).

7.3 Recommendations to Individuals

For the individual reducing the effects of burnout can be mitigated by control - orientated coping, such as addressing the situation and seeking help; this has empirically been tested as having a negative relationship with work burnout (Leiter, 1991a).

A supportive partner or spouse is important to reduce burnout through shared domestic responsibility (Spickard et al., 2002). Creagan (2004) found that long-term commitment in a relationship can act as a buffer against modern day stress and that the challenge is to “leave the job at work” in order for it not to interfere with domestic tranquillity.

Spickard et al. (2002) have valuable insights into the mitigation of burnout namely: (1) time set aside to spend with family and friends, (2) religious or spiritual activity, (3) finding purpose and being positive and (4) positively influencing your life through personal values and choices. Cannon (2006) encourages individuals to seek comfort, consult life mentors, seek professional help, recharge in places where you are enriched and read personal development books. At work it would mean taking control of the environment especially workload, finding meaning at work, setting limits, having a mentor and having adequate administrative support systems (Spickard et al., 2002). Engelbrecht (2006) emphasises the necessity to unwind from work in order to cope with

work stressors. She contends that one needs a strategy to in order to meet the needs of all the components in ones' life, i.e. mental and physical health, partners needs. child/parents, family, community and work. A study on the working hours of managers in Britain has revealed that poor time management skills causes stress and inefficiency, therefore if improved, it would be one alternative to avoid early burnout (Industrial and Commercial training,1992).

The individual needs to take up new roles and adapt to new tasks, prioritise work tasks, use initiative and live with uncertainty and ambiguity. Managing is about the responsible use of authority, resolving conflict and focusing on the job rather than the person (Simpson and French, 1998). Yukl (2001) described how professional networks can aid an individual in obtaining political support, help with the implementation of innovations and proposals, obtaining advice and coordinating tasks with people in other departments; this is seen as useful for building resiliency and decreasing burnout (Zunz, 1998).

Cannon (2006) does not recommend changing jobs, location or partners when one is impaired; as this will complicate matters. The evidence from this research report would indicate that trying to mitigate the adverse working conditions would be more fruitful than trying to address the quality of the external environment.

7.4 Recommendations to business

Maslach (1996) suggested a proactive approach to prevent burnout was to assign mentors to new employees to act as a guardian and quality assure the work conditions especially those relating to the relationships with immediate superiors.

Maslach (1996) found that organisations who give employees the ability to *Influence Work* would encourage engagement in the workplace. The use of instruments like the Copenhagen Psychosocial questionnaire and the Copenhagen Burnout Inventory by mental health practitioners especially with regard to Employee Assistance programs can greatly assistant in identifying work and home difficulties (Maslach, 1996). If employers internalise their understanding of the engagement to burnout continuum, they will be in a better position to understand how the organisational context can affect workers well-being (Maslach, 1996). Managers fail to see that organisational factors can cause burnout and their lack of understanding perpetuates the problem (Levinson, 1996). Maslach (1996) further reveals how burnout results from a mismatch between the individual and the job. This mismatch is identified in six areas; (1) workload[3], (2) control[4], (3) reward, (4) sense of community [5](5) fairness and (6) values. Lee et al. (1993) found that positive communication through social gatherings about nonworking activities (e.g., marriages, births, promotions, awards) might help to reduce burnout. This would help develop stronger support on the job as workers become more familiar with their colleagues (Sutherland et al., 2004). This is consistent with finding in this report that increased social support reduces the incidence of burnout (Lee et al., 1993). *Feedback at Work* by sharing with workers through a robust systematic way that their contributions are valuable increases positive self-imagery and recharges them psychologically (Levinson, 1996).

As far as retention of workers is concerned, Moore (2000) found that the immediate line manager has to recognise the burnout syndrome in an employee and act decisively.

[3] Consistent with this research – Factor quantitative demands of the job
[4] Consistent with this research – Factor Influence at work
[5] Consistent with this research – Factor sense of community

Furthermore, Moore (2000) found that work factors increase work burnout and directly affect turnover intention. Sutherland et al. (2004) recommended alignment with the cultural and value systems of the organisation; analysis of exit interviews for root cause analysis, identifying individuals in key roles, managing poor and good performers differently, pay equity and internally marketing the employee value proposition. Other factors to limit dysfunctional turnover due to burnout include development opportunities through training, performance related pay, recognition of the individual, communication and involvement, giving more latitude in decision-making, improving leadership qualities, challenging work and access to the latest technology (Sutherland et al., 2004).

Organisations need to take a proactive role in developing skill enhancement and breadth of experience because of restructuring (Maslach, 1996).This is further supported by a UK study which found that by increasing job control during reorganisation; by allowing more discretion and choice in work assignments, saw an improvement in mental health and sickness absence rates (Bond and Bunce, 2001). Malone (2004) found that through “loose hierarchies” decentralised systems accommodated a greater degree of flexibility. Giving workers responsibility had the effect of increased commitment of the mind, heart and soul in a way that supersedes just following orders. Flexible work arrangements, which are supported by work-family support policies, can accommodate workers family responsibilities without sacrificing work hours and the amount of work performed (Voydanoff, 2005).

Intervention strategies do work because after a 12 month follow up study that there was a significant difference between the experimental group and the control group for all three burnout measures, including mental health indicators (Bourbonnais et al., 2006b).

Longer-term preventative interventions will depend on businesses commitment and willingness to identify adverse psychosocial factors and work to adopt processes to reduce those (Bourbonnais et al., 2006b). Improvements in psychosocial work conditions have seen significant decreases in symptoms associated with mental health and sick leave by 9% – 55% (Bourbonnais, Brisson, Vinet, Vézina and Lower, 2006).

Intervention processes only have the desired success through management and staff involvement (Bourbonnais et al., 2006a).

7.5 Recommendations to Government

A proactive approach by the Department of Heath and Department of Labour to embark on studies and intervention strategies to reduce the effects of burnout is lacking in comparison to by work done by the National Institute of Occupational Health in Denmark.

An example of government providing a framework to identify and prevent problems of work related stress is work being done by the European Social Partners (European Trade Union Federation, Union of Industrial and Employers' Confederations of Europe; European Association of Craft; Small and Medium Sized Enterprises; European Centre of Enterprises with Public Participation and of Enterprises of General Economics Interest) (Kompier, 2005). They signed the "Framework Agreement on Work –Related Stress" and the agreement stipulates " Identifying whether there is a problem of work – related stress can involve analysis of factors such as work organisation and processes (working time arrangements, degree of autonomy, match between workers skills and job requirements, workload, etc), working conditions and environment (exposure to abusive

behaviour, noise, heat, dangerous substances, etc) and subjective factors (emotional and social pressures, feeling unable to cope, perceived lack of support, etc)" (Kompier, 2005, p. 405). The emphasis is on a proper risk assessment and prevention strategies.

Mental health is seen in Canada as a leading cause of the increase in absenteeism and is attributed with an increase of 25% in health care cost and insurance claims for the period 1993 -1999 (Bourbonnais et al., 2006a). This cannot be good for inflationary pressure and national competitiveness. The International Labour Organisation concludes that psychosocial work conditions are one of the principal causes of accidents, illness, absenteeism and death in the workplace worldwide (Bourbonnais et al., 2006a).

In preparation for the pending National Health Insurance Scheme and the Social Security Scheme, it is an imperative to calculate the costs associated with mental health claims as this may increase the overall cost of the scheme to the entire base of members. Proactive research and prevention measures will go a long way to reducing the overall cost of the scheme to its members and government.

7.6 Further Research

1. Research has to move beyond self-report measures and look at more objective consequences like long-term sick leave, early retirement and mortality.
2. Workforce Bullying and the Relationship with Burnout. The question that will need to be answered is whether Workforce bullying is the same as *Quality of Leadership*. If it is indeed different; what are the implications in today's workplace.

3. Future research work may want to focus on those who have avoided the experience of job burnout by examining the coping mechanisms that they have developed to stay energised, positively engaged and fulfilled through their work.
4. Impact of burnout on service recipients. Up to now most research has focused on the burnout associated with “people doing people work” and of interest would be the effects on those receiving service from workers suffering from client related burnout and how is this affecting profitability.
5. An action research approach in which researchers develop a collaborative working relationship with organisations to address problems by using a social science approach. The collaboration brings together expertise with an intimate knowledge of the organisation and a capacity to change organisation processes and structures. This approach defines the intervention as a contribution to the functioning of the organisation as well as a scientific investigation of burnout.
6. Most authors agree that burnout develops gradually, but the question remains: how gradually and how persistently?
7. We need to study how people live with their different degrees of burnout in their daily lives. How do people with high degrees of burnout cope with their symptoms? Do they take more medicine, do they talk to others about their problems, or do they try to cope in more passive and defensive ways?
8. The relationship between burnout and profitability: comparisons between related companies within an industry.
9. It is unclear if some job – person mismatches are important than others in the prevalence of burnout?
10. Personality factors and the Impact on Burnout. We have established that psychosocial factors cause burnout. The question remains; how that may differ

by individual or does personalities not play a significant role in mitigating adverse working conditions.

Although this research cannot make any generalisation to the entire working population of South Africa is has proved that work conditions is a decisive contributor to the burnout phenomenon as opposed to biographical factors and has made a contribution to the body of knowledge. The consequences of burnout namely *Intention to Quit* and *Negative Health* are not correlated. This effectively means that health workers are intending to leave the workplace and workers suffering from ill health are staying. More longitudinal studies are needed in South Africa to assess the impact of intervention efforts into reducing burnout and its related consequences over time. Burnout is both reversible and preventable; sufficient work and collaboration between private enterprise, government and academia could enable us reduce the negative costs and effects to GDP and social society.

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Appendix A

Statistics

Table 22: Frequencies: Age

	N	Minimum	Maximum	Mean	Standard Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic
Age	353	19	70	34.37	6.949
Valid N (list wise)	353				

Figure 3: Age Frequency Distribution

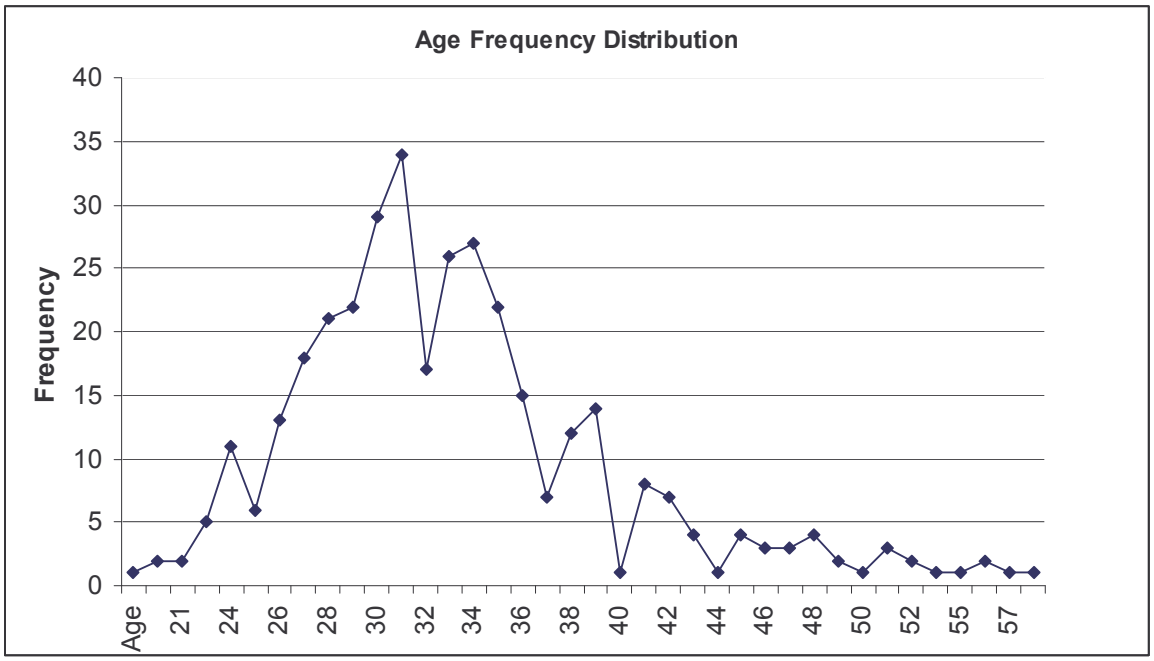

Table 23: Frequencies: Gender

	Frequency	Percent	Valid Percent	Cumulative Percent

Male	194	55.0	55.0	55.0
Female	159	45.0	45.0	100.0
Total	353	100.0	100.0	

Table 24: Frequencies: Marital Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Married	222	62.9	62.9	62.9
Co-Habiting	26	7.4	7.4	70.3
Single	89	25.2	25.2	95.5
Divorced	16	4.5	4.5	100.0
Total	353	100.0	100.0	

Table 25: Frequencies: Children

		No	Yes	Total
Less than 6 years of age	Count	234	119	353
	%	66.3%	33.7%	100.0%
7 – 13 Years	Count	278	75	353
	%	78.8%	21.2%	100.0%
14 Years of age and above	Count	303	50	353
	%	85.8%	14.2%	100,0%

Table 26: Frequencies: Educational Qualification

	Frequency	**Percent**	**Cumulative Percent**
Grade 12/ Matric	39	11.0	11.0
Post School Certificate	35	9.9	21.0
3 year Degree/ Diploma	92	26.1	47.0
4 year Degree / Diploma	99	28.0	75.1

Masters Degree	88	24.9	100.0
Total	353	100.0	

Table 27: Frequencies: Tenure

	Frequency	Percent	Cumulative Percent
0 -2 years	175	49.6	49.6
3 – 5 years	79	22.4	72.0
6 – 10 years	62	17.6	89.5
More than 10 years	37	10.5	100.0
Total	353	100.0	

Table 28: Descriptive Statistics: CBI Questionnaire: Absolute Means

Descriptive Statistics								
	N	Range	Min	Max	Mean	Std. Deviation	Skewness	Kurtosis
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
Personal Burnout Mean	287	100.00	.00	100.00	44.5993	22.13836	.231	-.575
Work Burnout Mean	287	96.43	.00	96.43	42.2256	20.26459	.228	-.431
Client Burnout Mean	240	87.50	.00	87.50	31.8229	21.20393	.422	-.551
Valid N (list wise)	240							

Table 29: Factor Analysis Personal Burnout

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.902
Bartlett's Test of Sphericity	Approx. Chi-Square	1163.669
	df	15
	Sig.	.000

Anti-image Matrices								
		Persona	Persona	Persona	Persona	Persona	Persona

		I1	I2	I3	I4	I5	I6
Anti-image Covariance	**Personal1**	.620	-.074	-.050	-.113	.022	-.045
	Personal2	-.074	.327	-.117	-.041	-.038	-.053
	Personal3	-.050	-.117	.254	-.046	-.080	-.072
	Personal4	-.113	-.041	-.046	.511	-.101	.003
	Personal5	.022	-.038	-.080	-.101	.303	-.119
	Personal6	-.045	-.053	-.072	.003	-.119	.344
Anti-image Correlation	**Personal1**	.935(a)	-.164	-.127	-.201	.050	-.098
	Personal2	-.164	.904(a)	-.406	-.099	-.121	-.157
	Personal3	-.127	-.406	.880(a)	-.127	-.289	-.243
	Personal4	-.201	-.099	-.127	.929(a)	-.256	.006
	Personal5	.050	-.121	-.289	-.256	.884(a)	-.369
	Personal6	-.098	-.157	-.243	.006	-.369	.905(a)

a Measures of Sampling Adequacy(MSA)

Communalities

	Initial	Extraction
Personal1	.380	.391
Personal2	.673	.722
Personal3	.746	.816
Personal4	.489	.515
Personal5	.697	.735
Personal6	.656	.689

Extraction Method: Principal Axis Factoring.

Total Variance Explained

Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**4.194**	**69.908**	**69.908**	3.867	64.451	64.451
2	.599	9.979	79.887			
3	.469	7.822	87.709			
4	.316	5.260	92.969			
5	.230	3.831	96.800			

6	.192	3.200	100.000			

Extraction Method: Principal Axis Factoring.

Table 30: Reliability Analysis Personal Burnout

Reliability Statistics	
Cronbach's Alpha	**N of Items**
.910	6

Item Statistics			
	Mean	**Std. Deviation**	**N**
Personal1	34.32	29.160	287
Personal2	47.39	27.051	287
Personal3	49.65	26.771	287
Personal4	33.71	26.076	287
Personal5	47.04	26.277	287
Personal6	55.49	24.343	287

Item-Total Statistics				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**
Personal1	233.28	12818.081	.602	**.917**
Personal2	220.21	12129.502	.803	.886
Personal3	217.94	11967.088	.847	.880
Personal4	233.89	12884.067	.689	.902
Personal5	220.56	12281.331	.802	.887
Personal6	212.11	12757.167	.781	.890

Scale Statistics			
Mean	**Variance**	**Std. Deviation**	**N of Items**
267.60	17643.850	132.830	6

Table 31: Factor Analysis Work Burnout

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.843
Bartlett's Test of Sphericity	Approx. Chi-Square	708.461
	df	21
	Sig.	.000

Anti-image Matrices								
		Work1	Work2	Work3	Work4	Work5	Work6	Work7
Anti-image Covariance	Work1	.357	-.108	-.170	-.085	.000	-.155	-.091
	Work2	-.108	.560	-.103	-.027	-.117	.072	-.026
	Work3	-.170	-.103	.464	.066	-.032	-.021	-.117
	Work4	-.085	-.027	.066	.515	-.251	-.050	-.038
	Work5	.000	-.117	-.032	-.251	.480	-.012	-.072
	Work6	-.155	.072	-.021	-.050	-.012	.741	-.036
	Work7	-.091	-.026	-.117	-.038	-.072	-.036	.572
Anti-image Correlation	Work1	.824(a)	-.242	-.417	-.199	.000	-.302	-.202
	Work2	-.242	.888(a)	-.202	-.051	-.225	.112	-.045
	Work3	-.417	-.202	.835(a)	.134	-.069	-.037	-.227
	Work4	-.199	-.051	.134	.792(a)	-.505	-.080	-.069
	Work5	.000	-.225	-.069	-.505	.811(a)	-.020	-.137
	Work6	-.302	.112	-.037	-.080	-.020	.861(a)	-.055
	Work7	-.202	-.045	-.227	-.069	-.137	-.055	.918(a)
a Measures of Sampling Adequacy(MSA)								

Communalities		
	Initial	Extraction
Work1	.643	.726
Work2	.440	.462
Work3	.536	.518
Work4	.485	.406
Work5	.520	.478

Work6	.259	**.227**
Work7	.428	.482

Extraction Method: Principal Axis Factoring.

Total Variance Explained

Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**3.793**	**54.186**	**54.186**	3.299	47.123	47.123
2	.887	12.675	66.861			
3	.790	11.282	78.143			
4	.532	7.594	85.737			
5	.395	5.636	91.373			
6	.349	4.986	96.359			
7	.255	3.641	100.000			

Extraction Method: Principal Axis Factoring.

Table 32: Reliability Analysis for Work Burnout

Reliability Statistics

Cronbach's Alpha	N of Items
.857	7

Item Statistics

	Mean	Std. Deviation	N
Work1	41.88	30.454	240
Work2	36.98	30.249	240
Work3	35.10	29.456	240
Work4	38.13	24.195	240
Work5	36.88	26.367	240
Work6	41.35	25.068	240
Work7	56.98	26.190	240

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Work1	245.42	13545.851	.779	.812
Work2	250.31	14552.726	.620	.838
Work3	252.19	14443.417	.662	.831
Work4	249.17	15836.123	.587	.842
Work5	250.42	15177.650	.634	.836
Work6	245.94	16539.389	.438	.861
Work7	230.31	15183.479	.639	.835

Scale Statistics			
Mean	**Variance**	**Std. Deviation**	**N of Items**
287.29	19994.726	141.403	7

Table 33: Factor analysis for Client Burnout

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.847**
Bartlett's Test of Sphericity	**Approx. Chi-Square**	825.722
	df	15
	Sig.	.000

Communalities		
	Initial	**Extraction**
Client1	.578	.581
Client2	.367	.373
Client3	.728	.799
Client4	.638	.698
n.Client5	.540	.428
n.Client6	.611	.549
Extraction Method: Principal Axis Factoring.		

Total Variance Explained

Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**3.826**	**63.763**	**63.763**	3.428	57.137	57.137
2	.834	13.898	77.661			
3	.545	9.087	86.748			
4	.336	5.605	92.353			
5	.258	4.300	96.653			
6	.201	3.347	100.000			
Extraction Method: Principal Axis Factoring.						

Table 34: Reliability Analysis for Client Burnout

Reliability Statistics	
Cronbach's Alpha	N of Items
.879	6

Item Statistics			
	Mean	Std. Deviation	N
Client1	22.81	25.008	240
Client2	42.08	29.462	240
Client3	27.19	23.940	240
Client4	28.33	26.162	240
n.Client5	37.81	28.836	240
n.Client6	32.71	27.213	240

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Client1	168.13	11777.850	.697	.858
Client2	148.85	11716.778	.565	.881
Client3	163.75	11436.715	.816	.840
Client4	162.60	11255.219	.765	.846
n.Client5	153.13	11527.850	.618	.871

n.Client6	158.23	11351.977	.706	.856

Scale Statistics			
Mean	**Variance**	**Std. Deviation**	**N of Items**
190.94	16185.833	127.224	6

Table 35: Descriptive Factors for the Copenhagen Psychosocial Questionnaire

	N	Range	Min	Max	Mean	Std Deviation
Meaning of work	254	4.00	1.00	5.00	2.156	.91473
Commitment to the workplace	254	4.00	1.00	5.00	3.046	.86835
Predictability	254	4.00	1.00	5.00	2.824	.95647
Role-clarity	254	3.75	1.00	4.75	2.238	.79856
Role-conflicts	254	4.00	1.00	5.00	2.940	.88442
Quality of leadership	254	4.00	1.00	5.00	2.931	1.06817
Social support	287	4.00	1.00	5.00	2.557	.94110
Feedback at work	287	4.00	1.00	5.00	3.073	.93954
Social relations	287	4.00	1.00	5.00	2.871	.67996
Sense of community	287	4.00	1.00	5.00	2.188	.85384
Job satisfaction	248	3.00	1.00	4.00	2.194	.71790
General health	248	3.40	1.00	4.40	2.082	.75459
Mental health	248	4.75	1.00	5.75	4.059	.95019
Vitality	248	4.67	1.00	5.67	3.376	1.01731
Behavioural stress	240	4.00	1.00	5.00	3.765	.82995
Somatic stress	287	3.50	1.50	5.00	3.912	.76920
Cognitive stress	287	4.00	1.00	5.00	3.663	.87317
Sense of coherence	240	2.71	2.29	5.00	4.210	.66249
Quantitative demands	287	3.75	1.00	4.75	2.932	.76597
Cognitive demands	287	4.00	1.00	5.00	2.036	.73020
Emotional demands	287	4.00	1.00	5.00	3.111	.91773
Demands for hiding emotions	287	4.00	1.00	5.00	3.564	.92566

Influence at work	287	4.00	1.00	5.00	2.785	.78351

Table 36: Factor Analysis: Possibilities for development

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.781**
Bartlett's Test of Sphericity	**Approx. Chi-Square**	293.220
	df	6
	Sig.	.000

Communalities		
	Initial	**Extraction**
Sec.B.Q6	.328	.404
Sec.C.Q4	.355	.458
Sec.C.Q5	.477	.680
Sec.C.Q6	.353	.446
Extraction Method: Principal Axis Factoring.		

Total Variance Explained						
Factor	**Initial Eigen values**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	**2.474**	**61.847**	**61.847**	1.987	49.683	49.683
2	.607	15.173	77.020			
3	.525	13.131	90.151			
4	.394	9.849	100.000			
Extraction Method: Principal Axis Factoring.						

Table 37: Reliability: Possibilities for Development

Reliability Statistics	
Cronbach's Alpha	**N of Items**
.793	4

Item Statistics			
	Mean	Std. Deviation	N
Sec.B.Q6	2.17	.971	254
Sec.C.Q4	1.81	.842	254
Sec.C.Q5	2.04	1.053	254
Sec.C.Q6	1.93	.919	254

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sec.B.Q6	5.78	5.424	.559	.763
Sec.C.Q4	6.14	5.790	.591	.750
Sec.C.Q5	5.91	4.649	.691	.694
Sec.C.Q6	6.02	5.533	.582	.751

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
7.95	8.895	2.982	4

Table 38: Factor Analysis: Meaning of Work

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.742**
Bartlett's Test of Sphericity	Approx. Chi-Square	461.054
	df	3
	Sig.	.000

Communalities		
	Initial	Extraction

Sec.C.Q7	.679	.806
Sec.C.Q8	.666	.777
Sec.C.Q9	.573	.649
Extraction Method: Principal Axis Factoring.		

Total Variance Explained

Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.483	82.768	82.768	2.231	74.360	74.360
2	.309	10.308	93.075			
3	.208	6.925	100.000			

Extraction Method: Principal Axis Factoring.

Factor Matrix(a)

	Factor
	1
Sec.C.Q7	.898
Sec.C.Q8	.881
Sec.C.Q9	.805

Extraction Method: Principal Axis Factoring.

a 1 factors extracted. 8 iterations required.

Table 39: Reliability: Meaning of Work

Reliability Statistics

Cronbach's Alpha	N of Items
.895	3

Item Statistics

	Mean	Std. Deviation	N
Sec.C.Q7	2.07	1.009	254

Sec.C.Q8	2.00	.960	254
Sec.C.Q9	2.39	1.049	254

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sec.C.Q7	4.39	3.449	.817	.828
Sec.C.Q8	4.46	3.649	.808	.839
Sec.C.Q9	4.08	3.472	.757	.883

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
6.47	7.531	2.744	3

Table 40: Factor Analysis: Commitment to the workplace

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.670**
Bartlett's Test of Sphericity	**Approx. Chi-Square**	222.269
	df	6
	Sig.	.000

Communalities

	Initial	Extraction
Sec.C.Q10	.240	**.262**
Sec.C.Q11	.399	.553
Sec.C.Q13	.396	.538
Sec.C.Q12	.250	**.284**

Extraction Method: Principal Axis Factoring.

Total Variance Explained

Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**2.192**	**54.809**	**54.809**	1.636	40.911	40.911
2	.841	21.034	75.844			
3	.583	14.568	90.412			
4	.384	9.588	100.000			

Extraction Method: Principal Axis Factoring.

Table 41: Reliability: Commitment to the workplace

Reliability Statistics	
Cronbach's Alpha	N of Items
.719	4

Item Statistics			
	Mean	Std. Deviation	N
Sec.C.Q10	3.93	1.280	254
Sec.C.Q11	2.75	1.172	254
Sec.C.Q13	2.65	1.162	254
Sec.C.Q12	2.85	1.093	254

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sec.C.Q10	8.26	7.424	.430	.708
Sec.C.Q11	9.43	6.982	.599	.601
Sec.C.Q13	9.53	7.151	.573	.618
Sec.C.Q12	9.33	8.129	.440	.695

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
12.19	12.064	3.473	4

Table 42: Factor Analysis: Role-Clarity

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.769
Bartlett's Test of Sphericity	Approx. Chi-Square	465.976
	df	6
	Sig.	.000

Anti-image Matrices					
		Sec.C.Q16	Sec.C.Q17	Sec.C.Q18	Sec.C.Q19
Anti-image Covariance	Sec.C.Q16	.698	-.178	-.069	-.011
	Sec.C.Q17	-.178	.478	-.141	-.076
	Sec.C.Q18	-.069	-.141	.343	-.221
	Sec.C.Q19	-.011	-.076	-.221	.408
Anti-image Correlation	Sec.C.Q16	.851(a)	-.309	-.141	-.021
	Sec.C.Q17	-.309	.816(a)	-.348	-.173
	Sec.C.Q18	-.141	-.348	.719(a)	-.591
	Sec.C.Q19	-.021	-.173	-.591	.744(a)
a Measures of Sampling Adequacy(MSA)					

Communalities		
	Initial	Extraction
Sec.C.Q16	.302	.320
Sec.C.Q17	.522	.620
Sec.C.Q18	.657	.793
Sec.C.Q19	.592	.633
Extraction Method: Principal Axis Factoring.		

Total Variance Explained						
Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**2.735**	**68.373**	**68.373**	2.366	59.143	59.143
2	.658	16.441	84.815			
3	.378	9.445	94.260			
4	.230	5.740	100.000			
Extraction Method: Principal Axis Factoring.						

Table 43: Reliability: Role-Clarity

Reliability Statistics	
Cronbach's Alpha	N of Items
.842	4

Item Statistics			
	Mean	Std. Deviation	N
Sec.C.Q16	2.51	.948	254
Sec.C.Q17	2.33	1.052	254
Sec.C.Q18	2.04	.946	254
Sec.C.Q19	2.07	.926	254

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sec.C.Q16	6.44	6.698	.531	**.860**
Sec.C.Q17	6.63	5.539	.719	.782
Sec.C.Q18	6.91	5.790	.772	.759
Sec.C.Q19	6.88	6.136	.700	.791

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items

8.95	10.203	3.194	4

Table 44: Factor Analysis: Role-Conflicts

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.736**
Bartlett's Test of Sphericity	**Approx. Chi-Square**	338.528
	df	6
	Sig.	.000

Communalities		
	Initial	**Extraction**
Sec.C.Q20	.223	**.262**
Sec.C.Q21	.455	.523
Sec.C.Q22	.592	.834
Sec.C.Q23	.413	.449
Extraction Method: Principal Axis Factoring.		

Total Variance Explained						
Factor	**Initial Eigen values**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	**2.490**	**62.250**	**62.250**	2.068	51.702	51.702
2	.695	17.378	79.628			
3	.535	13.366	92.994			
4	.280	7.006	100.000			
Extraction Method: Principal Axis Factoring.						

Factor Matrix(a)	
	Factor
	1
Sec.C.Q22	.913

Sec.C.Q21	.723
Sec.C.Q23	.670
Sec.C.Q20	.512
Extraction Method: Principal Axis Factoring.	
a 1 factors extracted. 12 iterations required.	

Table 45: Reliability: Role-Conflicts

Reliability Statistics	
Cronbach's Alpha	**N of Items**
.792	4

Item Statistics			
	Mean	**Std. Deviation**	**N**
Sec.C.Q20	2.94	1.127	254
Sec.C.Q21	2.96	1.218	254
Sec.C.Q22	2.91	1.093	254
Sec.C.Q23	2.94	1.063	254

Item-Total Statistics				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**
Sec.C.Q20	8.81	8.223	.468	**.805**
Sec.C.Q21	8.80	6.967	.632	.726
Sec.C.Q22	8.85	7.008	.746	.668
Sec.C.Q23	8.82	7.912	.580	.751

Scale Statistics			
Mean	**Variance**	**Std. Deviation**	**N of Items**
11.76	12.515	3.538	4

Table 46: Factor Analysis: Quality of Leadership

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.808
Bartlett's Test of Sphericity	Approx. Chi-Square	617.096
	df	6
	Sig.	.000

Communalities		
	Initial	Extraction
Sec.C.Q24	.611	.661
Sec.C.Q25	.663	.742
Sec.C.Q26	.638	.716
Sec.C.Q27	.569	.615
Extraction Method: Principal Axis Factoring.		

Total Variance Explained						
Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.048	76.203	76.203	2.734	68.352	68.352
2	.447	11.170	87.373			
3	.285	7.125	94.498			
4	.220	5.502	100.000			
Extraction Method: Principal Axis Factoring.						

Table 47: Reliability: Quality Of Leadership

Reliability Statistics	
Cronbach's Alpha	N of Items
.895	4

Item Statistics

	Mean	Std. Deviation	N
Sec.C.Q24	2.87	1.226	254
Sec.C.Q25	2.94	1.140	254
Sec.C.Q26	2.99	1.259	254
Sec.C.Q27	2.93	1.272	254

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sec.C.Q24	8.85	10.713	.753	.869
Sec.C.Q25	8.79	10.951	.796	.855
Sec.C.Q26	8.74	10.306	.788	.857
Sec.C.Q27	8.80	10.548	.737	.876

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
11.72	18.256	4.273	4

Table 48: Factor Analysis: Sense Of Community

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.706**
Bartlett's Test of Sphericity	**Approx. Chi-Square**	391.707
	df	3
	Sig.	.000

Communalities

	Initial	Extraction
Sec.B.Q21	.618	.809
Sec.B.Q22	.580	.692
Sec.B.Q23	.428	.494

Extraction Method: Principal Axis Factoring.

Total Variance Explained						
Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**2.312**	**77.064**	**77.064**	1.994	66.463	66.463
2	.441	14.696	91.760			
3	.247	8.240	100.000			
Extraction Method: Principal Axis Factoring.						

Table 49: Reliability: Sense Of Community

Reliability Statistics	
Cronbach's Alpha	N of Items
.840	3

Item Statistics			
	Mean	Std. Deviation	N
Sec.B.Q21	2.02	.857	287
Sec.B.Q22	2.22	.953	287
Sec.B.Q23	2.32	1.116	287

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sec.B.Q21	4.54	3.396	.770	.731
Sec.B.Q22	4.34	3.191	.723	.759
Sec.B.Q23	4.24	2.863	.649	**.853**

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
6.56	6.561	2.562	3

Table 50: Factor Analysis: Job Satisfaction

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.812
Bartlett's Test of Sphericity	Approx. Chi-Square	476.464
	df	6
	Sig.	.000

Communalities		
	Initial	Extraction
Sec.E.Q1	.489	.556
Sec.E.Q2	.369	.416
Sec.E.Q3	.607	.715
Sec.E.Q4	.646	.791
Extraction Method: Principal Axis Factoring.		

Total Variance Explained						
Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.833	70.834	70.834	2.479	61.980	61.980
2	.545	13.624	84.458			
3	.375	9.374	93.832			
4	.247	6.168	100.000			
Extraction Method: Principal Axis Factoring.						

Table 51: Reliability: Job Satisfaction

Reliability Statistics	
Cronbach's Alpha	N of Items
.860	4

Item Statistics			
	Mean	Std. Deviation	N
Sec.E.Q1	2.20	.926	248
Sec.E.Q2	2.02	.774	248
Sec.E.Q3	2.33	.894	248
Sec.E.Q4	2.23	.818	248

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sec.E.Q1	6.58	4.650	.685	.833
Sec.E.Q2	6.76	5.478	.599	**.863**
Sec.E.Q3	6.44	4.547	.761	.799
Sec.E.Q4	6.55	4.742	.795	.787

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
8.78	8.246	2.872	4

Table 52: Factor Analysis: General Health

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.729
Bartlett's Test of Sphericity	Approx. Chi-Square	412.719
	df	6
	Sig.	.000

Communalities		
	Initial	Extraction
Sec.F	.554	.610

Sec.G.Q2	.443	.424
Sec.G.Q3	.271	**.267**
Sec.G.Q4	.686	.951
Extraction Method: Principal Axis Factoring.		
Dropped Secg.Q1 due to a low Communality of only 0.169		

Total Variance Explained

Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**2.603**	**65.066**	**65.066**	2.252	56.302	56.302
2	.728	18.207	83.273			
3	.454	11.338	94.610			
4	.216	5.390	100.000			
Extraction Method: Principal Axis Factoring.						

Table 53: Reliability: General Health

Reliability Statistics

Cronbach's Alpha	N of Items
.792	5

Item Statistics

	Mean	Std. Deviation	N
Sec.F	2.2339	.95747	248
n.Sec.G.Q1	1.8952	1.01661	248
Sec.G.Q2	2.0685	1.00572	248
n.Sec.G.Q3	2.1290	1.09816	248
Sec.G.Q4	2.0847	1.02444	248

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted

Sec.F	8.1774	9.256	.697	.714
n.Sec.G.Q1	8.5161	10.680	.379	**.811**
Sec.G.Q2	8.3427	9.651	.572	.752
n.Sec.G.Q3	8.2823	9.807	.469	.788
Sec.G.Q4	8.3266	8.529	.778	.682

Scale Statistics			
Mean	**Variance**	**Std. Deviation**	**N of Items**
10.4113	14.235	3.77293	5

Table 54: Factor Analysis: Mental Health

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.788**
Bartlett's Test of Sphericity	**Approx. Chi-Square**	576.293
	df	10
	Sig.	.000

Communalities		
	Initial	**Extraction**
Sec.H.Q1	.421	.467
Sec.H.Q2	.629	.678
Sec.H.Q3	.429	.347
Sec.H.Q4	.600	.654
Sec.H.Q5	.552	.564
Extraction Method: Principal Axis Factoring.		

Total Variance Explained						
Factor	**Initial Eigen values**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	**3.146**	**62.911**	**62.911**	2.710	54.202	54.202
2	.811	16.228	79.139			

3	.487	9.745	88.884			
4	.311	6.214	95.098			
5	.245	4.902	100.000			
Extraction Method: Principal Axis Factoring.						

Table 55: Reliability: Mental Health

Reliability Statistics	
Cronbach's Alpha	**N of Items**
.856	5

Item Statistics			
	Mean	**Std. Deviation**	**N**
Sec.H.Q1	4.5924	1.28521	238
Sec.H.Q2	4.9664	1.22514	238
n.Sec.H.Q3	2.7941	1.08482	238
Sec.H.Q4	4.6639	1.09681	238
n.Sec.H.Q5	3.2647	1.05207	238

Item-Total Statistics				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**
Sec.H.Q1	15.6891	13.388	.641	.837
Sec.H.Q2	15.3151	13.179	.719	.813
n.Sec.H.Q3	17.4874	14.968	.587	.847
Sec.H.Q4	15.6176	14.001	.715	.816
n.Sec.H.Q5	17.0168	14.320	.709	.818

Scale Statistics			
Mean	**Variance**	**Std. Deviation**	**N of Items**
20.2815	21.072	4.59046	5

Table 56: Factor Analysis: Vitality

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.723
Bartlett's Test of Sphericity	Approx. Chi-Square	660.697
	df	6
	Sig.	.000

Communalities		
	Initial	Extraction
Sec.H.Q6	.411	.388
Sec.H.Q7	.527	.562
Sec.H.Q8	.810	.778
Sec.H.Q9	.821	.840
Extraction Method: Principal Axis Factoring.		

Total Variance Explained						
Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.888	72.194	72.194	2.568	64.189	64.189
2	.662	16.547	88.741			
3	.350	8.742	97.483			
4	.101	2.517	100.000			
Extraction Method: Principal Axis Factoring.						

Table 57: Reliability: Vitality

Reliability Statistics	
Cronbach's Alpha	N of Items
.885	4

Item Statistics

	Mean	Std. Deviation	N
n.Sec.H.Q6	2.8383	1.06188	235
n.Sec.H.Q7	2.8213	1.05103	235
Sec.H.Q8	4.0426	1.22575	235
Sec.H.Q9	3.8255	1.16547	235

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
n.Sec.H.Q6	10.6894	9.446	.701	.870
n.Sec.H.Q7	10.7064	9.431	.715	.866
Sec.H.Q8	9.4851	8.182	.779	.842
Sec.H.Q9	9.7021	8.330	.812	.827

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
13.5277	15.148	3.89201	4

Table 58: Factor Analysis: Behavioural Stress

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.750**
Bartlett's Test of Sphericity	**Approx. Chi-Square**	249.937
	df	6
	Sig.	.000

Communalities

	Initial	Extraction
Sec.I.Q1	.240	**.297**
Sec.I.Q2	.437	.584
Sec.I.Q3	.458	.644
Sec.I.Q4	.269	.343

Extraction Method: Principal Axis Factoring.

Total Variance Explained

Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**2.364**	**59.111**	**59.111**	1.867	46.687	46.687
2	.684	17.095	76.206			
3	.582	14.540	90.746			
4	.370	9.254	100.000			

Extraction Method: Principal Axis Factoring.

Table 59: Reliability: Behavioural Stress

Reliability Statistics

Cronbach's Alpha	N of Items
.758	4

Item Statistics

	Mean	Std. Deviation	N
Sec.I.Q1	3.20	1.256	240
Sec.I.Q2	4.06	.964	240
Sec.I.Q3	3.69	1.105	240
Sec.I.Q4	4.11	1.013	240

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sec.I.Q1	11.86	6.398	.479	.756
Sec.I.Q2	11.00	6.929	.623	.672
Sec.I.Q3	11.38	6.219	.650	.648
Sec.I.Q4	10.95	7.249	.504	.729

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
15.06	11.021	3.320	4

Table 60: Factor Analysis: Somatic Stress

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.761
Bartlett's Test of Sphericity	Approx. Chi-Square	341.325
	df	6
	Sig.	.000

Communalities		
	Initial	Extraction
Sec.B.Q11	.376	.468
Sec.B.Q12	.477	.633
Sec.B.Q13	.423	.542
Sec.B.Q14	.281	.346
Extraction Method: Principal Axis Factoring.		

Total Variance Explained						
Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.475	61.875	61.875	1.989	49.727	49.727
2	.628	15.688	77.563			
3	.538	13.444	91.008			
4	.360	8.992	100.000			
Extraction Method: Principal Axis Factoring.						

Table 61: Reliability: Somatic Stress

Reliability Statistics	
Cronbach's Alpha	N of Items

.786	4

Item Statistics			
	Mean	Std. Deviation	N
Sec.B.Q11	4.02	1.122	287
Sec.B.Q12	4.29	1.018	287
Sec.B.Q13	4.31	.995	287
Sec.B.Q14	3.37	1.236	287

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sec.B.Q11	11.97	6.978	.590	.736
Sec.B.Q12	11.70	7.120	.658	.704
Sec.B.Q13	11.68	7.353	.628	.720
Sec.B.Q14	12.62	6.832	.522	.778

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
15.99	11.734	3.426	4

Table 62: Factor Analysis: Cognitive Stress

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.832
Bartlett's Test of Sphericity	Approx. Chi-Square	652.736
	df	6
	Sig.	.000

Communalities		
	Initial	Extraction

Sec.B.Q15	.534	.596
Sec.B.Q16	.513	.573
Sec.B.Q17	.606	.687
Sec.B.Q18	.691	.829

Extraction Method: Principal Axis Factoring.

Total Variance Explained

Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**3.003**	**75.064**	**75.064**	2.685	67.119	67.119
2	.419	10.485	85.549			
3	.351	8.785	94.334			
4	.227	5.666	100.000			

Extraction Method: Principal Axis Factoring.

Table 63: Reliability: Cognitive Stress

Reliability Statistics	
Cronbach's Alpha	N of Items
.889	4

Item Statistics			
	Mean	Std. Deviation	N
Sec.B.Q15	3.53	1.003	287
Sec.B.Q16	3.81	.965	287
Sec.B.Q17	3.64	1.035	287
Sec.B.Q18	3.68	1.028	287

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sec.B.Q15	11.13	7.288	.721	.870
Sec.B.Q16	10.85	7.515	.709	.875
Sec.B.Q17	11.02	6.940	.768	.853
Sec.B.Q18	10.97	6.720	.830	.828

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
14.66	12.199	3.493	4

Table 64 : Factor Analysis: Sense Of Coherence

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.812
Bartlett's Test of Sphericity	Approx. Chi-Square	378.640
	df	21

	Sig.	.000

Communalities		
	Initial	**Extraction**
Sec.I.Q6	.259	.316
Sec.I.Q7	.304	.375
Sec.I.Q8	.282	.321
Sec.I.Q10	.247	**.259**
Sec.I.Q11	.336	.321
Sec.I.Q12	.416	.456
Sec.I.Q13	.288	.346
Extraction Method: Principal Axis Factoring.		
Dropped SecI.Q9 due to a low Communality of only 0.116		
Dropped SecI.Q5 due to a low Communality of only 0.198		

Total Variance Explained						
Factor	**Initial Eigen values**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	**3.044**	**43.489**	**43.489**	2.394	34.201	34.201
2	.950	13.577	57.066			
3	.758	10.831	67.898			
4	.724	10.339	78.237			
5	.598	8.546	86.783			
6	.514	7.337	94.120			
7	.412	5.880	100.000			
Extraction Method: Principal Axis Factoring.						

Table 65: Reliability: Sense Of Coherence

Reliability Statistics	
Cronbach's Alpha	**N of Items**
.780	7

Item Statistics			
	Mean	Std. Deviation	N
Sec.I.Q6	4.1750	1.10277	240
Sec.I.Q7	4.1792	1.04560	240
n.Sec.I.Q8	3.8708	1.04900	240
n.Sec.I.Q10	4.6167	.79941	240
Sec.I.Q11	4.0417	1.12332	240
Sec.I.Q12	4.2792	.97735	240
n.Sec.I.Q13	4.3125	.92741	240

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sec.I.Q6	25.3000	15.951	.492	.755
Sec.I.Q7	25.2958	15.958	.533	.746
n.Sec.I.Q8	25.6042	16.265	.489	.755
n.Sec.I.Q10	24.8583	17.829	.450	.763
Sec.I.Q11	25.4333	15.887	.487	.757
Sec.I.Q12	25.1958	15.957	.588	.736
n.Sec.I.Q13	25.1625	16.806	.505	.753

Table 66: Factor Analysis: Quantitative Demands

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.736
Bartlett's Test of Sphericity	Approx. Chi-Square	262.162
	df	6
	Sig.	.000

Communalities		
	Initial	Extraction
Sec.B.Q28	.244	.308

Sec.B.Q29	.218	**.261**
Sec.B.Q30	.366	.484
Sec.B.Q31	.447	.704

Extraction Method: Principal Axis Factoring.

Total Variance Explained

Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**2.267**	**56.683**	**56.683**	1.758	43.941	43.941
2	.746	18.650	75.333			
3	.586	14.655	89.989			
4	.400	10.011	100.000			

Extraction Method: Principal Axis Factoring.

Table 67: Reliability: Quantitative Demands

Reliability Statistics

Cronbach's Alpha	N of Items
.741	4

Item Statistics

	Mean	Std. Deviation	N
Sec.B.Q28	2.6969	1.00806	287
n.Sec.B.Q29	2.7875	1.03105	287
Sec.B.Q30	3.3798	.97091	287
Sec.B.Q31	2.8641	1.07042	287

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sec.B.Q28	9.0314	6.030	.473	.716
n.Sec.B.Q29	8.9408	6.091	.439	.735

Sec.B.Q30	8.3484	5.759	.576	.660
Sec.B.Q31	8.8641	5.062	.660	.605

Scale Statistics			
Mean	**Variance**	**Std. Deviation**	**N of Items**
11.7282	9.387	3.06389	4

Table 68: Factor Analysis: Cognitive Demands

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.727**
Bartlett's Test of Sphericity	**Approx. Chi-Square**	242.785
	df	6
	Sig.	.000

Communalities		
	Initial	**Extraction**
Sec.B.Q32	.205	**.266**
Sec.B.Q41	.255	.348
Sec.B.Q42	.363	.492
Sec.B.Q43	.387	.564
Extraction Method: Principal Axis Factoring.		

Total Variance Explained						
Factor	**Initial Eigen values**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	**2.228**	**55.691**	**55.691**	1.669	41.735	41.735
2	.742	18.555	74.246			
3	.605	15.137	89.384			
4	.425	10.616	100.000			
Extraction Method: Principal Axis Factoring.						

Table 69: Reliability: Cognitive Demands

Reliability Statistics	
Cronbach's Alpha	N of Items
.731	4

Item Statistics			
	Mean	Std. Deviation	N
Sec.B.Q32	2.06	1.038	287
Sec.B.Q41	1.80	.904	287
Sec.B.Q42	2.02	.984	287
Sec.B.Q43	2.26	.995	287

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sec.B.Q32	6.09	5.332	.443	.719
Sec.B.Q41	6.34	5.562	.505	.681
Sec.B.Q42	6.12	5.093	.556	.650
Sec.B.Q43	5.89	4.927	.591	.629

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
8.15	8.531	2.921	4

Table 70: Factor Analysis: Emotional Demands

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.622
Bartlett's Test of Sphericity	Approx. Chi-Square	247.570
	df	3
	Sig.	.000

Anti-image Matrices				
		Sec.B.Q44	Sec.C.Q1	Sec.C.Q2

Anti-image Covariance	**Sec.B.Q44**	.558	-.290	-.002
	Sec.C.Q1	-.290	.438	-.251
	Sec.C.Q2	-.002	-.251	.668
Anti-image Correlation	**Sec.B.Q44**	.631(a)	-.587	-.004
	Sec.C.Q1	-.587	**.580(a)**	-.464
	Sec.C.Q2	-.004	-.464	.690(a)
a Measures of Sampling Adequacy(MSA)				

Communalities

	Initial	Extraction
Sec.B.Q44	.442	.446
Sec.C.Q1	.562	.987
Sec.C.Q2	.332	.335

Extraction Method: Principal Axis Factoring.

Total Variance Explained

Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**2.092**	**69.717**	**69.717**	1.768	58.946	58.946
2	.621	20.710	90.427			
3	.287	9.573	100.000			

Extraction Method: Principal Axis Factoring.

Table 71: Reliability: Emotional Demands

Reliability Statistics

Cronbach's Alpha	N of Items
.776	3

Item Statistics

	Mean	Std. Deviation	N

Sec.B.Q44	3.31	1.163	254
Sec.C.Q1	3.05	1.022	254
Sec.C.Q2	2.96	1.072	254

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sec.B.Q44	6.01	3.454	.587	.730
Sec.C.Q1	6.27	3.462	.747	.555
Sec.C.Q2	6.36	3.979	.520	**.795**

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
9.32	7.348	2.711	3

Table 72: Factor Analysis: Influence At Work

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.643**
Bartlett's Test of Sphericity	**Approx. Chi-Square**	172.909
	df	3
	Sig.	.000

Communalities

	Initial	Extraction
Sec.B.Q3	.223	**.291**
Sec.B.Q4	.381	.716
Sec.B.Q5	.312	.418

Extraction Method: Principal Axis Factoring.

Dropped SecB.Q2 due to a low Communality of only 0.213

Total Variance Explained

Factor	Initial Eigen values	Extraction Sums of Squared Loadings

	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**1.907**	**63.552**	**63.552**	1.425	47.507	47.507
2	.663	22.094	85.646			
3	.431	14.354	100.000			

Extraction Method: Principal Axis Factoring.

Table 73: Reliability: Influence At Work

Reliability Statistics	
Cronbach's Alpha	**N of Items**
.714	4

Item Statistics			
	Mean	**Std. Deviation**	**N**
Sec.B.Q2	2.22	1.022	287
Sec.B.Q3	3.29	1.127	287
Sec.B.Q4	3.06	1.098	287
Sec.B.Q5	2.57	1.021	287

Item-Total Statistics				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**
Sec.B.Q2	8.93	6.676	.398	.710
Sec.B.Q3	7.85	5.706	.529	.634
Sec.B.Q4	8.08	5.682	.560	.614
Sec.B.Q5	8.57	6.141	.521	.640

Scale Statistics			
Mean	**Variance**	**Std. Deviation**	**N of Items**
11.14	9.822	3.134	4

Table 74: Psychosocial Pearson Parametric Correlations with Burnout

		Personal Burnout Mean	Work Burnout Mean	Client Burnout Mean
Possibilities for development	Pearson Correlation	-.239	-.233	-.190
	Sig. (2-tailed)	.000	.000	.003
	N	287	287	240
Meaning of work	Pearson Correlation	-.372	-.457	-.330
	Sig. (2-tailed)	.000	.000	.000
	N	254	254	240
Commitment to the work place	Pearson Correlation	-.286	**-.341**	-.125
	Sig. (2-tailed)	.000	.000	.054
	N	254	254	240
Predictability	Pearson Correlation	**-.352**	**-.390**	-.251
	Sig. (2-tailed)	.000	.000	.000
	N	254	254	240
Role-clarity	Pearson Correlation	**-.330**	**-.416**	-.270
	Sig. (2-tailed)	.000	.000	.000
	N	254	254	240
Role-conflicts	Pearson Correlation	**.321**	**.439**	**.379**
	Sig. (2-tailed)	.000	.000	.000
	N	254	254	240
Quality of leadership	Pearson Correlation	**-.357**	**-.340**	-.156
	Sig. (2-tailed)	.000	.000	.015
	N	254	254	240
Social support	Pearson Correlation	**-.308**	**-.341**	-.178
	Sig. (2-tailed)	.000	.000	.006
	N	287	287	240
Feedback at work	Pearson Correlation	**-.342**	**-.340**	-.174
	Sig. (2-tailed)	.000	.000	.007
	N	287	287	240
Social relations	Pearson Correlation	-.055	-.024	-.070
	Sig. (2-tailed)	.356	.687	.278
	N	287	287	240

Sense of community	Pearson Correlation	-.324	-.377	-.188
	Sig. (2-tailed)	.000	.000	.003
	N	287	287	240
Job satisfaction	Pearson Correlation	-.397	-.464	-.248
	Sig. (2-tailed)	.000	.000	.000
	N	248	248	240
General health	Pearson Correlation	-.417	-.366	-.285
	Sig. (2-tailed)	.000	.000	.000
	N	248	248	240
Mental health	Pearson Correlation	.695	.668	.469
	Sig. (2-tailed)	.000	.000	.000
	N	248	248	240
Vitality	Pearson Correlation	-.734	-.732	-.466
	Sig. (2-tailed)	.000	.000	.000
	N	248	248	240
Behavioural stress	Pearson Correlation	.598	.667	.503
	Sig. (2-tailed)	.000	.000	.000
	N	240	240	240
Somatic stress	Pearson Correlation	.558	.507	.334
	Sig. (2-tailed)	.000	.000	.000
	N	287	287	240
Cognitive stress	Pearson Correlation	-.585	-.626	-.424
	Sig. (2-tailed)	.000	.000	.000
	N	287	287	240
Sense of coherence	Pearson Correlation	-.410	-.455	-.410
	Sig. (2-tailed)	.000	.000	.000
	N	240	240	240
Quantitative demands	Pearson Correlation	.458	.593	.424
	Sig. (2-tailed)	.000	.000	.000
	N	287	287	240
Cognitive demands	Pearson Correlation	.066	.051	.058
	Sig. (2-tailed)	.266	.390	.373
	N	287	287	240

Emotional demands	Pearson Correlation	.407	.425	.313
	Sig. (2-tailed)	.000	.000	.000
	N	287	287	240
Demands for hiding emotions	Pearson Correlation	.277	.365	.239
	Sig. (2-tailed)	.000	.000	.000
	N	287	287	240
Influence at work	Pearson Correlation	-.345	-.355	-.277
	Sig. (2-tailed)	.000	.000	.000
	N	287	287	240

Table 75: Psychosocial work conditions Nonparametric Correlations with Burnout

Correlations					
			Personal Burnout Mean	Work Burnout Mean	Client Burnout Mean
Kendall's tau_b	Possibilities for development	Correlation Coefficient	-.161	-.154	-.141
		Sig. (2-tailed)	.000	.000	.002
		N	287	287	240
	Meaning of work	Correlation Coefficient	-.270	-.326	-.251
		Sig. (2-tailed)	.000	.000	.000
		N	254	254	240
	Commitment to the work place	Correlation Coefficient	-.195	-.225	-.081
		Sig. (2-tailed)	.000	.000	.079
		N	254	254	240
	Predictability	Correlation Coefficient	-.263	-.273	-.199
		Sig. (2-tailed)	.000	.000	.000
		N	254	254	240
	Role-clarity	Correlation Coefficient	-.256	-.306	-.210
		Sig. (2-tailed)	.000	.000	.000
		N	254	254	240
	Role-conflicts	Correlation Coefficient	.213	.313	.260
		Sig. (2-tailed)	.000	.000	.000
		N	254	254	240

	Quality of leadership	Correlation Coefficient	-.257	-.253	-.125
		Sig. (2-tailed)	.000	.000	.007
		N	254	254	240
	Social support	Correlation Coefficient	-.246	-.255	-.139
		Sig. (2-tailed)	.000	.000	.004
		N	287	287	240
	Feedback at work	Correlation Coefficient	-.250	-.247	-.115
		Sig. (2-tailed)	.000	.000	.015
		N	287	287	240
	Social relations	Correlation Coefficient	-.028	-.014	-.062
		Sig. (2-tailed)	.533	.746	.204
		N	287	287	240
	Sense of community	Correlation Coefficient	-.273	-.301	-.150
		Sig. (2-tailed)	.000	.000	.001
		N	287	287	240
	Job satisfaction	Correlation Coefficient	-.314	-.362	-.197
		Sig. (2-tailed)	.000	.000	.000
		N	248	248	240
	General health	Correlation Coefficient	-.319	-.268	-.195
		Sig. (2-tailed)	.000	.000	.000
		N	248	248	240
	Mental health	Correlation Coefficient	**.517**	**.514**	.336
		Sig. (2-tailed)	.000	.000	.000
		N	248	248	240
	Vitality	Correlation Coefficient	**-.570**	**-.582**	-.366
		Sig. (2-tailed)	.000	.000	.000
		N	248	248	240
	Behavioural stress	Correlation Coefficient	**.466**	**.522**	.368
		Sig. (2-tailed)	.000	.000	.000
		N	240	240	240
	Somatic stress	Correlation Coefficient	.412	.376	.255
		Sig. (2-tailed)	.000	.000	.000
		N	287	287	240

	Cognitive stress	Correlation Coefficient	.440	.462	.320
		Sig. (2-tailed)	.000	.000	.000
		N	287	287	240
	Sense of coherence	Correlation Coefficient	-.295	-.357	-.291
		Sig. (2-tailed)	.000	.000	.000
		N	240	240	240
	Quantitative demands	Correlation Coefficient	.341	.436	.304
		Sig. (2-tailed)	.000	.000	.000
		N	287	287	240
	Cognitive demands	Correlation Coefficient	.020	.045	.039
		Sig. (2-tailed)	.637	.284	.409
		N	287	287	240
	Emotional demands	Correlation Coefficient	.294	.302	.237
		Sig. (2-tailed)	.000	.000	.000
		N	287	287	240
	Demands for hiding emotions	Correlation Coefficient	.216	.280	.184
		Sig. (2-tailed)	.000	.000	.000
		N	287	287	240
	Influence at work	Correlation Coefficient	-.247	-.246	-.181
		Sig. (2-tailed)	.000	.000	.000
		N	287	287	240
Spearman's rho	Possibilities for development	Correlation Coefficient	-.215	-.204	-.186
		Sig. (2-tailed)	.000	.001	.004
		N	287	287	240
	Meaning of work	Correlation Coefficient	-.364	-.442	-.333
		Sig. (2-tailed)	.000	.000	.000
		N	254	254	240
	Commitment to the work place	Correlation Coefficient	-.274	-.312	-.110
		Sig. (2-tailed)	.000	.000	.088
		N	254	254	240
	Predictability	Correlation Coefficient	-.351	-.367	-.265
		Sig. (2-tailed)	.000	.000	.000
		N	254	254	240

	Role-clarity	Correlation Coefficient	-.348	-.420	-.284
		Sig. (2-tailed)	.000	.000	.000
		N	254	254	240
	Role-conflicts	Correlation Coefficient	.290	.427	.353
		Sig. (2-tailed)	.000	.000	.000
		N	254	254	240
	Quality of leadership	Correlation Coefficient	-.354	-.345	-.172
		Sig. (2-tailed)	.000	.000	.008
		N	254	254	240
	Social support	Correlation Coefficient	-.320	-.336	-.182
		Sig. (2-tailed)	.000	.000	.005
		N	287	287	240
	Feedback at work	Correlation Coefficient	-.334	-.330	-.160
		Sig. (2-tailed)	.000	.000	.013
		N	287	287	240
	Social relations	Correlation Coefficient	-.036	-.020	-.087
		Sig. (2-tailed)	.540	.740	.179
		N	287	287	240
	Sense of community	Correlation Coefficient	-.350	-.398	-.202
		Sig. (2-tailed)	.000	.000	.002
		N	287	287	240
	Job satisfaction	Correlation Coefficient	-.410	-.488	-.263
		Sig. (2-tailed)	.000	.000	.000
		N	248	248	240
	General health	Correlation Coefficient	-.433	-.371	-.271
		Sig. (2-tailed)	.000	.000	.000
		N	248	248	240
	Mental health	Correlation Coefficient	**.673**	**.668**	.442
		Sig. (2-tailed)	.000	.000	.000
		N	248	248	240
	Vitality	Correlation Coefficient	**-.729**	**-.737**	-.481
		Sig. (2-tailed)	.000	.000	.000
		N	248	248	240

	Behavioural stress	Correlation Coefficient	.615	.685	.488
		Sig. (2-tailed)	.000	.000	.000
		N	240	240	240
	Somatic stress	Correlation Coefficient	.548	.502	.343
		Sig. (2-tailed)	.000	.000	.000
		N	287	287	240
	Cognitive stress	Correlation Coefficient	.580	.608	.425
		Sig. (2-tailed)	.000	.000	.000
		N	287	287	240
	Sense of coherence	Correlation Coefficient	-.407	-.489	-.398
		Sig. (2-tailed)	.000	.000	.000
		N	240	240	240
	Quantitative demands	Correlation Coefficient	.447	.575	.416
		Sig. (2-tailed)	.000	.000	.000
		N	287	287	240
	Cognitive demands	Correlation Coefficient	.030	.061	.057
		Sig. (2-tailed)	.609	.303	.379
		N	287	287	240
	Emotional demands	Correlation Coefficient	.390	.410	.312
		Sig. (2-tailed)	.000	.000	.000
		N	287	287	240
	Demands for hiding emotions	Correlation Coefficient	.286	.375	.241
		Sig. (2-tailed)	.000	.000	.000
		N	287	287	240
	Influence at work	Correlation Coefficient	-.334	-.337	-.248
		Sig. (2-tailed)	.000	.000	.000
		N	287	287	240

Table 76: Descriptive statistics of the Intention to Quit

Descriptive Statistics								
	N	Range	Min	Max	Mean	Std. Deviation	Skewness	Kurtosis

Intention to Quit	240	4.00	1.00	5.00	3.0344	1.28583	.012	-1.234
Valid N (list wise)	240							

Table 77: Factor Analysis of Intention to Quit

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.784**
Bartlett's Test of Sphericity	**Approx. Chi-Square**	487.845
	df	6
	Sig.	.000

Communalities		
	Initial	**Extraction**
Sec.J.Q1	.431	.478
Sec.J.Q2	.696	.823
Sec.J.Q3	.409	.467
Sec.J.Q4	.660	.729
Extraction Method: Principal Axis Factoring.		

Total Variance Explained						
Factor	**Initial Eigen values**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	**2.843**	**71.087**	**71.087**	2.496	62.407	62.407
2	.495	12.377	83.464			
3	.468	11.699	95.162			
4	.194	4.838	100.000			
Extraction Method: Principal Axis Factoring.						

Table 78: Reliability of Intention to Quit

Reliability Statistics	
Cronbach's Alpha	**N of Items**
.864	4

Item Statistics			
	Mean	Std. Deviation	N
Sec.J.Q2	3.0458	1.54229	240
Sec.J.Q4	3.0000	1.57118	240
n.Sec.J.Q1	2.5333	1.52762	240
n.Sec.J.Q3	3.5583	1.46248	240

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sec.J.Q2	9.0917	14.586	.806	.786
Sec.J.Q4	9.1375	14.755	.765	.804
n.Sec.J.Q1	9.6042	16.198	.644	.853
n.Sec.J.Q3	8.5792	16.688	.638	.855

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
12.1375	26.454	5.14333	4

Table 79: Intention to Quit Correlations with Burnout

Correlations		
		Intention to Quit
Personal Burnout Mean	Pearson Correlation	.240
	Sig. (2-tailed)	.000
	N	240
Work Burnout Mean	Pearson Correlation	.343
	Sig. (2-tailed)	.000
	N	240
Client Burnout Mean	Pearson Correlation	.105
	Sig. (2-tailed)	.103
	N	240

Table 80: Intention to Quit- Nonparametric Correlations with Burnout

Correlations			
			Intention to Quit
Kendall's tau_b	Personal Burnout Mean	Correlation Coefficient	.171
		Sig. (2-tailed)	.000
		N	240
	Work Burnout Mean	Correlation Coefficient	.248
		Sig. (2-tailed)	.000
		N	240
	Client Burnout Mean	Correlation Coefficient	.079
		Sig. (2-tailed)	.084
		N	240
Spearman's rho	Personal Burnout Mean	Correlation Coefficient	.239
		Sig. (2-tailed)	.000
		N	240
	Work Burnout Mean	Correlation Coefficient	.343
		Sig. (2-tailed)	.000
		N	240
	Client Burnout Mean	Correlation Coefficient	.112
		Sig. (2-tailed)	.083
		N	240

Table 81: T- Test on National Burnout Averages: Work Burnout

Confidence Intervals of Means Work Burnout						
Sample	N	Mean	Std Deviation	Std Err	95% Lower Conf limit of Diff	95% Upper Conf limit of Diff
Human Service Workers Denmark	1917	33.000	17.70	0.4043	32.2077	33.7923
Canadian Nurses	302	48.1100	10.9482	0.6300	46.8752	49.3448
SA White collar workers	287	42.2256	27.6187	1.6303	39.0303	45.4209

Human Service Workers Denmark				
Two-Sided, Two-Sample T-Test (H0: M1 - M2 = 0.0500 versus H1: M1 - M2 <> 0.0500)				
Variance Assumption	**DF**	**T-Value**	**Prob. Level**	**Conclude H1 @ 5% Significance Level**
Equal	2202.00	-7.602	0.0000	Yes
Unequal	322.07	-5.522	0.0000	Yes

Canadian Nurses				
Two-Sided, Two-Sample T-Test (H0: M1 - M2 = 0.0500 versus H1: M1 - M2 <> 0.050				
Variance Assumption	**DF**	**T-Value**	**Prob. Level**	**Conclude H1 @ 5% Significance Level**
Equal	587.00	3.401	0.0007	Yes
Unequal	369.95	3.338	0.0009	Yes

Table 82 T- Test on National Burnout Averages: Personal Burnout

Confidence Intervals of Means Personal Burnout						
Sample	**N**	**Mean**	**Std Deviation**	**Std Err**	**95% Lower Conf limit of Diff**	**95% Upper Conf limit of Diff**
Human Service Workers Denmark	1917	35.9	16.5	0.3769	35.1614	36.6386
Canadian Nurses	302	43.6200	10.4269	0.6000	42.4440	44.7960
SA White collar workers	287	44.5993	26.31	1.5709	41.5204	47.6782

Human Service Workers Denmark				
Two-Sided, Two-Sample T-Test (H0: M1 - M2 = 0.0500 versus H1: M1 - M2 <> 0.0500)				
Variance Assumption	**DF**	**T-Value**	**Prob. Level**	**Conclude H1 @ 5% Significance Level**
Equal	2202.00	-7.623	0.0000	Yes
Unequal	368.09	-0.612	0.5409	Yes

Canadian Nurses				
Two-Sided, Two-Sample T-Test (H0: M1 - M2 = 0.0500 versus H1: M1 - M2 <> 0.050(				
Variance Assumption	**DF**	**T-Value**	**Prob. Level**	**Conclude H1 @ 5% Significance Level**
Equal	587.00	-0.624	0.5331	No
Unequal	368.09	-0.612	0.5409	No

Table 83 T- Test on National Burnout Averages: Client Burnout

Confidence Intervals of Means Client Burnout						
Sample	**N**	**Mean**	**Std Deviation**	**Std Err**	**95% Lower Conf limit of Diff**	**95% Upper Conf limit of Diff**
Human Service Workers Denmark	1917	30.9000	17.6000	0.4020	30.1121	31.6879
Canadian Nurses	302	36.06	11.2958	0.6500	34.7860	37.3340
SA White collar workers	240	32.9268	26.7702	1.7280	29.5400	36.3136

Human Service Workers Denmark				
Two-Sided, Two-Sample T-Test (H0: M1 - M2 = 0.0500 versus H1: M1 - M2 <> 0.0500)				
Variance Assumption	**DF**	**T-Value**	**Prob. Level**	**Conclude H1 @ 5% Significance Level**
Equal	2155.00	-1.610	0.1075	No
Unequal	265.47	-1.171	0.2428	No

Canadian Nurses				
Two-Sided, Two-Sample T-Test (H0: M1 - M2 = 0.0500 versus H1: M1 - M2 <> 0.0500)				
Variance Assumption	**DF**	**T-Value**	**Prob. Level**	**Conclude H1 @ 5% Significance Level**
Equal	540.00	1.809	0.0710	No

Unequal	306.55	1.670	0.0959	No

Appendix B

Questionnaire

Section A: Biographical Information

1. Age:
2. Gender:
3. Marital Status:
    1. Married:
    2. Co- habiting
    3. Single
    4. Divorced
4. Do you have children in the following age groups:
    1. Less than 6 years of age
    2. 7- 13 years of age
    3. 14 years of age and above
5. What is your highest educational qualification:
    1. Grade 12/Matric
    2. Post school certificate
    3. 3 year Degree/ Diploma
    4. 4 year Degree / Diploma (e.g. Bing, Btech, LLB, Higher diploma or Honours
    5. Masters Degree
6. How long have you been working in your current position:
    1. 0 - 2 years

2. 3 – 5 years
3. 6 – 10 years
4. More than 10 years

7. What forms of income does your family receive?
    1. Single Salary
    2. Dual Salary
    3. Financial investment Income

Section B: Copenhagen Burnout Inventory (Kristensen et.al 2005a)

Copenhagen Burnout Inventory (English version) used in the PUMA study

NB: The questions of the CBI are not being printed in the questionnaire in the same order as shown here. In fact, the questions are mixed with questions on other topics. This is recommended in order to avoid stereotyped response patterns.

Part one: Personal burnout

Definition: Personal burnout is a state of prolonged physical and psychological exhaustion.

Questions:

How often do you feel tired?

How often are you physically exhausted?

How often are you emotionally exhausted?

How often do you think: ”I can’t take it anymore”?

How often do you feel worn out?

How often do you feel weak and susceptible to illness?

Response categories: Always, Often, Sometimes, Seldom, Never/almost never.

Scoring: Always: 100. Often: 75. Sometimes: 50. Seldom: 25. Never/almost never: 0.

Total score on the scale is the average of the scores on the items.

If less than three questions have been answered, the respondent is classified as nonresponder.

Part two: Work-related burnout

Definition: Work-related burnout is a state of prolonged physical and psychological exhaustion, which is perceived as related to the person's work.

Questions:

Is your work emotionally exhausting?

Do you feel burnt out because of your work?

Does your work frustrate you?

Do you feel worn out at the end of the working day?

Are you exhausted in the morning at the thought of another day at work?

Do you feel that every working hour is tiring for you?

Do you have enough energy for family and friends during leisure time?

Response categories:

Three first questions: To a very high degree, To a high degree, Somewhat, To a low degree, To a very low degree.

Last four questions: Always, Often, Sometimes, Seldom, Never/almost never. Reversed score for last question.

Scoring as for the first scale. If less than four questions have been answered, the respondent is classified as non-responder.

Part three: Client-related burnout

Definition: Client-related burnout is a state of prolonged physical and psychological exhaustion,

which is perceived as related to the person's work with clients*.

*Clients, patients, social service recipients, elderly citizens, or inmates.

Questions:

Do you find it hard to work with clients?

Do you find it frustrating to work with clients?

Does it drain your energy to work with clients?

Do you feel that you give more than you get back when you work with clients?

Are you tired of working with clients?

Do you sometimes wonder how long you will be able to continue working with clients?

Response categories:

The four first questions: To a very high degree, To a high degree, Somewhat, To a low degree, To a very low degree.

The two last questions: Always, Often, Sometimes, Seldom, Never/almost never.

Scoring as for the first two scales. If less than three questions have been answered, the respondent is classified as non-responder.

Section C: Copenhagen Psychosocial Questionnaire *(Kristensen et.al, 2005b)*

Copenhagen Psychosocial Questionnaire (English version) used in the PUMA study

The Copenhagen Psychosocial Questionnaire (COPSOQ) have been developed by the Psychosocial Department, National Institute of Occupational Health, Copenhagen, Denmark.

NB: The questions of the CBI are not being printed in the questionnaire in the same order as shown here. In fact, the questions are mixed with questions on other topics. This is recommended in order to avoid stereotyped response patterns.

The scales of the COPSOQ are formed by adding the points of the individual questions of the scales by giving equal weights to each question. In most cases the questions have five response options. In these cases the weights are: 0, 25, 50, 75, and 100. The scale value is calculated as the simple average. Thus, all scales go from 0 to 100. Respondent who answer less than half of the questions in a scale are regarded as missing. If a person has answered at least half of the questions, the scale value is calculated as the average of the questions answered.

Scale

***QUANTITATIVE DEMANDS**:*

Is your workload unevenly distributed so it piles up?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

Do you get behind with your work?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

How often can you take it easy and still do your work?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

Do you have enough time for your work tasks?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

COGNITIVE DEMANDS:

Do you have to keep your eyes on lots of things while you work?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

Does your work require that you remember a lot of things?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

Does your work demand that you are good at coming up with new ideas?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

Does your work require you to make difficult decisions?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

***EMOTIONAL DEMANDS**:*

Does your work put you in emotionally disturbing situations?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

Is your work emotionally demanding?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

Do you get emotionally involved in your work?

(To a very large extent, to a large extent, Somewhat, To a small extent, To a very small extent)

DEMANDS FOR HIDING EMOTIONS:

Does your work require that you do not state your opinion?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

Does your work require that you hide your feelings?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

INFLUENCE AT WORK

Do you have a large degree of influence concerning your work?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

Do you have a say in choosing who you work with?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

Can you influence the amount of work assigned to you?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

Do you have any influence on WHAT you do at work?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

POSSIBILITIES FOR DEVELOPMENT

Is your work varied?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

Does your work require you to take the initiative?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

Do you have the possibility of learning new things through your work?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

Can you use your skills or expertise in your work?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

MEANING OF WORK

Is your work meaningful?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

Do you feel that the work you do is important?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

Do you feel motivated and involved in your work?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

COMMITMENT TO THE WORKPLACE

Would you like to stay at your current place of work for the rest of your working life?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

Do you enjoy telling others about your place of work?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

Do you feel that the problems at your place of work are yours too?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

Do you feel that your place of work is of great personal importance to you?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

PREDICTABILITY

At your place of work, are you informed well in advance concerning for example important

decisions, changes, or plans for the future?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

Do you receive all the information you need in order to do your work well?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

ROLE-CLARITY

Do you know exactly how much say you have at work?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

Does your work have clear objectives?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

Do you know exactly which areas are your responsibility?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

Do you know exactly what is expected of you at work?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

ROLE-CONFLICTS

Do you do things at work, which are accepted by some people but not by others?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

Are contradictory demands placed on you at work?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

Do you sometimes have to do things, which ought to have been done in a different way?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

Do you sometimes have to do things, which seem to you to be unnecessary?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

QUALITY OF LEADERSHIP

To what extent would you say that your immediate superior….

- makes sure that the individual member of staff has good development opportunities?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

- gives high priority to job satisfaction?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

- is good at work planning?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

- is good at solving conflicts?

(To a very large extent, To a large extent, Somewhat, To a small extent, To a very small extent)

SOCIAL SUPPORT

How often do you get help and support from your colleagues?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

How often do you get help and support from your immediate superior?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

FEEDBACK AT WORK

How often does your superior talk with you about how well you carry out your work?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

How often do your colleagues talk with you about how well you carry out your work?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

SOCIAL RELATIONS

Do you work isolated from your colleagues?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

Is it possible for you to talk to your colleagues while you are working?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

SENSE OF COMMUNITY

Is there a good atmosphere between you and your colleagues?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

Is there good co-operation between the colleagues at work?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

Do you feel part of a community at your place of work?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

INSECURITY AT WORK

Are you worried about……

- becoming unemployed?

(yes, no)

- new technology making you redundant?

(yes, no)

- it being difficult for you to find another job if you became unemployed?

(yes, no)

- being transferred to another job against your will?

(yes, no)

JOB SATISFACTION

Regarding your work in general. How pleased are you with…

- your work prospects?

(Very satisfied, Satisfied, Unsatisfied, Highly unsatisfied, Not relevant)

- the physical working conditions?

(Very satisfied, Satisfied, Unsatisfied, Highly unsatisfied, Not relevant)

- the way your abilities are used?

(Very satisfied, Satisfied, Unsatisfied, Highly unsatisfied, Not relevant)

- your job as a whole, everything taken into consideration?

(Very satisfied, Satisfied, Unsatisfied, Highly unsatisfied, Not relevant)

GENERAL HEALTH

In general, would you say your health is:

(Excellent, Very good, Good, Fair, Poor)

How TRUE or FALSE is each of the following statements for you?

I seem to get sick a little easier than other people.

(Definitely true, Mostly true, Don´t know, Mostly false, Definitely false)

I am as healthy as anybody I know.

(Definitely true, Mostly true, Don´t know, Mostly false, Definitely false)

I expect my health to get worse.

(Definitely true, Mostly true, Don´t know, Mostly false, Definitely false)

My health is excellent.

(Definitely true, Mostly true, Don´t know, Mostly false, Definitely false)

MENTAL HEALTH

These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks -

Have you been a very nervous person?

(All of the time, Most of the time, A good bit of the time, Some of the time, A little of the time,

None of the time)

- have you felt so down in the dumps that nothing could cheer you up?

(All of the time, Most of the time, A good bit of the time, Some of the time, A little of the time, None of the time)

- have you felt calm and peaceful?

(All of the time, Most of the time, A good bit of the time, Some of the time, A little of the time, None of the time)

- have you felt downhearted and blue?

(All of the time, Most of the time, A good bit of the time, Some of the time, A little of the time, None of the time)

- have you been a happy person?

(All of the time, Most of the time, A good bit of the time, Some of the time, A little of the time, None of the time)

VITALITY

These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks -

- did you feel full of pep?

(All of the time, Most of the time, A good bit of the time, Some of the time, A little of the time,

None of the time)

- did you have a lot of energy?

(All of the time, Most of the time, A good bit of the time, Some of the time, A little of the time, None of the time)

- did you feel worn out?

(All of the time, Most of the time, A good bit of the time, Some of the time, A little of the time, None of the time)

- did you feel tired?

(All of the time, Most of the time, A good bit of the time, Some of the time, A little of the time, None of the time)

BEHAVIOURAL STRESS

Please consider each of the following statements and indicate how well the descriptions fit your situation during the past 4 weeks!

I have not been able to stand dealing with other people.

(Correct, Almost correct, Somewhat correct, Only slightly correct, Incorrect)

I have not had the time to relax or enjoy myself.

(Correct, Almost correct, Somewhat correct, Only slightly correct, Incorrect)

I have been a bit touchy.

(Correct, Almost correct, Somewhat correct, Only slightly correct, Incorrect)

I have lacked initiative.

(Correct, Almost correct, Somewhat correct, Only slightly correct, Incorrect)

SOMATIC STRESS

How much of the time during the past 4 weeks have you -

- had stomach ache or stomach problems?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

- had a tight chest or chest pains?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

- been dizzy?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

- had tension in various muscles?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

COGNITIVE STRESS

How much of the time during the past 4 weeks have you -

- had problems concentrating?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

- had difficulty in taking decisions?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

- had difficulty with remembering?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

- found it difficult to think clearly?

(Always, Often, Sometimes, Seldom, Never/hardly ever)

SENSE OF COHERENCE

(How do you see yourself?)

I believe I can cope with most situations in life.

(Correct, Almost correct, Somewhat correct, Only slightly correct, Incorrect)

So far, I have not had any clear direction or purpose in life.

(Correct, Almost correct, Somewhat correct, Only slightly correct, Incorrect)

I do not feel that I am able to influence my future to any great extent.

(Correct, Almost correct, Somewhat correct, Only slightly correct, Incorrect)

I feel that what I do in my daily life is meaningful.

(Correct, Almost correct, Somewhat correct, Only slightly correct, Incorrect)

Often things happen around me that I do not understand.

(Correct, Almost correct, Somewhat correct, Only slightly correct, Incorrect)

I feel that I have a great deal to live for.

(Correct, Almost correct, Somewhat correct, Only slightly correct, Incorrect)

I know what I ought to do in my life, but I do not believe that I am able to do it.

(Correct, Almost correct, Somewhat correct, Only slightly correct, Incorrect)

It is difficult for me to see how different pieces in my life are connected.

(Correct, Almost correct, Somewhat correct, Only slightly correct, Incorrect)

I feel I understand most of what is going on in my everyday life.

(Correct, Almost correct, Somewhat correct, Only slightly correct, Incorrect)

(Kristensen et.al, 2005b)

NRCWE Questionnaires Copenhagen Burnout Inventory

http://www.arbejdsmiljoforskning.dk/Spørgeskemaer/Udbrændthed.aspx

Section D: Turnover Intention (Moore, 2000)

Scale Range: 1= Very Unlikely; 5 = Very Likely

How likely is it that you will be working at the same company this time next year? (R)

How likely is it that you will take steps during the next year to secure a job at a different company?

I will be with this company five years from now. (R)

I will probably look for a job at a different company in the next year.