

https://dspace.org/

An investigation into the moderating effects of hardiness on the relationship between performance monitoring and life satisfaction in a call centre environment.

Latif, Juraida

2010-11-10
http://hdl.handle.net/10539/8863

Downloaded from a DSpace repository. https://dspace.org/

CHAPTER ONE: INTRODUCTION

1.1. General Introduction

"…the mechanization and rationalization of office work has proceeded to the extent that relatively large groups of semi-skilled employees are concentrated together…performing routinized and disciplined work, often rewarded in accordance with physical output, with little chance of promotion…" (Lockwood, 1958, p. 92)

"… the conversion of the office into a factory-like process in accordance with the percepts of modern management and the available technology…the modern office becomes a machine which at best functions well only within its routine limits, and functions badly when it is called upon to meet special requirements" (Braverman, 1974, p. 347-348).

The above two quotations emphasise the evolution of office work from strictly quantitative to a convergence of both qualitative and quantitative methods of labour practice and evaluation (Marx & Sherizen, 1986). With the introduction of inter-active personal computers into the office on a large scale by the 1980s, more attention became focused on the application of new technologies directed towards the monitoring of employee output (Marx & Sherizen, 1986).

In a response to this evolution, finance sector organisations began seeking to replicate the cost savings gained through centralising these so called "back office" operations by developing a new kind of facility (Bain, Watson, Mulvey, Taylor & Gall, 2001). Particularly, the electronic monitoring equipment used to distribute and measure work in the processing centres became an extremely powerful management tool especially

when integrated with the telephone in the new pattern of work, which defined the call centre (Bain et al., 2001). Therefore, companies developed the capability to not only electronically distribute work and measure output, but also to assess and intervene in the quality of an employee's performance on the job (Bain et al., 2001). Call centres have provided the most dynamic area of growth in white-collar employment since the mid 1990s. From a management perspective, the most vital consideration is that the labour process is located in a combination of quantity of calls (calls per hour, average length of calls, etc.) and quality of each employee-customer interaction (Bain et al., 2001). Existing literature suggests that the above process of monitoring in a call centre may have negative effects on the employee's well being, e.g.; Eason (2002); Holman (2005) and Holman, Chissick and Totterdell (2002). There however appears to be a lack in the literature on this type of performance monitoring and its effects on employee life satisfaction at large. The literature places some emphasis on individual differences and call centres however there is very little research on the role of hardiness among call centre agents.

In an attempt to add to the abovementioned lack of literature, the present study aims at investigating the moderating effects of hardiness on the relationship between performance monitoring (covering three aspects of performance monitoring in line with Holman et al., 2002, namely, its performance-related content (i.e., immediacy of feedback, clarity of performance criteria), its purpose (i.e., developmental rather than punitive aims), and its perceived intensity) and well being with particular focus on life satisfaction in a call centre environment. More specifically, this study has the following two aims:

a) To examine the relationship between the characteristics of performance monitoring and life satisfaction, and the relationship between hardiness and life satisfaction in a call centre environment.
b) Investigate the moderating effects of hardiness on the relationship between performance monitoring and life satisfaction in a call centre environment (main aim).

In order to achieve the above aims, the following hypotheses are tested:

1) The content of performance monitoring (in terms of call productivity and quality) is related to life satisfaction in a call centre environment.
2) The purpose of performance monitoring (when considered beneficial) (in terms of call productivity and quality) is related to life satisfaction in a call centre environment.
3) The perceived intensity of performance monitoring is related life satisfaction in a call centre environment.
4) There exists a relationship between hardiness and life satisfaction
5) Hardiness has a moderating effect on the relationship between performance monitoring and life satisfaction in a call centre environment.

It was considered important to first examine the relationship between performance monitoring (covering three aspects namely the content, purpose and perceived intensity of performance monitoring) and life satisfaction as well as between hardiness and life satisfaction in a call centre environment before establishing whether or not hardiness has a moderating effect on the relationship between performance

monitoring and life satisfaction in a call centre environment (in accordance with Baron and Kenny, (1986) which will be discussed later).

In order to achieve the above two aims, this dissertation has been divided into six chapters (with the inclusion of this chapter). To elaborate further, chapter one gives an overview of the aims of research study. Chapter two discusses previous literature on call centres, life satisfaction and hardiness. In chapter three, the methodology used to conduct the research is highlighted explaining the step-by-step process. Chapter four then attends to the statistical procedures employed to carry out this study. This is followed by chapter five which describes and discusses the statistical procedures of chapter four in greater depth in order to gain greater insight into employees' reactions to performance monitoring and life satisfaction taking into account the hardiness variable. Thereafter, theoretical and practical implications that emerge are discussed and finally, chapter six concludes the study.

CHAPTER TWO: THEORETICAL BACKGROUND OF CALL CENTRES, CALL CENTRE TECHNOLOGY, LIFE SATISFACTION RESILIENCE AND HARDINESS (Literature Review)

2.1 General Introduction

The following chapter of this research report highlights previous findings in the area of call centres; call centre technology, hardiness and life satisfaction. A myriad of literature on these concepts are presented and examples by pioneers and leading researchers are given in order to substantiate these findings and the authenticity of the background literature.

Call centres, which are work environments typically made up of a set of personnel, computers and telecommunication equipment which allows for the delivery of services by use of a telephone (Batt & Moynihan, 2002) have recently become one of the most interesting contexts for research because of the numerous findings revealing negative connotations to call centres and their impact on employees (Metcalf & Fernie, 1998). The call centre industry has attracted much negative comment in the media. Newspapers, radio and television features have all referred to call centres as 'electronic sweatshops' (Metcalf & Fernie, 1998). Furthermore, the call centre agents are being termed 'battery hens' illustrating the intensive and stressful nature of being such an employee (Taylor & Bain, 1999). Such terminology has partly emerged from research writings by Metcalf and Fernie (1998) and Taylor and Bain (1999).

2.2. Historical Overview of Call Centres

In terms of the history or evolution of call centres, the first call centre was established in the late 1960s in response to a US Federal Judge who ordered the Ford Motor Company to establish a `free phone line' to facilitate the recall of defective cars (Bagnara & Marti, 2001). In compliance with this order AT&T and Ford developed the `800' number (Bagnara & Marti, 2001). Since then, call centres have been concealed offices behind phone-based services designed to ease consumers' access to companies as well as public administration for claims as well as for booking purposes (Bagnara & Marti, 2001).

This was seen as a cost-saving solution that allowed centralising demands and specialising replies focused on keeping calls simple and minimal (Bagnara, Gabrielli & Marti, 2000). The employees at these concealed offices were expected to possess limited knowledge (usually about a specific product and fault), minimal level of communication skills (politeness and kindness sufficed) and a very brief level of linguistic skills (enough to understand regional variations) (Bagnara & Marti, 2001). Their tasks were repetitive (and continue to be), and there was a need to address boredom and the ability to counter "quantitative" cognitive overload (Bagnara & Marti, 2001). The idea of workstations stemmed from the need to protect call centre agents from noise interference. The consequence of this however was, and continues to be, "social seclusion" (Bagnara & Marti, 2001; Wallace & Eagleson, 2004). Some current outsourced call centres share these features, and so do most of their agents. An alternative is now available for standard claims and requests: It is the system commonly referred to as the IVR (Interactive Voice Responder), which automates

frequent standard requests and replies for low-premium customers (Bagnara et al., 2000). This would perhaps reduce the amount of calls handled by the call centre agents and to some degree, perhaps aim to reduce monotony (Bagnara et al., 2000).

During the 1970s, customer behaviour began to change as there was a move towards preference to personalised, rather than mass-market goods and services, and people now required assistance in using the products they had bought (Bagnara & Marti, 2001). Buying and selling had become communication-based processes and this change in customer attitudes had call centres at the fore and there arose a need for change (Bagnara & Marti, 2001). Customer claims became less common as new personalised products and services were introduced to the market (Wallace & Eagleson, 2004). Operators in call centres were required to support and guide the clients along the life cycle of the products (Bagnara & Marti, 2001). They now had to preserve and improve the relationship between the organisation and its clients by keeping a record of the varied questions and replies (Bagnara & Marti, 2001). The problem now was that most call centres had been designed to simply answer those standard claims and were finding difficulty in coping with this new and demanding situation (Bagnara & Marti, 2001; Wallace & Eagleson, 2004). In turn, performance deteriorated, clients were on hold for longer periods, and low quality replies became a frustrating reality for the customers (Bagnara & Marti, 2001; Bagnara, 2000).

The introduction of the Automatic Call Distribution (introduced during the 1980's through to the 1990's), allowed for the integration of computers and digital telephones giving a new face to the call centre and it's services, served as a solution to the problem (Bagnara et al., 2000; Taylor & Bain, 1999; Wallace & Eagleson, 2004).

Service became more efficient and customers began to receive better feedback although the harsh reality of operator's working conditions did not seem to have changed much, if at all (Bagnara & Marti, 2001).

Social isolation was still a problem for call centre agents even after attempts were made to make work space more permeable (Bagnara et al., 2000). Furthermore, the skills of the agents remained rudimentary and the literature reveals that they had to tolerate stress because of the monotonous tasks, boredom and for the most part client frustrations (Bagnara & Marti, 2001; Batt & Moynihan, 2002).

2.3. Contemporary Call Centre Environments

Call centre jobs are currently classified as 'low-quality' and follow heavily routinised forms of work (Batt & Moynihan, 2002). A call centre environment is usually identified by a large number of open-space cubicles (which are small desk spaces separated from each other at 90 degree angles by partitions) in which call centre agents with telecommunication headphones communicate with customers/clients (Ojha & Kasturi, 2005). A more recent trend has been the emergence of contact centres, which in addition to telephone contact, allow for email, fax etc. Call centres may be designed for inbound or outbound calls (Ojha & Kasturi, 2005). Inbound call centres receive calls from outside callers --- these callers either require some form of information or query a certain service of interest (Ojha & Kasturi, 2005). Outbound call centres on the other hand contact persons who are already customers (or potential customers) to market or sell a product or service (Ojha & Kasturi, 2005).

Call centre employees are often referred to as telephone agents, telephone operators, telephone communicators, telephone sales representatives (TSRs), customer service representatives (CSRs), customer consultants, or even representatives (Reps) (Bagnara & Marti, 2001; Holman, et al., 2002; Townsend, 2005). The majority of the literature, however, at some point refers to these employees as "agents" and this research report will similarly use this term to refer to call centre employees. Agents in a call centre environment have been defined by Bagnara and Marti (2001) as people working within a call centre whose primary job is to handle incoming and/or outgoing telephone calls. It should be cautioned, however that such definitions capture only some of the generic components of operations in call centres, and of agents' work.

The work of a call centre agent is broken down into simplistic components parts, which does not need much practice, knowledge or even a great amount of experience since any request from a customer is answered following a predefined sub set of options (Bain et al., 2002) (This can easily imply that call centre agents religiously follow a script, however this is not always the case). In such a situation, since information transfer is limited and may not be effective on the first call, s/he may be forced to call several times even for a minor request and a person different from that who received the original call often communicates the possible solution (Bain et al., 2002). This may be very frustrating for the customer and the reaction of the customer may then have some level of effect on the call centre agent/s.

Taking a different approach to understanding the call centre with current understandings of information exchange in mind, call centre work involves managing relationships with customers, and therefore call centre agents can be regarded as

"knowledge workers" (Bagnara & Marti, 2001). These agents utilise internal (personal) and external (organisational structures, cognitive artefacts in the work environment, and clients) knowledge to solve problems and manage dynamic relationships and processes (Bagnara & Marti, 2001). Call centres have been, and continue to explosively grow, due to their economic relevance. According to the statistics, the research estimates between the years 1999 and 2004 has increased from $7.1 to a phenomenal $30 billion (Bagnara & Marti, 2001). The overall European call centre market is growing at a 40% rate and some research findings suggest that a major reason for this is that call centres are seen to many as a great social phenomenon (Bagnara & Marti, 2001). It is one of the most rapidly growing forms of employment across the world (Bagnara & Marti, 2001). In East Asia and Australia, the same applies. In USA, more than five and a half million new jobs have been created since 1990 in this prominent sector (Bagnara & Marti, 2001). The statistics on call centre prevalence is not exhaustive and from all the viewed sources there appears to be a certainty that the number of call centres and people employed thereof is on the increase. On average, call centres are growing at a 30±35% rate per annum in terms of calls volumes, and 20±25% per annum in terms of the amount of agents' employed (Bagnara & Marti, 2001).

Some authors (for example, Kjellerup, 2000) however maintain the view that call centre work requirements cause frustration and can be very stressful (e.g., Knights & McCabe, 1998; Mullholand, 2002) for both customer and agent and therefore becomes an example of a `toxic organisation' because of the heavy workload and lack of work satisfaction. The call centre is often a place where people work in order to make money and then move to another working environment hence using the call

centre as a stepping stone rather than a place of preference (Kjellerup, 2000). Much of the research on call centres has been concerned with, for example, forms of management control (Callaghan & Thompson, 2001), high commitment management (Hutchinson, Purcell & Kinnie, 2000), industrial relations and unionism (Bain & Taylor, 2000), payment systems (Metcalf & Fernie, 1998), and even emotion work (Zapf, Vogt, Seifert, Mertini, & Isic, 1999). There is also a widespread use of contingent labour seen in short duration fixed-term contracts and a heavy reliance on temporary labour (Metcalf & Fernie, 1998). Call centres are accused, therefore, of re-creating the 'sweat shops' and provide the ideal environment for the exercise of 'Panoptican' control over virtually every aspect of employee behaviour at work (Metcalf & Fernie, 1998). This means, in light of Metcalf and Fernie (1998) that call centres are utilising an extremely stringent based control system whereby every single action is being observed and monitored both by supervisors and by electronic systems. The authors compare this type of control to a prisoner who is securely confined to his cell and is continuously monitored by a supervisor and unable to communicate with others around him (colleagues at work) (Metcalf & Fernie, 1998). Metcalf and Fernie (1998) represent an almost inhumane indictment of the call centre environment.

2.4. The Growth Rate of Call Centres

Research published in Datamonitor (2004) (as cited in The International Marketing Council of South Africa, 2006) predicted that South African call centre numbers would double by 2008, and rated Cape Town ahead of India in terms of quality of service. It was reported that South Africa offered outsource providers a higher quality, with labour costs running at about two-thirds of their US or UK equivalents. These

findings were echoed in a report released in 2005 by the Ion Group, which ranked South Africa ahead of India, Mexico and the Philippines (International Marketing Council of South Africa, 2006). Also, research by Deloitte, published in December 2005, found that there were 535 call centres in SA employing about 65 000 people (International Marketing Council of South Africa, 2006). This indicates that the South African call centre industry has become one of the dominant industries in the country and accounts for a large number of the South African workforce (International Marketing Council of South Africa, 2006).

More recently, in accordance with conservative expert estimates, the Philippines call centre industry is expected or rather hoped to grow into a million workers by 2010. In order for this to be achieved, the industry needs to recruit an average of 200,000 additional workers each year (Call Centre Directory, 2008). Experts say that this figure may be difficult to achieve. The only hope is to acquire a significant number of "career shifters"- licensed professionals who have specific career specialties but chose to change work due to either personal or financial concerns (Call Centre Directory, 2008).

According to the South African National Department of Trade and Industry, the South African call-centre industry has been growing at a rate of approximately 8% for the four years since 2006 and employs about 54 000 call-centre agents (Call Centre Directory, 2008). Gauteng Companies (2007) says that South Africa is a country of large call centres: the average number of seats is 116 which is bigger than any European Union country. The second largest area of work for South African contact

centres is billing and account-handling, followed by technical support, telemarketing and telesales, and reservations (Gauteng Companies, 2007).

2.5. Performance Monitoring in Call Centre Environments

Most call centres utilise some form of technology that ensures their staff are being continuously monitored. Electronic performance monitoring is a measurement system in call centres that focuses on statistics generated by utilising technologically designed systems and call-rating by supervisors/call monitors to ensure surveillance and listen to calls, determine the length and number of calls in order to rate them according to the centres' criteria (Smith, Carayon, Sanders, Lim, & LeGrande, 1992). Databases, transaction terminals, and the automatic call distribution system (ACD) are linked together to provide efficiency, a high degree of flexibility and responsiveness, reduced dependence on employee skills and cost savings (Houlihan, 2000). Therefore, in call centres, information and communication technologies are used to firstly create the conditions of work, thereafter maintain and monitor them (Smith et al., 1992).

The extensive use of information and communication technologies (ICTs) in call centres allows for the measurement of a variety of operations conducted by the call centre agents (Houlihan, 2000). This measurement may be both direct and indirect without any intensive effort from the supervisor or manager (Houlihan, 2000). For management and organisational benefit, this is exceptionally effective in terms of supervision and information regarding performance (Taylor & Bain, 2000). However, at another level, incorrect or an over dependence on such measures by management may negatively impact on the call centre agents as this form of continuous monitoring is far from naturalistic for a work environment (this will discussed later in this report)

(Ojha & Kasturi, 2005). Employees are connected to information technology (IT), the system automatically allocates work, facilitates its completion and also monitors the employees performance (Ojha & Kasturi, 2005). Taylor & Bain (1999) “characterise call centre work as an 'assembly line in the head’ and detail the intensive control systems commonly applied” (Taylor & Bain, 1999, p. 109). These quantitative measures are routinely and regularly collected for each call centre agent and include measurement of time taken to answer, length of each call, the abandoned call rate, accuracy and strict adherence to script and greeting, and wrap-up time-which involves dealing with recording of call details and subsequent actions required through the process of interaction (Kinnie, Hutchinson & Purcell, 2000). These measures are gathered as part of the automatic call distribution (ACD) system. Furthermore, calls are recorded and both team leaders and managers listen to the calls (Kinnie et al., 2000). The lengths of calls are measured in seconds with a collection of overt and covert performance surveillance measures in place to ensure employee conformity to strict operating procedures (Kinnie et al., 2000). This intensive monitoring has caused the call centre to be labeled as Tayloristic due to the harbouring of a “new’ and ICT driven control model (MacDonald & Sirianni, 1996). Taylor and Bain (2000) have argued that employee resistance has and will continue to occur and will be very difficult to eliminate should these monitoring circumstances not change for the betterment of the agent.

Call centre work is conducted in isolation from co-workers, yet is constantly monitored by management who are responsible for structuring and interpreting the collected recordings (Holman et al., 2002). The work of a call centre agent is usually considered monotonous yet stressful. Within this perspective, the call centre agent is

almost reduced to a machine with not much room for flexibility and the other perspective reflects the view that the call centre agent is a semi-professional and is therefore an empowered employee (Kinnie et al., 2000). This suggests that the agents use the technology to improve their skills knowledge and performance (Kinnie et al., 2000). Similarly to Frenkel et al. (1999), Kinnie et al. (2000) state that the reality lies somewhere between these two perspectives. Realistically, elements of both models can be found in a call centre environment as in most work environments (Kinnie et al., 2000). In relation to many call centres, the development of the technical systems is considered more important or rather, priority is placed upon technical systems in call centres instead of the social system whereas critical skills within call centres are seated not in technical but in social skills and personality (Frenkel et al., 1999). This, according to the findings by Holman et al. (2005) sometimes has detrimental effects on the call centre employees. These findings illustrating the negative effects on employee health and well being by Holman et al. (2002; 2005) and as well as other researchers will be discussed under the next sub-section of this chapter.

Evidence contained in the 2003 issue of the European Journal of Work and Organizational Psychology reveals that working in call centres imposes certain demands on the call centres agents and this categorises call centre work as dissimilar to any other job (Dormann & Zijlstra, 2003). An example of such a study is by Lewig and Dollard (2003) who examined the emotional demands (emotional labour) of call centre work and their relationship to the job satisfaction and emotional exhaustion in a sample of 98 South Australian call centre workers within the theoretical frameworks of the job demand – control model, the effort – reward imbalance model, and the job demands – resources model. Using qualitative methods, these authors confirmed that

emotional labour variables in the experience of emotional exhaustion and satisfaction at work played a central role. Specifically the research by Lewig and Dollard, (2003) confirmed the pre-eminence of emotional dissonance compared to a range of emotional demand variables which influenced and accounted for variance in emotional exhaustion and job satisfaction. Emotional dissonance was also found to exacerbate the level of emotional exhaustion at high levels of psychosocial demands (Lewig & Dollard, 2003). This implies that the jobs combining high levels of both psychological and social demands are much more detrimental than those that require lower levels of psychosocial demands and are therefore a cause for concern (Lewig & Dollard, 2003). Similarly, research conducted by Grebner et al. (2003) showed how a great variety of resources and stressors including aspects of emotion work (which Zapf, Vogt, Seifert, Mertini and Isic, (2003) identified as high in call centres) are related to health outcomes in call centres.

In theory, call centre work should be considered as socio-technical systems, like most service organisations ought to be (Dormann & Zijlstra, 2003). As is suggested by previous research findings, focus tends to be placed on the technical aspects of call centres due to its beneficial purpose from a managerial and organisational viewpoint instead of on the social component (Dormann & Zijlstra, 2003). An impressive amount of the literature reflects the negative impact of performance monitoring practices on employees however, it should be noted that the customers too could be negatively affected by these monitoring procedures (Dormann & Zijlstra, 2003). This possibility may exist because customers are usually informed that their calls are monitored, and they may feel controlled, which may lead to a wide range of negative consequences such as dissatisfaction (Dormann & Zijlstra, 2003).

This type of surveillance through quantitative measures of performance, together with the type of low-pay, often low-skill, contingent labour, and lack of flexibility and employee autonomy is indicative of a control employment system (Kinnie et al., 2000). Other performance measures further emphasise the actual delivery of service and seek to monitor, evaluate, and control the quality of the interaction between the agent and the customer (MacDonald & Sirianni, 1996). This means that agents are monitored in terms of their tone of voice, helpfulness, as well as enthusiasm either directly by the supervisor or through the electronic surveillance system (Deery, Iverson & Walsh, 1999). There appears, therefore, to be a contradiction between the ways employees are managed and controlled and the type of emotional labour required for high levels of service and customer satisfaction (Kinnie et al., 2000).

The rationale for this level of monitoring in call centres as per managerial standpoint is that this provides high levels of customer satisfaction (White, 1998). The argument is that when the only contact a customer has with an organisation is via the telephone, the quality of that interaction becomes critical and is often the only criterion by which performance and the organisation as a whole would be judged (White, 1998). This combination of direct contact with the customer, and emphasis on service quality and a tightly controlled work environment places great demands on employees (White, 1998). Deery et al. (1999) found that this leads to emotional burnout and high labour turnover. Knights and McCabe (1998) state that it is ironic that concern for customers does not seem to be matched with an equal concern for the employees. They elaborate by saying that the greatest irony is that the two are seen as distinct (Knights & McCabe, 1998).

2.6. Call Centre Work/Work Design, Performance Monitoring and Employee Well-Being

Many studies have investigated the design of call centre work and employee well being (Holman et al., 2002). According to Holman et al., (2002) a wide range of job, organisational, and environmental factors have been identified as antecedents that affect well-being at work. A factor that has been overlooked or has received less attention is performance monitoring in call centre environment. Stanton (2000) defines performance monitoring as practices that involve observing, examining, or recording of employee work related behaviors (or a combination of all three), with or without technological assistance (Stanton, 2000). Within organisations it also involves feedback processes although feedback is not always an aspect of monitoring (Stanton, 2000). Performance monitoring exists in both traditional and electronic forms. Traditional forms involve direct observation, listening to calls, work sampling, and self-report and data is collected both qualitative and quantitatively (Holman et al., 2002). Electronic performance monitoring involves the automatic and remote collection of only quantitative data (e.g., call times) and is a form of continuous rather than episodic monitoring (Holman et al., 2002; Holman et al., 2005).

Both forms of performance monitoring vary according to a number of characteristics (Carayon, 1993; Stanton, 2000). These characteristics are clustered into two main groups, namely, content and purpose (Holman et al, 2002). The "content" of performance monitoring focuses on the objective qualities of the monitoring process. It includes: frequency (e.g., its regularity); feedback (e.g., how often it is fed back); performance criteria (e.g., qualitative, quantitative, clarity); source (e.g., who or what collects the data); and target (e.g., is monitoring at an individual or group level, which

task is monitored) (Holman et al., 2002). The "purpose" of performance monitoring focuses on the uses of the performance data. For example, is the data used for punitive or developmental reasons, or to inform reward decisions (Holman et al., 2002)? In addition to content and purpose, the research also addresses a third factor which is often referred to as "monitoring cognitions" (Stanton, 2000). This factor addresses the perceptions of monitoring and includes attitudes toward monitoring (e.g., is it an invasion of privacy), assessments of its fairness and whether the monitoring system is trusted or not (Chalykoff & Kochan, 1989; Niehoff & Moorman, 1993). The present study aimed at adding to the literature in addressing these characteristics or factors in terms of their effects or rather the relationship it has with life satisfaction (as an aspect of well-being) since much of the literature suggests that performance monitoring has negative effects on call centre agents. More particularly, this study looks at whether hardiness plays a moderating role on this relationship.

Those in favour of performance monitoring argue that performance monitoring enables or allows the organisation to monitor and improve employee performance, as well as reduces costs and ensures customer satisfaction (Alder, 1998). Employees are thought to benefit because they can receive accurate, timely and fair feedback, and therefore improve their performance and develop new skills (Grant & Higgins, 1989; Moorman & Wells, 2003; Holman et al., 2002). Critics of performance monitoring on the other hand argue that performance monitoring is intrinsically threatening and stressful to employees because it may adversely affect employees' relationship with coworkers (Alder, 1998; Johnson, Cooper, Cartwright & Donald, 2005). Monitoring is also considered to intensify employees' workload and increases the level of work demands of the call centre agents (Smith et al, 1992). This high level of work demand due to the intensity of monitoring is thought to negatively affect employee well-being

(Holman et al., 2002). There are studies that suggest a link between performance monitoring and stress (Aiello & Kolb, 1995; Smith et al., 1992) however, there exists only a few studies of performance monitoring as an antecedent that affects well-being.

In their study investigating the relationship between performance monitoring and well-being amongst 347 call centre agents from two UK call centres (covering three aspects of performance monitoring, namely, its performance-related content (i.e., immediacy of feedback, clarity of performance criteria), its beneficial-purpose (i.e., developmental rather than punitive aims), and its perceived intensity) Holman et al., (2002) found that performance monitoring in call centres is an important antecedent of employee well-being and emotional labour. Their findings revealed that the performance-related content and the beneficial-purpose of monitoring were positively related to well-being, while perceived intensity had a strong negative association with well-being. They also found that emotional labor did not mediate the relationship between monitoring and well-being, although it was related to these two factors. Holman et al. (2002) also found that the perceived intensity showed stronger associations with emotional exhaustion, while job control and supervisory support moderated the effects of the perceived intensity of monitoring and well-being (Holman et al., 2002). From these findings it is fair to say that not all characteristics of monitoring are considered in a negative light and it is usually the perceptions of the intensity of the monitoring that gives performance monitoring "a bad name". In line with these findings, this research study aimed at examining the relationship between perceptions of performance monitoring (with focus on its different characteristics in line with Holman et al, 2002) and life satisfaction in a call centre in order to determine which aspects of performance monitoring are seen in a positive or negative

light (since the majority of the literature suggests that call centre work has a negative impact on employees.) and most importantly, establish if hardiness has a moderating effect on this relationship.

A significant amount of research has focused on designing the processes and practices that can improve employee performance and satisfaction (Knights & McCabe, 1998), but the literature on individual differences suggests that along with the design of the job, personal dispositions of employees also influence their reaction in work environments. (This will be attended to later in the report.) Frequently, call centre jobs are characterised as having limited task variety meaning that agents carry out the same tasks monotonously. Along with carrying out the same tasks, agents are also on occasion expected to say the same sentences repeatedly (a.k.a scripting as mentioned earlier). Research has highlighted clear associations between work design characteristics and employee effectiveness in terms of performance, satisfaction and mental health (e.g., Parker & Wall, 1998; Warr, 1994).

Relative to the above statement relating to the design and processes that may improve performance and satisfaction, it is important to highlight that the Job Characteristics Model by Hackman and Oldham (1975), conceptualises five 'core job characteristics' that relate to the motivation and satisfaction of employees. These are skill variety, task identity, task significance, autonomy and feedback from the job. These core job characteristics produce 'critical psychological states', for example, skill variety, task identity and task significance affect the "experienced" meaningfulness of work (Parker & Wall, 1998). Autonomy influences the "experienced" responsibility for work, and feedback relates to knowledge of results of work activities (Parker & Wall,

1998). These states are then responsible for four main outcomes, that is, work satisfaction, work motivation, work performance, and absenteeism and turnover (Parker & Wall, 1998).

The Job Characteristics Model (JCM) is the most widely used theoretical approach to job design (Parker & Wall, 1998) and is used as a framework for many studies in organisational behaviour. Sprigg, Smith and Jackson (2003) for example used an expanded model of work design as recommended by Parker and Wall (1998) in their research in order examine the call centre context. Their model includes time control, method control, role breath (boundary control), participation in decision making, task variety, skill utilisation, workload, role conflict, role clarity and co-worker support (Sprigg et al., 2003). In their findings using a sample collected from 36 call centres operated by 19 organisations across the UK, they found that working as a call centre agent is associated with higher job related depression than working in any other role in the call centre. Also, job related anxiety levels were similar across all call centre employees and were relatively high in comparison to other benchmark groups such as those reported by Mullarkey, Jackson, Wall, Wilson & Grey-Taylor, (1999). These results are similar to the findings by Holman et al. (2002).

Sprigg et al. (2003) also found that the call centre agents reported the lowest levels of overall job satisfaction, with intrinsic job satisfaction being particularly low. The study paralleled results with a study by Mullarkey et al. (1999) with regard to the risk call centre employees face in terms of mental health. The proportion of call centre agents at risk of mental health problems is much higher than for all other service groups.

Also using the job demand control model, Bakker, Demerouti and Schaufeli (2003) examined the predictive validity of the job demands resource model for self reported absenteeism and turnover intentions among 477call centre employees of a Dutch telecom company. The main aim of their study was to determine if job demands would be the most important predictors of absenteeism, through their relationship with health problems, and job resources would be the most important predictors of turnover intentions, through their relationship with involvement (i.e. organisational commitment, satisfaction and dedication) (Bakker, Demerouti & Schaufeli, 2003) They found that job resources such as social support, supervisory coaching, and performance feedback were influential predictors of commitment satisfaction and dedication (positive relationship) and indirectly of turnover intentions (negative relationship). This implied that all job resources were significantly related to turnover intent, which means that involvement (commitment, satisfaction and dedication) acted as a mediator between job resources and turnover intentions (Bakker, Demerouti & Schaufeli, 2003; Bakker, Demerouti, Taris, Schaufeli & Schreurs, 2003).

Similarly, studies by Terry and Jimmieson (1999) for example investigated the relationship between job characteristics, mental health and job satisfaction. These authors found that employees with low task variety report poorer mental health with higher stress levels and employees with higher job control report greater job satisfaction (Terry & Jimmieson, 1999). Employees in jobs with 'poor role characteristics' also report poorer mental health. Sprigg et al. (2003) conceptualise poor role characteristics as conditions where employees have high role conflict, and low or undefined role clarity. These aspects of work and jobs (low/limited task

variety, low control, high role conflict and low role clarity) according to Cox and Griffiths (1996) are considered psychosocial risk factors. Interestingly, these factors are evident in call centres.

In a study by Deery et al. (2002) it was found using survey data from 480 Australian call centre operators that the speed and pace of work in a call centre environment was a significant factor which affected emotional resources in a negative way. In another study conducted by Wilk and Moynihan (2005) amongst 940 call centre employees in the state of Pennsylvania, the authors found that worker emotional exhaustion varied across supervisors within jobs, suggesting that emotion work is influenced at a supervisory rather than a job level. These two studies if looked at in combination suggest that call centre employees can either be negatively affected by the job itself or by their supervisors.

In another line of research on call centres, Bain, Watson, Mulvey, Taylor and Gall (2002) conducted extensive research in four call centres in central Scotland. Their study focused on the rise of the call centre within the context of the development of Tayloristic methods and technological change in office based work. More specifically they were interested in investigating the managerial utilisation of targets to measure employees' quantitative and qualitative performance. The evidence by these authors showed that target-setting lies at the heart of management strategy in the call centres studied. Also, it was found that not only are targets widely applied to "hard" quantitative data (number of calls answered, average handling time, etc.) but also to "soft" qualitative factors like pride in the company and enthusiasm (Bain et al., 2002). They state that while it is possible that call centre agents may to some degree have

exposure to a variety of services and require a fair amount of knowledge and skill, the daily experience of most of these sector employees still appear to be within the frames of Tayloristic practice (Bain et al., 2002). The above statement by Bain et al. (2002) raises concerns regarding the effects that these Tayloristic practices have on the call centre agents. Once again, it is concerns like these that have stirred a need to investigate possible coping tools (particularly hardiness) in the call centre agents that may help deal with the situation. The following sub section highlights existing literature on individual differences, coping and resilience.

2.7. Individual/Personality Differences, Coping, and Resilience

Personality differences are important factors in allowing people to be distinguished from each other. Personality differences may have implications in relation to coping and how some people may cope better with pressures at work than others (Dewe & Trenberth, 2004). There are a number of personality traits or characteristics that are considered as to assist people in dealing with stress or negatively perceived life events, some of these traits include locus of control, self-esteem and hardiness (Tjiong, 2000). In the research on job stress, leading thinkers have viewed worker control (although not an individual difference) as a moderator of the relationship between job demands and stress. Over the years, many studies demonstrated that people who have the resources required to resolve difficulties tend to suffer fewer physiological and psychological consequences following exposure to stressors (e.g. Ganster & Fusilier, 1989) and several studies have attempted to extend these findings to organisational settings relating coping and chronic stressors. Coping can be understood as the cognitive and behavioural attempts aimed at changing, remodelling or reducing negative emotions themselves, or the factors in the environment that are

responsible for these emotions (Dewe et al., 2004). More specifically, coping can be defined as "constantly changing cognitive and behavioural efforts to manage specific external and/ or internal demands that are appraised as taxing or exceeding the resources of a person" (Lazarus & Folkman, 1984, p 141).

Numerous investigators have recognised at least two major types of coping, both of which are used by people to deal with stressful situations. The first is the regulation of emotions or distress (emotion focused coping) and secondly the management of the problem at the origin of the emotions/ distress (i.e. problem focused coping) (Spector & O'Connell, 1994). The former refers to a wide variety of cognitive processes such as avoidance, minimisation and distancing as well as to behavioural strategies such as meditating, exercising or emotional support (Spector & O'Connel, 1994). The latter involves analytic processes that place focus on the environment for example problem solving strategies as well as strategies that are directed inwards (Spector & O'Connell, 1994). People with good coping skills arguably possess resiliency against stress and adverse effects. There is a myriad of research relating personality to many different organisational variables, including job stressors (e.g. workload, lack of autonomy) and job strains (e.g. job dissatisfaction, work anxiety, and psychological well being) (Spector & O'Connell, 1994). With this in mind, it is possible that individual differences or rather personality may play a role in call centre agent's ability to deal with the demands of their work environment. In light of the above assumption, Ojha and Kasturi (2005) for example advise that identifying the personal attributes of persons, call centre managers will be able to hire potential employees who are better equipped to be effective call centre agents. This suggestion could have useful implications for call centres both in terms of management and employees.

Taking this into consideration, it would be of significance to investigate the role of hardiness (as a personality factor), in call centre agents as a factor allowing them to deal with the intense monitoring systems (as discussed earlier) in the call centre. Before explaining the concept of hardiness, it is important to highlight existing literature on stress, coping and illness.

Since Selye (1956) first described the relationship between stress and illness, several other theories linking stress, coping and illness have been proposed. Many researchers also hold the view that along with general coping skills, various personality traits mediate or even moderate stress reactions and may enhance or compromise one's immune response (Dreher 1995; Kemeny & Laudenslager, 1999; Kiecolt-Glaser & Glaser 1988). Hardiness is an example of such a personality variable that may moderate the effects of call centre technology and life satisfaction (since call centre work is often considered stressful). The sub section below will elaborate on this variable.

2.8. Hardiness

Over two decades following "Selye's" (1956) initial work on stress, Kobasa (1979) focused on what she called the "subtle points in his findings" in an attempt to isolate factors that ease negative impacts of stressful events. In 1979 Kobasa introduced the concept of hardiness. This personality characteristic stemmed from existential psychology and is considered to be a quality of an individual to view stressful or pressured life events as amenable as well as view changes as a normal part of life (Kobasa, 1979). The literature on psychological hardiness suggests that the positive orientation associated with hardiness helps a person to stay healthy and free from anxiety under stressful circumstances (Kobasa, Maddi & Khan, 1982).

The hardy personality style proposed by Kobasa et al. (1982) encourages coping, which involves, "an amalgam of cognition, emotion, and action aimed at not only survival, but also the enrichment of life through development" (p. 368). Kobasa (1979) has suggested that hardiness consists of three inter-related dimensions. The first being commitment which is considered to be a sense of purpose and meaning that is expressed by way of becoming involved in life's events rather than being passively involved or running away from the problem (Tjiong, 2000). According to Kobasa (1979) hardy people including managers exhibit a sense of commitment to various domains of their life i.e. social, work, interpersonal, family and self (Kobasa, 1979; Kobasa et al., 1982). The second dimension of hardiness is challenge and this is the belief that change, instead of stability, is normal and that change is a stimulus to enhance growth rather than a threat to security and familiarity (Kobasa et al, 1982). Kobasa et al. (1982) suggest that hardy personalities feel challenged by stressful situations and display higher tolerance levels for ambiguity. The third dimension of hardiness is control, which is the individual's perception of influence over his/her life (Gebhardt, van der Doef & Paul, 2001) more clearly, it refers to an individual's ability to face reality and take charge of any given stressful situation (Tjiong, 2000; Kobasa, 1979). Control can also ensure that the individual will act as though he/she is influential instead of helpless (Kobasa, 1979; Tjiong, 2000)**.** According to Kobasa (1979), individuals who experience high levels of stress yet appear healthy exhibit decision control and cognitive control as it is under such circumstances that hardiness comes in as a buffer and moderates the effects of the stressor. These two forms of control allows for them to choose amongst various courses of action to handle the situation and appraise and incorporate stressful events into a life plan thereby deactivating the effect of the stressor (Kobasa, 1979).

These three dimensions have been hypothesised to form a constellation that: (a) moderates the effects of stress by changing one's perception of a given situation, and (b) lessens the negative impact of stressful life events by influencing cognitive appraisal and the ability to cope. Since hardiness is a personality composite of commitment, control and challenge, it is directly relevant to health, well-being and overall satisfaction because it may assist in the determination of positive or negative outcomes of stressful situations or events (Gebhardt, et al., 2001). According to Kobasa (1979), hardy individuals will perceive positive events as important and negative events as unimportant as hardiness will buffer the effects of negative events (Kobasa, 1979; Tjiong, 2000).

In the years following the introduction of the concept of hardiness, the relationship between hardiness and health has been investigated in a number of different studies e.g. (Kobasa et al., 1982, Tjiong, 2000; Gebhardt et al, 2001). The construct of hardiness has emerged as an important variable in moderating the relationship or offering resistance toward the effects of stressful situations, occurrences or environments (Judkins, Reid & Furlow, 2006; Tjiong, 2000). Judkins, Reid and Farlow (2006) suggest that the hardiness personality trait protects individuals by altering perceptions of stress and by mobilising effective coping strategies. Furthermore, hardy individuals possess a belief that allows them to consider stressors as manageable thereby being able to influence their situations (Judkins, Reid & Furlow, 2006). Additionally, it is stated by Judkins, Reid and Farlow (2006) that hardy employees in a work setting follow the belief that events occur as a result of personal actions instead of the actions of others or the organisation.

Many studies have linked hardiness to health. Results following the investigation of the relationship between hardiness and health imply that hardiness is associated with better overall health conditions and decreased physical complaints (Roth, Wiebe, Fillingim & Shay, 1989; Kobasa, 1993). Empirical results further suggest that individuals who posses hardy personalities are more inclined to practice health related behaviours such as healthy eating, refrain from smoking, etc. than those who do not possess hardy personalities (Roth et al, 1989). Nicholas (1993) for example investigated the relationship between hardiness, self-care practices and perceived health status in 72 older adults. The results indicated that hardiness is significantly correlated with the practice of health-care activities, such as frequent exercise, healthy eating habits, relaxation and general health improvement.

Kobasa began her work with focus mainly on married middle aged men who were of Anglo American heritage and held jobs in middle management. Due to this, over the years, more questions have come to the fore in relation to gender, ethnicity, and age exist in regard to the measurement of hardiness. For example, Wiebe (1991) in a study of undergraduate students, found that hardiness exerted weaker effects among women than men. In another study of adolescents, Shepperd and Kashani (1991) found that the hardiness dimensions of commitment and control interacted with stress and gender in predicting health and other well-being outcomes. More specifically, commitment and control moderated the experience of physical and psychological symptoms, but only among high-stress boys. Nakano (1990) studied hardiness in Japanese women and found that there were no hardiness main effects or interactions. Costantini, Solano DiNapoli and Bosco (1997) studied hardiness in second-year nursing students in Rome. In DiNapoli and Bosco (1997) study, it was found that the higher the levels of hardiness at the beginning of the second year of study, the lower the levels of

emotional exhaustion. Furthermore they found that the higher levels of hardiness allowed for higher personal achievement scores at the end of the second year of study. The above studies suggest that hardiness sometimes moderates the effects of certain stressors on overall health and well-being. Taking this into consideration, it is possible that hardiness could serve as a moderator in the relationship between performance monitoring and life satisfaction in a call centre environment. There is however very little if any research on the moderating effects of hardiness in this regard.

Researchers in the field of individual differences argue that hardiness allows people to accept and transform trying circumstances so that they become less stressed or burnt out (Kobasa, 1979; Maddi & Kobasa, 1984). Research studies examining hardiness have revealed that hardiness promotes desirable behaviors, such as exercise and relaxation, which provide long-term benefits (Maddi, 1999) and reduces the chances of stress-related physical illnesses, mental or psychological illnesses, and impaired performance (Maddi, 2005). Furthermore, studies using self reports and other measures Maddi (1999) found that hardiness was negatively related to the "fight or flight" reaction. Thus, higher levels of hardiness may assist in the management of stress, which, in turn, could lead to a variety of health benefits, lower stress levels, improved physical health, satisfaction and improved psychological well being (Harrisson, Loiselle, Duquette & Semenic, 2002)

Pollock (1989) states that hardy persons recognise they have options to exercise judgment and make good decisions (control), opportunities to become actively involved in various life activities (commitment), and abilities to perceive change as beneficial (challenge). When faced with a stressful life event or situation, hardy

people will attempt to change events (control) into a challenge consistent with life's purpose (commitment) that results in learning and even personal growth (challenge) (Soderstrom, Dolbier, Leiferman & Steinhardt, 2000). Soderstrom et al. (2000) state that individuals with these qualities have the stamina and the sense of personal control to deal with uncertainties and will take necessary actions, while negotiating between different cultural demands. In contrast, less hardy individuals may lack the willpower to overcome the difficulties resulting from competing sociocultural expectations and norms (Soderstrom et al., 2000).

A fair amount of studies have looked at hardiness in relation to the work environment. These studies however have primarily focused on nurses, teachers, highway patrol officers, and military personnel as subjects. Collins (1996) for example found that fulltime hospital staff nurses who possess higher levels of psychological hardiness have less work stress and less burnout. In another study by Lambert and Lambert (1993), it was found that role stress and hardiness correlate negatively in nurse educators. In their study of nurses, Duquette, Kerouac, Sandhu, Dutchame and Saulnier (1995) found work stressors and hardiness to be significant predictors of burnout. In a similar line of research, Simoni and Paterson (1997) found that both hardiness and coping approaches could be used independently or jointly to reduce levels of burnout. Also, findings of high levels of hardiness in individuals in the work environment have been linked to increased retention rates among nurses as was illustrated in the research by Tierney and Lavelle (1997).

Extensive studies have also explored the benefits of a hardy personality and its relationship to either mediating or moderating stress and reducing illness by

enhancing the immune response system (Dreher, 1995; Kemeny & Laudenslager, 1999). Bartone, Ursano, Wright and Ingraham (1989) for example found that hardy emergency assistants remained healthy even after withstanding extended periods of stress. In her study of upper and middle-level executives with comparable levels of stress, Kobasa (1979) found that highly stressed executives with low illness rates possessed more hardiness than highly stressed executives who exhibited a low level of immunity and hence high rates of illness. Similar findings were described among full-time corporate employees and university students in studies by Soderstrom et al. (2000).

In a similar line of research, Maddi, Khan and Maddi (1998) found, following hardiness training, that managers in a utility company exhibited increased hardiness and their levels of job satisfaction had increased. A decrease in occurrences of illness and self-reported strain were also noted (Maddi, Kahn, & Maddi, 1998). Furthermore, the authors reported that hardiness can be learned and that increasing hardiness was more effective than relaxation techniques or passive listening (Judkins, Massey & Huff, 2006).

As mentioned, a portion of the literature on hardiness, for example Dewe and Trenberth (2004) highlights the role of hardiness as a buffer in stressful situations and the findings are convincing yet mixed (Dewe & Trenberth 2004). Similarly, studies by, Kobasa (1979); Williams and Lawler (2001) based their research on corporate and college samples which consisted predominantly of European Americans. In their studies hardiness was found to reduce depressive symptoms and to lessen the effects of stress (Kobasa, 1979; Williams & Lawler, 2001). Similarly, studies among health

care populations found psychological distress to be significantly related to nurses' perceptions of work-related stressors (Harrison, Loiselle, Duquette, & Semenic, 2002). The results highlight that those who encounter continuous and repetitive stressors may show decreased resistance to stress, which can lead to physical or psychological problems (Harrison et al., 2002). Overall, the research specifies that hardy individuals tend to make a positive appraisal of their situation when faced with a stressful event and, in effect, the stressor becomes manageable due to its moderating effects (Harrison et al., 2002). This highlights the inherent potential of a stressor to contribute to personal growth and development (Dewe & Trenberth 2004). A few studies however have found that hardiness does not play a moderating role in times of managerial work stress (Luszczynska & Cieslak, 2002).

As mentioned earlier, it is possible that hardiness may have an influential impact on how people deal with call centre technology. In line with the above statement of Dewe and Trenberth (2004) it may also be possible that hardy call centre agents may view the monitoring technology as developmental.

Although the research evidence increasingly points to the importance of hardiness and contextual characteristics in predicting outcomes, few studies document the nature of the interrelationships among these factors in call centre employees or any other work related situations for that matter, other than nurses. This lack of research is the reason for the present study with the intention of adding to the literature. The following subsection attends to the variable of life satisfaction which can be considered as an aspect of overall well-being.

2.9. Life Satisfaction

Life satisfaction appears to be an easily understood or self-explanatory term however in social research there seems to be a myriad of definitions of this concept. In obvious terms it gives an inclination towards overall happiness. According to Rice (1984) life satisfaction is best understood as the degree to which the experience of an individual's life satisfies that individual's wants as well as his/her needs, both physically and psychologically. Life satisfaction has been viewed as an overarching criterion or ultimate outcome of human experience encompassing a number of elements. These include the elements of quality of life, social progress, social policy aimed at improvements in the quality of life, and identification of conditions for a good life to name a few (Veenhoven & Saris, 1996).

The above explanation implies that the concept of life-satisfaction denotes an overall evaluation of life. An overall evaluation of life involves all relevant criteria in the mind/psychology of the individual including: how good s/he feels, how well expectations are likely to be met, amongst other criteria (Veenhoven & Saris, 1996). The object of evaluation is life as a whole instead of a specific area of life, e.g., employment (Veenhoven & Saris, 1996). Enjoyment of work certainly adds to the appreciation of life, but it is not the only constituent. It is simply one of many domains that feed into overall life satisfaction (Veenhoven & Saris, 1996).

The subject of life-satisfaction as identified by the literature is part of a broader field of investigation referred to as quality of life. The primary concern in this field is to develop criteria for a ‘good’ life (Veenhoven & Saris, 1996). This area of research

stemmed in the 18th century (known as Enlightenment thinking). From this era, the purpose for existence was life itself, rather than for the service of the King or God. Self-actualisation and happiness were seen as core values, and it was society that was seen as the means for providing individuals with the requirements for a so called "good life" (Veenhoven & Saris, 1996). A variety of researchers in the field of life satisfaction and quality of life hold the view that the pursuit of happiness is not fixed and that happiness is specific to an individual and dependent on human action (Tucker, Ozer, Lyubomirsky & Boehm, 2006).

Currently, in accordance with available literature, the term 'quality of life' denotes two meanings:

1) the presence of conditions/situations considered necessary for a good life, and
2) the practice of good living (Veenhoven & Saris, 1996).

More clearly, Ehrhardt, Saris, and Veenhoven, (2000) explain that firstly, the general level of happiness depends on the quality of society; therefore theory suggests that happiness can be elevated by social reform. Secondly, that relative happiness within society depends on how well we cope with given conditions, which implies that we can improve our level of happiness by developing our own individual capabilities (Ehrhardt et al., 2000). Individual factors play a crucial role here. The above two assumptions can be used to understand the call centre environment/agents. The first meaning could refer to the situation of the call centre environment. If the environment is one where the essential conditions of a working environment are not in place, this could have negative implications on the quality of life of the call centre agent. At an individual level, both the context of the call centre and the attitude or perceptions of the call centre agent may determine the quality of his or her life. In light of this

example, the current study takes both assumptions into account. In order to understand or rather explore the assumptions of theory, it became important to attempt to measure life satisfaction and quality of life.

The first life satisfaction survey studies were performed in the USA during the 1960's and primary emphasis was on mental health (Veenhoven & Saris, 1996). The results from some of this research appeared in books by Gurin et al. (1960) and Bradburn (1969). In the 1970's, life-satisfaction was at the fore in several American Social Indicator studies (Veenhoven & Saris, 1996). In the 1980's the first large-scale longitudinal survey on life-satisfaction was conducted by Heady and Wearing (1992) in Australia.

The literature on life-satisfaction can most effectively be understood and summarised by means of the questions that arise--especially if following the utilitarian viewpoint of creating "greater happiness for a greater number of people" (Veenhoven & Saris, 1996). The most important questions being what is life-satisfaction and how can it be measured? More so the question is how satisfied are people in general, and whether or not people differ in degrees or rather levels of satisfaction (Veenhoven & Saris, 1996). If everyone is satisfied with life, then there is no need to search for ways to improve levels of satisfaction. Also, if people don't differ, then there would be no means to indicate how life satisfaction could be improved (Veenhoven & Saris, 1996).

More recent findings on life satisfaction have focused on the relationship between work and family life (Perrone, Webb, Wright & Jackson, 2007; Perrone, Webb & Jackson, 2006). The research states that both women and men are expressing a strong

commitment to work and family domains. This responsibility can lead to both increased role strain and also increased life satisfaction depending on the individual and their perceptions (Perrone, 2000). According to Super (1990), individuals occupy many different roles over the course of their life span with regards to career, home and family, community, study, and even leisure. Super (1990) purports that satisfaction in these different roles is directly related to overall life satisfaction (Perrone et al., 2007). In a similar line of study, Bonebright, Clay, and Ankenman, (2000) and Salvatore and Munos Sastre (2001) reported that life satisfaction and overall well-being have been empirically linked to work satisfaction and to family satisfaction. People may have a number of desires or needs and these may exist in more than one domain of life (Hanton, Evans & Neil 2003; Lounsbury, Saudargas, Gibson & Leong, 2005). It has been noted that the dominant approaches and models of overall or global life satisfaction of students and adults in different spheres highlights that satisfaction is tightly linked with specific domains of experience (Hanton et al, 2003). These domains include living arrangements, social life, workload, finances, security, academic performance, work performance and feedback, professors, and so forth e.g., Tross, Harper, Osher and Kneidinger (2000). A similar model is commonly used in research on life satisfaction of working adults in relation to specific life domains (Andrews & Withey, 1976; Campbell, Converse & Rodgers, 1976). (Studies relating personality traits, life satisfaction and specific life domains will be discussed later in this review.) With this in mind, it would be fair to say that a person's state of happiness depends on society and the context is which the person is in. Considering this thought and in light of the two meanings of quality of life that was explained earlier, it is possible that general happiness can be increased by contextual modification, hence life satisfaction can increase if the context is suitable

to the person and makes them feel content and happy (Lounsbury et al., 2005). Additionally, if the psychological processes involved in obtaining high levels of life satisfaction could be understood, then it would be theoretically possible to assist people in finding ways to acquire them (Veenhoven & Saris, 1996).

2.10. Performance Monitoring, Life Satisfaction and Hardiness.

Work plays a vital role in one's life and makes up most of one's waking hours in the day. With this in mind, job satisfaction can be regarded as a component that influences overall life satisfaction. A job is assumed to have important effects on overall life satisfaction in several ways (Kenny & Bhattacharjee, 2000). Work is the source of income that helps people meet their needs and wants although it is not only the income that fulfils the individuals needs (Kenney & Bhattacharjee, 2000). Also, work accounts for a large amount of waking hours per day of most people, and there is evidence to suggest that work has a substantial influence on people's self-concept and esteem (Kenney & Bhattacharjee, 2000). As there exists a clear link between work and life satisfaction research has focussed on developing theoretical models that form a framework for ways of improving life satisfaction or quality of life through changes in the workplace (Veenhoven & Saris, 1996).

Rice (1984), for example has developed such a conceptual model, which proposes that working conditions influence life satisfaction and life satisfaction can be improved or worsened in relation to changes in characteristics of either the person or the environment (as elaborated earlier) (Ehrhardt, Saris & Veenhoven, 2000). Changes may include short-term effects of work (e.g. changes in mood, energy level and interests), and long-term effects of work (e.g. changes in skills, and health) (Ehrhardt et al., 2000). Since it appears as though call centres require intense and stressful

working hours, one can question the level of happiness of the employees. The reason for not using happiness however but rather life satisfaction as a variable in this study is because happiness is a single factor whereas life satisfaction includes multifaceted elements of what people consider satisfying.

Many studies have investigated the link between work and life satisfaction. A study by Dokery (2003) for example investigated factors that influenced Australians' self reported levels of happiness and overall life satisfaction with a particular emphasis on the role of the labour market experience. The study by Dokery (2003) was based on data from two previous longitudinal surveys. The first, the 1995 year 9 cohort of the Longitudinal Surveys of Australian Youth (LSAY), tracked a sample of young Australians in each year from year 9 to age 19 (Dockery, 2003). The second survey was known as wave 1 of the Household Income and Labour Dynamics in Australia Survey (HILDA). The data from these surveys and the extended research by Dokery (2003) found that levels of happiness and satisfaction declined with the duration of unemployment. Furthermore, his study illustrated the importance of the quality of working life, rather than just having a job and also highlighted attributes that had an influence on well-being (Dockery, 2003).

According to Lounsbury, Park, Sundstrom, Williamson and Pemberton (2004) the important factor preceding life satisfaction and the domains of experience is personality, which is posited as leading to life satisfaction.

As highlighted earlier, life satisfaction is believed by many authors in the field of quality of life to be unique. Studies conducted by Lounsbury et al. (2005) for example

sampled 532 students at a South Eastern U.S university and examined the big five and narrow personality traits in relation to a measure of domain specific satisfaction as well as a measure of general life satisfaction. They found that four of the five traits namely agreeableness, conscientiousness, emotional stability and extraversion-as well as the narrow traits of aggression, career decidedness, optimism, self-directed learning, sense of identity and work drive were positively, significantly related to both the satisfaction measures (Lounsbury et al., 2005). They found that the Big Five traits accounted for 45% of life satisfaction variance with sense of identity contributing an additional 7%, and college satisfaction, 6%. Furthermore, similarities were noted to findings of personality traits and academic performance, job performance, and adult career and life satisfaction. Similar to this study, Furnham (1991) outlines the importance of personality traits, e.g. extraversion, in determining satisfaction in work and leisure.

Given that the sources of life satisfaction vary widely among individuals, it would be understandable for them to vary across cultures and subcultures too. Research by Diener, Diener and Diener (1995), Oishi, Diener, Suh, and Lucas (1999) and Sam (2001) convey that what may be important for some individuals or cultures may not be as important for others, showing, for example, self-esteem, family, number of friends, and satisfaction with education, material wealth and home life correlate differently with life satisfaction in different groups. This suggests that satisfaction is better used in an overall sense ("life as a whole") rather than within categories (for example education or employment) as indicators to compare groups (Tucker et al., 2006). This is an important consideration particularly in terms of a South African work environment due to the variety of cultural backgrounds.

Recent research in areas of adult satisfaction, particularly work and student related has demonstrated that narrow personality traits add significant incremental validity to the Big Five personality traits in some work settings and among certain populations (Ashton, 1998; Lounsbury, Sundstrom, Loveland & Gibson, 2003; Paunonen, Rothstein & Jackson, 1999). Lounsbury et al. (2003) found that the narrow traits of aggression and work drive added significantly to the prediction of student grade point average above and beyond the Big Five traits. Their literature also cites a number of narrow personality traits, which have been related to life satisfaction among adults. These include work drive, tough-mindedness, and optimism (Lounsbury, Gibson & Hamrick, 2004). The above studies show that there exists a link between work, personality traits and life satisfaction. In light of existing research and in an attempt to fill the gap in the literature on call centre technology, hardiness and life satisfaction, the present study investigates the moderating effects of hardiness on the relationship between performance monitoring and life satisfaction in a call centre environment (since call centre work is often viewed as stressful and having negative effects on employee well-being).

More specifically, this study has two aims:

a) To examine the relationship between the characteristics of performance monitoring and life satisfaction, and hardiness and life satisfaction in a call centre environment.
b) Investigate the moderating effects of hardiness on the relationship between performance monitoring and life satisfaction in a call centre environment (main aim).

In an attempt to achieve these aims the following hypotheses are tested:

1) The content of performance monitoring (feedback) (in terms of call productivity and quality) is related to life satisfaction in a call centre environment.

2) The purpose of performance monitoring (when considered beneficial) (in terms of call productivity and quality) is related to life satisfaction in a call centre environment.

3) The perceived intensity of performance monitoring is related to life satisfaction in a call centre environment.

4) There exists a relationship between hardiness and life satisfaction.

5) Hardiness has a moderating effect on the relationship between performance monitoring and life satisfaction in a call centre environment.

CHAPTER THREE: METHODOLOGY

The purpose of this study is to examine the moderating effects of hardiness on the relationship between performance monitoring (looking at three aspects namely the content, beneficial purpose and perceived intensity) and life satisfaction in a call centre environment. This chapter details the methodology that was employed in this research. The chapter firstly addresses the aims of the present study. Thereafter, a brief description of the call centre that is used for the study is provided, followed by a discussion on the use of quantitative methods for data collection and analysis. Each measuring instrument that is used is described. Furthermore, the procedures used to distribute and collect the data is explained and the ethical considerations involved in distributing and collecting the data are also highlighted.

3.1. Research Rationale

Call centres have recently become one of the most interesting fields of research especially in terms of employee well-being. Qualitative studies within call centres found that computer based monitoring can have negative effects on employee well being and general health (Houlihan, 2000). According to previous research that was conducted in call centres, it was found that performance monitoring has been thought to be "pervasive" (Chalykoff, & Kochan, 1989). The image of pervasiveness appears troublesome and for this reason it is of interest to determine whether or not call centre work affects the agents' level of life satisfaction. The researcher was particularly interested in whether the different characteristics of call centre monitoring systems (both traditional and electronic) have an effect on employee life satisfaction and whether or not hardiness plays a moderating role in this relationship. The reason for focussing on this particular topic is that although life satisfaction has been researched

extensively before, very little if any emphasis is placed on the effects of call centre monitoring on life satisfaction in relation to the call centre agents. Furthermore, individual differences have been researched well; however, their function as a moderator in the relationship between call centre technology (performance monitoring) and life satisfaction has not been established in the literature. Ultimately, this research aims at filling the gaps in the literature.

3.2. Research Aims:

The research question of this study is whether hardiness has moderating effects on the relationship between performance monitoring (covering three aspects) and life satisfaction in a call centre environment. Specifically this study has two aims. Firstly, this study is aimed at examining the relationship between performance monitoring and life satisfaction and hardiness and life satisfaction in a call centre environment. Secondly, this study is aimed at investigating the moderating effects of hardiness on the relationship between performance monitoring and life satisfaction in a call centre environment (main aim). More specifically, this study has five hypotheses:

1) The content of performance monitoring (in terms of call productivity and quality) is related to life satisfaction in a call centre environment.
2) The purpose of performance monitoring (when considered beneficial) (in terms of call productivity and quality) is related to life satisfaction in a call centre environment.
3) The perceived intensity of performance monitoring is related to life satisfaction in a call centre environment.
4) There exists a relationship between hardiness and life satisfaction

5) Hardiness has a moderating effect on the relationship between performance monitoring and life satisfaction in a call centre environment.

3.3 Research Design

In this study, one South African call centre is sampled. The current study followed a non-experimental, quantitative, cross-sectional, ex-post facto, correlational design. Non-experimental designs suggest that no random assignment was used, nor were the independent variables manipulated. Furthermore, the study does not consist of an experimental nor a control group (Neuman, 1997).

3.4. Ethical Considerations and Procedure

The researcher had applied for ethics clearance from the Ethics Research Committee at the University of the Witwatersrand. After permission was granted by the committee, the researcher proceeded to obtain permission to conduct the research from the human resource manager of the call centre (appendix A). Once permission was granted by the manager (refer to appendix B), the researcher then handed out the questionnaires to the call centre agents.

3.5. Procedure

In order to gain the relevant information for this study, questionnaires were handed out by the researcher (after gaining consent from the organisation) to approximately 102 call centre agents (the number of agents present on the day questionnaires were handed out) (refer to appendix C for questionnaire). The employees were invited to participate in the study by means of a participation invitation letter (appendix D)

which was attached to the questionnaire. Employees were informed in this letter that completing the questionnaire would be considered informed consent. All participants were assured anonymity and confidentiality. Anonymity was ensured as participants were not asked to mention any identifying information. Confidentiality was also assured by explaining to the participants that all completed questionnaires were to be placed in a sealed box, which was situated in the reception area of the organisation. The researcher emptied the box at regular intervals. There was an 84% response rate however only 83 % of the returned questionnaires were usable. This implies that the overall response rate of usable questionnaires was 71%. The participants were all adult personnel ranging from ages between 19-65 with majority of the participants being in the age range of 21-36. The participants are from different racial backgrounds namely African, White, Indian and Coloured of which 62% are male and 38% are female. All the participants have some level of education with the lowest level being matric. Furthermore, the participants' marital status, intention to resign and period of work have been captured and reported in the tables below. Tables 3.5.1-3.5.8 gives more detail on the abovementioned biographical information of the participants of this study.

Table 3.5.1. Gender of Participants

Gender	Frequency
Male	45
Female	27

Table 3.5.2 Race of Participants

Race	Frequency	Percentage
Black	43	59.72
Indian	9	12.50
Coloured	14	19.44
White	6	8.33

Table 3.5.3 Education Level of Participants

Educational Level	Frequency	Percentage
Matric	46	63.89
Diploma	15	20.83
Undergraduate Degree	10	13.89
Post graduate Degree	1	1.39

Table 3.5.4 Home Language of Participants

Home Language	Frequency	Percentage
English	31	43.06
Afrikaans	4	5.56
Sesoto	13	18.06
Zulu	11	15.28
Sepedi	5	6.94
Xhosa	3	4.17
Tswana	3	4.17
Tsonga	2	2.78

Table 3.5.5 Marital Status of Participants

Marital Status	Frequency	Percentage
Single	52	72.22
Married	18	25.00
Divorced	2	2.78

Table 3.5.6 Intent to Resign

Thoughts of Resigning	Frequency	Percentage
No	22	30.56
Yes	50	69.44

Table 3.5.7 Age of Participants

Age of Participants	Mean	Std Dev	Min	Max	N
	29.78	8.45	19.00	53.00	72

Table 3.5.8 Period of Work

Period of Work in Months	Mean	Std Dev	Min	Max	N
	39.77	51.92	2.00	300	72

3.6. The Call Centre

The call centre that was used for the purpose of this study is a South African service call centre, which is situated within the organisation's head office. There are approximately 124 operators working in this inbound call centre. These employees are overseen by six supervisors and one manager. The call centre agents perform their work from a small desk which is separated from neighbouring agents by partitions. The call centre agents that participated all have at least a matric certificate and the ability to speak English is a prerequisite for being an agent at this call centre. Agents receive call from clients of the organisation with regards to credit queries. The agents are then required to provide the client/potential client with the necessary information.

3.7. Quantitative Methods

This study adopted the use of quantitative methods. Quantitative methods are used in order to collect original data for describing a population that is relatively large to observe directly (Babbie & Mouton, 2004). In this study, a standardised questionnaire was used. As suggested by Babbie and Mouton (2004), a standardised questionnaire provides data in the same form for all respondents because the same

technique is used to observe each participant. The questionnaires that were used in this study comprised closed ended questions, with the exception of the biographical questionnaire that was more open ended. The study surveyed call centre employees from a call centre in South Africa. A total of 102 adult call centre employees agreed to fill in the questionnaire (with the permission of the human resource manager of the department) and 84 were returned of which 72 were used (as explained earlier). The proportion of young employees was much larger than that of older employees and the proportion of men was larger than that of women.

This study utilised a biographical questionnaire, performance monitoring measures-developed by Holman et al. (2002), the Kobasa Hardiness Scale by Kobasa (1990) and The Satisfaction with Life Scale which was developed by Diener, Emmons, Larsen, & Griffin, (1985). Participation in this research was entirely voluntary and confidentiality was assured.

3.8. Instruments

3.8.1. Measuring Performance Monitoring

The content, purpose, and intensity of performance monitoring was measured using the performance monitoring measures by Holman et al. (2002) (appendix C). The content of performance monitoring was measured using a twelve (six items are based on content of call productivity and six are based on quality of call productivity) item subscale known as the "performance feedback" of monitoring. The items in this subscale pertained directly to those aspects of the content of monitoring that are performance-related (feedback) (Holman et al., 2002). This covers the call quality and call productivity of the amount of feedback, the way in which feedback was shared,

frequency and usefulness of feedback, and the constructiveness of feedback (Holman et al., 2002). This subscale takes into consideration both electronic and traditional forms of monitoring. Sample items include: "The feedback I receive about my call quality/productivity is useful", "I am satisfied with the amount of feedback I receive about my call quality/productivity" (Holman et al., 2002). The internal consistency of this subscale was calculated using Cronbach's alpha coefficient and was found to have a reliability of 0.93. The purpose of performance monitoring was measured using a ten-item subscale (five items based on call productivity and five items based on call quality) referred to as the scale of "performance monitoring purpose". The items focus on call quality and call productivity of feedback provision, level of customer service, discipline or development, identification of strengths, weaknesses and poor performance. Similarly to the previous subscale, this subscale takes into consideration both traditional and electronic performance monitoring (Holman et al., 2002). Sample questions include: "To what extent do you agree that the purpose of monitoring your call productivity/quality is to discipline rather than develop you", "identify strengths and weaknesses" (Holman et al., 2002). The internal consistency of this subscale was found to be 0.69 (using Cronbach's alpha coefficient). The perceived intensity of performance monitoring was measured using a ten-item subscale, again covering the intensity of both the electronic and traditional forms of monitoring. The scale is referred to as the scale of "performance monitoring awareness/intensity" (Holman et al., 2002). The items are based on the call productivity and call quality. Sample items include: "The performance monitoring at work is too intense," and "I feel like there is no escape from monitoring". The internal consistency of this subscale was calculated and reflected a reliability of 0.86 (using Cronbach's alpha coefficient).

For feedback, purpose, and intensity of call monitoring, a 5-point Likert scale was used. With a score of 1 indicating *Strongly disagree* and a score of 5 indicating *Strongly agree*. Scores for the content of performance monitoring range from 12 to 60 and scores for the purpose of monitoring range from 10 to 50. A few items were reverse scored thus a higher score for the content and purpose of monitoring indicates satisfaction/happiness in relation to these aspects of monitoring. Scores for the perceived intensity of performance monitoring range from 10 to 50 and a higher score indicates unhappiness/dissatisfaction with this aspect of monitoring (the items in this scale were not reverse scored so a higher score indicates dissatisfaction). The internal consistency was calculated by Holman et al. (2002) by using Cronbach's alpha coefficient. The findings were 0:75 for feedback, 0:74 for purpose and 0:88 for intensity (Holman et al., 2002). The internal consistency of each subscale was also calculated for the purpose of this study (as mentioned above) with alpha coefficients of 0.93, 0.69 and 0.86 respectively.

3.8.2. Measuring Hardiness

Since its inception, there have been a number of measurement scales that were designed and applied to hardiness. Initially, different items of existing scales, such as the Alienation Test (Maddi, Kobasa & Hoover, 1979), the Internal–External Locus of Control Scale (Rotter, Seeman & Liverant, 1962), the Personality Research Form (Jackson, 1974) and the California Life Goals Evaluation Schedule (Hahn, 1966) were combined in the Unabridged Hardiness Scale (Ouellette, 1993) to measure commitment, control and challenge -- which are the three dimensions of hardiness (Gebhardt et al., 2001). Based on the research of the abovementioned instrument a

refined 36-item questionnaire was constructed (Jennings & Staggers, 1994). The items were negatively formulated, meaning that the instrument was meant to measure the absence rather than the presence of hardiness. This has led to many conceptual problems, for example, as explained by Ouellette (1993), hardiness measured in this manner may be confused with neuroticism, and an agreeable response style may affect scores in a way that imply respondents to be less hardy (Ouellette, 1993).

Pollock (1989) states that the predictive validity of hardiness be greatly improved by measuring hardiness at a domain-specific level. This means that instruments that assess hardiness should consist of items that are particularly relevant to the specific context of research. Pollock and Duffy (1990) developed such a questionnaire namely The Health-Related Hardiness Scale (HRHS). However, the authors found in a study with 389 patients (using factor analyses), who suffered from diabetes, multiple sclerosis, rheumatoid arthritis, that the commitment and challenge scales were not necessarily conceptually distinct (Pollock and Duffy, 1990).

For the purpose of this study, the construct of hardiness was assessed by using the Hardiness Scale (HS) developed by Kobasa (1990) (The Hardiness Institute, Inc. 1994) (refer to appendix C). The HS contains 30 items; each rated on a 4-point likert scale (from 1 'not true' to 4 'completely true'). The HS consists of three subscales, namely, commitment, control and challenge (Kobasa 1990). Commitment can be understood as a sense of involvement in life-activities-work or family, whereas challenge refers to a tendency to regard potentially stressful events as interesting opportunities for growth and control is best understood as a perception of influence over one's life (Kobasa et al., 1982; Kobasa, 1990). The commitment subscale consists of ten items and measures the level of commitment or the capacity to be

involved in activities such as work, family and interpersonal relationships (Harrison et al, 2002). Sample items include: "working hard doesn't matter, since only the bosses profit by it", "by working hard, you can always achieve your goals". The control subscale consists of ten items and measures the degree to which individuals believe they can influence life events. Sample items include: "Most of what happens in life is just meant to be", "Thinking of yourself as a free person just leads to frustration". The challenge subscale consists of ten items and looks at the positive anticipation of change, where change is seen as exciting and enhances or contributes to personal growth. Sample items include: "I don't like to make changes in my everyday schedule", "I like it when things are uncertain or unpredictable".

Kobasa (1990) reports an overall alpha coefficient of 0·90 for internal consistency, with an alpha of 0.70 each for commitment, control and challenge. In the French version of the HS, the overall Cronbach alpha is 0.81 and the subscale coefficients are 0.75 (commitment), 0.60 (control), and 0.58 (challenge) (Morissette, 1993). In this study, internal consistency of the scale was adequate, with the overall alpha coefficient of 0.65 and subscale coefficients of 0.80 (commitment), 0.67 (control) and 0.35 for (challenge). This study utilised the subscales in combination in order to look at hardiness as a whole. A few items were reverse scored and scores range from 30 to 120 with a higher score indicating higher levels of hardiness. This scale has been well established and used by a number of researchers.

3.8.3. Measuring Satisfaction with Life

The Satisfaction with Life Scale (SWLS) by Diener et al. (1985) is a five-item scale that "is designed around the view that one must ask subjects for an overall judgement of their life in order to measure the concept of life satisfaction" (Diener et al., 1985, pp. 71-72). Individuals indicate their degree of agreement or disagreement on a 7-

point Likert-type scale. The scores range from 5 to 35 with higher scores indicating greater life satisfaction. Pavot and Diener (1993) provide a broad list of studies that have used the SWLS with relevant normative data. Diener et al. (1985) reported a 2-month test-retest correlation coefficient of 0.82 and an alpha coefficient of 0.87 for a sample of 176 undergraduates from the University of Illinois. In a sample of 39 elderly individuals, Pavot, Diener, Colvin, and Sandvik (1991) obtained an alpha coefficient of 0.83. According to Pavot et al. (1991) the SWLS has been found to be positively associated at statistically significant levels with other measures of subjective well-being and negatively associated with measures of psychopathology (Diener et al., 1985).

The Satisfaction with Life Scale (SWLS; Diener et al., 1985) was originally developed to circumvent problems in previous scales, which were either composed of single items, narrowly focused on populations, or did not "strictly" measure the judgmental aspects of life satisfaction. Since its inception, the SWLS has been found to represent a single factor (e.g., Diener et al., 1985) and to demonstrate adequate internal consistency (Cronbach's alphas ranging from 0.79 to 0.89) and stability across time (*r*'s of 0.84 for 1 month and 0.54 for 4 years; Pavot and Diener, 1993) and occasions (Eid and Diener, 2004). The positive psychometric properties of the SWLS, combined with its subjective approach, have invited numerous direct group comparisons. For example, researchers have compared the SWLS scores of many diverse groups (Shevlin et al., 1998). The Satisfaction with Life Scale was used to measure life satisfaction for the purpose of this study (refer to appendix C). Sample items include: "In most ways my life is close to ideal", "So far I have gotten the

important things I want in life". The internal consistency (Cronbach alpha) was calculated for this study and was found to be 0.79.

3.9. Data Analysis

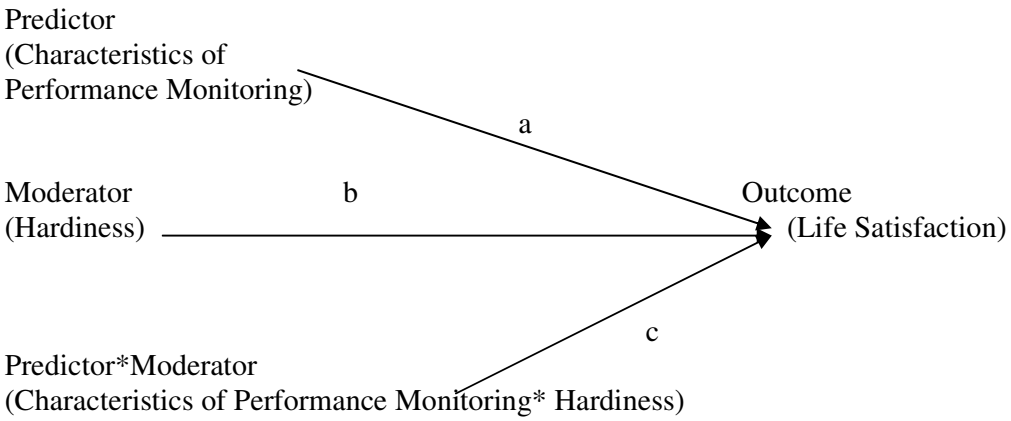
Once the questionnaires were completed and collected, the data was coded and analysed using SAS. A few of the items in the scales used were reversed scored. Frequency analyses and descriptive statistics were conducted for the biographical data (as discussed earlier) and for the total of each subscale in order to better understand the sample. Cronbach's alpha coefficients were also run in order to determine the internal consistency of the scales that were used. The Cronbach's alpha coefficient aims to assess reliability based on intercorrelations among all the single test items (Rosenthal and Rosnow, 1991).

As highlighted earlier, this study aimed at investigating the moderating effects of hardiness on the relationship between performance monitoring (covering three aspects) and life satisfaction in a call centre environment. In order to test this research question, this study followed the conditions for a moderator set out by Baron and Kenny, (1986).

According to Baron and Kenny (1986), moderators can be defined as the third variable affecting either the direction and/or the strength of the relationship between the independent (performance monitoring) and dependent variable (life satisfaction). Furthermore Baron and Kenny (1986) state that moderator variables always function as independent variables.

Baron and Kenny (1986) further state that in order for there to exist a moderating variable, three causal paths need to feed into the outcome variable (life satisfaction): the impact of performance monitoring as a predictor (Path *a),* the impact of hardiness as a moderator (Path *b),* and the interaction or product of these two (Path *c).* The moderator hypothesis is only supported if the interaction (Path *c)* is significant (Baron & Kenny, 1986). Refer to figure 3.9.1 below

Figure 3.9.1.: Moderator Model for variables to be assessed in this study



With the above in mind, Pearson's correlation coefficients and regression analyses were utilised in order to establish a relationship between the characteristics of performance monitoring and life satisfaction as well as between hardiness and life satisfaction. Finally, moderated multiple regressions were conducted in order to determine the moderating effects of hardiness on the relationship between performance monitoring and life satisfaction in a call centre environment (path *c* which includes that interaction effects). This chapter attended to the methodology that was adopted for this study. The following chapter attends to the quantitative results of this research paper.

Chapter Four: Quantitative Results

The following chapter presents the results of the statistical analysis that was carried out in order to test the research question. The statistical analysis of the raw data was carried out using the SAS computer programme. The results were then entered into tables using Microsoft Word and are presented below. The first results, illustrate the simple statistics of each subscale along with the internal reliability information for the subscales and overall scales. Thereafter the results of the Pearson's correlation analyses as well as linear regression analyses (between the characteristics of performance monitoring, hardiness and life satisfaction) will be described. This is followed by regression analyses of each IV and the moderator (hardiness) on life satisfaction. Finally, moderated multiple regression analyses were conducted between the characteristics of performance monitoring, hardiness and life satisfaction in order to achieve the main aim of the current study.

4 a. Descriptive statistics and Cronbach alpha coefficients

Table 4.1: Descriptive statistics and internal consistency information for the total of each performance monitoring subscale

VARIABLE	N	MEAN	STD DEV	MIN	MAX	CRONBACH ALPHA
Content of performance monitoring (feedback)	72	41.95	11.04	12.00	60.00	0.93
Beneficial purpose of performance monitoring	72	38.32	5.40	21.00	48.00	0.69
Perceived intensity of performance monitoring	72	35.14	6.93	17.00	50.00	0.86

The above Table 4.1 indicates the simple statistics for each of the subscales in the performance monitoring measures. The table contains means, standard deviations, minimum and maximum scores and the internal reliability information. The statistics indicate that the mean score of the respondents for content of performance monitoring is 41.95, with a standard deviation of 11.04. Majority of the population have scored between approximately 31 and 53 on this scale (midpoint=36). The mean score of the respondents for the beneficial purpose of performance monitoring purpose subscale was 38.32 with a standard deviation of 5.40. Majority of the population scored between approximately 33 and 43 on this scale (midpoint=30). Lastly, the mean score of the respondents for the performance monitoring awareness/intensity subscale was 35.14 with a standard deviation of 6.93 and the majority of the population scored

between approximately 28 and 42 (midpoint=30).The Cronbach alpha coefficients were calculated for each of the subscales. According to Murphy and Davidshofer, (2001) and Rosnow and Rosenthal, 1996, a test or subscale with an alpha coefficient of .60 and above is considered to have acceptable and satisfactory reliability. In light of this, the internal consistency of 0.93 for the content of feedback of performance monitoring, 0.69 for the beneficial purpose of performance monitoring and 0.86 for the perceived intensity of performance monitoring was considered acceptable.

The following table illustrates the simple statistics for the total of each hardiness subscale, including the simple statistics for the overall hardiness scale.

Table 4.2: Descriptive statistics and internal consistency for the hardiness subscales and overall scale

VARIABLE	N	MEAN	STD DEV	MIN	MAX	CRONBACH ALPHA
COMMITMENT	72	28.50	5.29	16.00	40.00	0.80
CHALLENGE	72	24.57	3.16	16.00	32.00	0.35
CONTROL	72	28.85	4.44	19.00	38.00	0.67
HARDINESS (as a whole)	72	81.91	7.97	68.00	100.00	0.65

Table 4.2 indicates the simple statistics for the hardiness subscales namely commitment, challenge and control as well as for the overall hardiness scale. The table contains the means, standard deviations, minimum and maximum scores as well as the internal consistency information. The statistics indicate that the mean score of

the respondents for the commitment subscale was 28.50 with a standard deviation of 5.29 and the majority of the population scored between approximately 24 and 34 (midpoint=25). The mean score for the challenge subscale was found to be 24.57 with a standard deviation of 3.16 and the majority of the population scored between 22 and 28 (midpoint=25). The mean score for the control subscale was found to be 28.85 with a standard deviation of 4.44 and the majority of the population scored between approximately 25 and 33 (midpoint=25). Finally, the mean score for the overall hardiness scale was found to be 81.91 with a standard deviation of 7.97. The majority of the sample scored between approximately 74 and 90 (Midpoint=75). The internal consistency was also calculated for the subscales and overall hardiness scale and was found to be 0.80 for commitment, 0.67 for control and 0.35 for challenge. The internal consistency for challenge as evident, was found to be poor. The internal consistency for the overall hardiness scale however was found to be 0.65 which, according to Rosnow and Rosenthal (1991), is considered to be an acceptable reliability. The overall hardiness scale was utilised for the purpose of this study.

The following table illustrates the simple statistics i.e. the means, standard deviations, medians, minimum and maximum scores with life sat (tot) = total of the life satisfaction scale.

Table 4.3: Descriptive statistics and internal consistency for the Life Satisfaction Scale

VARIABLE	N	MEAN	STD DEV	MEDIAN	MIN	MAX	CRONBACH ALPHA
LIFE SATISFACTION (TOT)	72	19.46	6.89	19.00	9.00	32.00	0.79

The above table shows that the mean score for the Life Satisfaction Scale was found to be 19.46 with a standard deviation of 6.89 and the majority of the population scored between 12 and 26 on this scale (midpoint=15). The internal consistency for the life satisfaction scale was found to be 0.79 which was considered adequate.

4 b. Pearson's correlation coefficients and linear regression analyses for the variables.

The following tables 4.4 a and 4.4 b to 4.7 a and 4.7 b illustrate the Pearson's correlation coefficients and linear regression analyses (*significance at $p<0.05$) for the variables in order to analyse the first aim of this study. It was considered useful to conduct these analyses in order to first assess the relationship between the variables (in accordance with the moderator model/conditions by Baron and Kenny (1986) which was described in the methodology chapter).

The following three hypotheses have been tested using correlations and regressions.

Hypothesis 1: The content of performance monitoring (in terms of call productivity and quality) is related to life satisfaction in a call centre environment

Table 4.4 a: Pearson's correlation coefficients for the content of performance monitoring and life satisfaction.

Pearson's Correlation Coefficient, n=72. **Prob>[r] under HO:Rho=0**	
The content of performance monitoring (feedback)	**Life satisfaction**
	0.37061
	0.0015*

*Significance at p<0.05

Table 4.4 b: Linear regression model for the content of performance monitoring feedback (Predictor) and life satisfaction (DV)

Variable	**DF**	**Parameter Estimate**	**T Value**	**Pr>[t]**	**R-Square**	0.1374
Intercept	1	9.70877	3.24	0.0018	**Adj R Square**	0.1249
Content of Performance monitoring (feedback)	1	0.22883	3.31	0.0015*		

*Significance at p<0.05

Tables 4.4 a and 4.4 b indicates the Pearson's correlation coefficient and regression analysis for the content of performance monitoring (feedback) and life satisfaction. The regression model was found to be significant (F1, 69=10.99, p<0.0015).The results in these tables indicate that the content of performance monitoring (in terms of call productivity and quality) is positively related to and predicts life satisfaction among agents. Thus, the feedback of performance monitoring had an impact on the

call centre agents' levels of life satisfaction. This finding supported the first hypothesis of the current study and fulfils path *a* of the Baron and Kenny (1986) moderator model.

Hypothesis 2: The beneficial purpose of performance monitoring (in terms of call productivity and quality) is related to life satisfaction in a call centre environment

Table 4.5 a. Pearson's correlation coefficients for the beneficial purpose of performance monitoring and life satisfaction

Pearson's Correlation Coefficient, n=72. Prob>[r] under HO:Rho=0	
Beneficial purpose of performance monitoring	**Life satisfaction**
	0.12474
	0.3000

*Significance at p<0.05

Table 4.5 b: Linear regression model for beneficial purpose of performance monitoring (Predictor) and life satisfaction (DV)

Variable	**DF**	**Parameter Estimate**	**T Value**	**Pr>[t]**	**R-Square**	0.0156
Intercept	1	13.27947	2.28	0.0259	**Adj R Square**	0.0013
Beneficial purpose of performance monitoring	1	0.15735	1.04	0.3000		

*Significance at p<0.05

The correlation and regression analyses in Tables 4.5 a and 4.5 b were not found to be significant. This suggests that the relationship between the beneficial purpose of performance monitoring and life satisfaction is not significant and the beneficial purpose of performance monitoring does not predict life satisfaction in the call centre. This finding indicates that the second hypothesis of this study has not been supported. This also suggests that the moderator relationship (for the beneficial purpose of performance monitoring, hardiness and life satisfaction) cannot be pursued since according to Baron and Kenny (1986), the independent variable has to be related to the dependent variable even if the relationship is not strong.

Hypothesis 3: The perceived intensity of performance monitoring is related to life satisfaction in a call centre environment.

Table 4.6 a: Pearson's Correlation Coefficient for the perceived intensity/awareness of performance monitoring and life satisfaction

Pearson's Correlation Coefficient, n=72. **Prob>[r] under HO:Rho=0**	
Performance monitoring intensity	**Life satisfaction**
	-0.23844
	0.0437*

*Significance at $p<0.05$

Table 4.6 b: Linear regression model for the perceived intensity/awareness of performance monitoring (Predictor) and life satisfaction (DV)

Variable	DF	Parameter Estimate	T Value	Pr>[t]	R-Square	0.0569
Intercept	1	27.77926	6.73	<.0001	**Adj R Square**	0.0434
Performance monitoring intensity	1	-0.23680	-2.05	0.0437*		

*Significance at p<0.05

The above regression results were found to be significant (F1, 70= 4.22, p<0.0437) and the correlation analysis was also found to be significant. The results in these tables indicate that the perceived intensity of performance monitoring is negatively related to and predicts life satisfaction among agents. This suggests that the more the call centre agents perceive the monitoring to be intense the lower their levels of life satisfaction. This result indicates that hypothesis three was supported and fulfils the path *a* moderator condition set by Baron and Kenny (1986).

The fourth hypothesis considers the relationship between hardiness and life satisfaction.

Hypothesis 4: There exists a relationship between hardiness and life satisfaction

Table 4.7 a: Pearson's correlation coefficient for hardiness and life satisfaction

Pearson's Correlation Coefficient, n=72. **Prob>[r] under HO:Rho=0**	
Hardiness	**Life satisfaction**
	0.54240
	<.0001*

*Significance at p<0.05

Table 4.7 b: Linear regression model for hardiness and life satisfaction

Variable	**DF**	**Parameter Estimate**	**Standard Error**	**T Value**	**Pr>[t]**	**R-Square**	0.3002
Intercept	1	-19.32112	7.10957	-2.72	0.0083	**Adj R Square**	0.2902
Hardiness	1	0.47340	0.08639	5.48	<.0001*		

*Significance at p<0.05

The regression model of the above analyses was found to be significant (F1, 70=30.03, p<.0001). The above Tables 4.7 a and 4.7 b indicate that hardiness is positively related to and predicts life satisfaction among call centre agents in this study. This suggests that the fourth hypothesis of this study was supported and the moderator condition (path *b*) set by Baron and Kenny (1986) has been met.

4 c. Linear regression analyses for each IV with the inclusion of the moderator variable (no interaction) and life satisfaction

The following multiple regressions were conducted by following the full model fitted selection for multiple regression.

Table 4.8: Multiple regression analysis of the content of performance monitoring (independent variable) and hardiness (moderator) on life satisfaction (dependent variable)

Variable	DF	Parameter Estimate	T Value	Pr>[t]	R-Square	0.3179
Intercept	1	-17.91491	-2.54	0.0132	**Adj R Square**	0.2979
The content of performance monitoring (feedback)	1	0.10875	1.60	0.1144		
Hardiness	1	0.39921	4.24	<.0001*		

*Significance at p<0.05

The above Table 4.8 indicates the multiple regression model for the variables the content of performance monitoring and hardiness on life satisfaction. The multiple regression model was found to be significant (F2, 68= 15.85, P<.0001). Furthermore, it can be seen that the content of performance monitoring and hardiness explains 31.79% of the variance of life satisfaction. Additionally, as evident from the above table 4.8, only hardiness was found to have significant main effects on life satisfaction. This shows that the content of performance monitoring has no impact on life satisfaction once hardiness is included in the model.

Table 4.9: Multiple regression analysis of the beneficial purpose of performance monitoring (independent variable) and hardiness (moderator) on life satisfaction (dependent variable)

Variable	DF	Parameter Estimate	T Value	Pr>[t]	R-Square	0.2962
Intercept	1	-16.83266	-2.21	0.0306	**Adj R Square**	0.2755
Beneficial purpose of performance monitoring	1	-0.08431	-0.62	0.5388		
Hardiness	1	0.48124	5.21	<.0001*		

*Significance at p<0.05

The above Table 4.9 indicates the multiple regression model for the variables the beneficial purpose of performance monitoring and hardiness on life satisfaction. The multiple regression model was also found to be significant (F2, 68= 14.31, p<.0001). The results suggest that the beneficial purpose of performance monitoring and hardiness explains 29.62% of the variance of life satisfaction. Also, similarly to the previous regression model, it was noted that only hardiness has significant main effects on life satisfaction and the beneficial purpose of performance monitoring has no significant main effects.

Table 4.10: Multiple regression analysis of the perceived intensity/awareness of performance monitoring (independent variable) and hardiness (moderator) on life satisfaction (dependent variable)

Variable	DF	Parameter Estimate	T Value	Pr>[t]	R-Square	0.3005
Intercept	1	-18.05978	-1.80	0.0756	**Adj R Square**	0.2803
Perceived intensity of performance monitoring	1	-0.01971	-0.18	0.8575		
Hardiness	1	0.46646	4.90	<.0001*		

*Significance at p<0.05

Table 4.10 indicates the multiple regression model for the variables the perceived intensity/awareness of performance monitoring and hardiness on life satisfaction. The multiple regression model was also found to be significant (F2, 68= 14.82, p<.0001). The results suggest that the perceived intensity/awareness of performance monitoring and hardiness explains 30.05% of the variance of life satisfaction. Again, it is noted that hardiness alone has significant main effects on life satisfaction whereas the perceived intensity/awareness of performance monitoring has no significant main effects.

4 d. Moderated multiple regressions for all three independent variables

Tables 4.11 and 4.12 below illustrate the moderated multiple regressions. The moderated multiple regressions examined the impact of the moderator hardiness on the relationship between the independent variables and life satisfaction. Separate regressions were run for each of the independent variables i.e. the content of performance monitoring, and the perceived intensity/awareness of performance monitoring (a moderated regression for the beneficial purpose of performance monitoring was not pursued as it was not significantly related to life satisfaction and this suggests that the conditions set by Baron and Kenny (1986) for moderator was not met). To address the effectiveness of hardiness as a moderator on the relationship between the characteristics of performance monitoring and life satisfaction in a call centre environment, full model fitted multiple regressions were conducted. The independent variable, moderator and interaction term were entered into each model (with life satisfaction as the DV). For the first model, the content of performance monitoring (IV), hardiness (moderator) and hardiness*content of performance monitoring (interaction term) were entered. The second model included the perceived intensity/awareness of performance monitoring (IV), hardiness (moderator) and hardiness*the perceived intensity/awareness of performance monitoring (interaction term). By adding in the interaction effect, path c (most important in determining a moderating effect) of Baron and Kenny's (1986) moderator model could be tested.

Table 4.11: Moderated multiple regression for the content of performance monitoring (feedback)

Variable	DF	Parameter Estimate	T Value	Pr>[t]	R-Square	0.3215
Intercept	1	-35.23208	-1.18	0.2411	**Adj R Square**	0.2912
(IV) Content of performance monitoring	1	0.48597	0.77	0.4461		
(Moderator) Hardiness	1	0.61845	1.63	0.1068		
(Interaction) Hardiness* Content of performance monitoring	1	-0.00474	-0.60	0.5515		

*Significance at $p<0.05$

The above regression model was found to be significant ($F3, 67=10.58$, $p<.0001$) Table 4.11 however demonstrates that the interaction term is not significant ($F\ 1 = -0.60$, $p = 0.5515$; $p > \alpha$. This suggests that hardiness does not have a moderating effect on the relationship between the content of performance monitoring and life satisfaction among call centre agents in this study suggesting that path *c* condition of Baron and Kenny's (1986) moderator model has not been fulfilled. Interestingly, from table 4.8 it becomes evident that hardiness is a significant predictor and has main effects, but in the above table, it becomes clear that once the interaction term is added to the model, no significant predictive power is added by hardiness.

Table 4.12: Moderated multiple regression for the perceived intensity/awareness of performance monitoring.

Variable	DF	Parameter Estimate	T Value	Pr>[t]	R-Square	0.3133
Intercept	1	32.22901	0.89	0.3756	**Adj R Square**	0.2825
(IV) Perceived intensity of performance monitoring	1	-1.46829	-1.43	0.1583		
(Moderator) Hardiness	1	-0.13202	-0.31	0.7573		
(Interaction) Hardiness* Perceived intensity of performance monitoring	1	0.01734	1.41	0.1641		

*Significance at $p<0.05$

The above regression model was found to be significant ($F3, 67=10.19$, $p<.0001$).

The above regression table however indicates that the interaction effect is not significant ($F\ 1 = 1.41$, $p =0.1641$, $p > \alpha$.). This suggests that hardiness does not have a moderating effect on the relationship between the perceived intensity/awareness of performance monitoring and life satisfaction among call centre agents and therefore the moderator condition set by Baron and Kenny (1986) for path *c* has not been fulfilled. Once again, it can be seen in table 4.10 that when hardiness and the perceived intensity/awareness of performance monitoring are added to the model, hardiness was found to have main effects. However, as is indicated in table 4.12 above, once the interaction term is added, hardiness is no longer a significant predictor.

The above Tables 4.11 to 4.12 show that hardiness does not have moderating effects on the relationship between performance monitoring and life satisfaction in a call centre environment.

This chapter had attended to the results of the current study. The following chapter attends to a more detailed discussion of the results/findings of this study.

CHAPTER FIVE: DISCUSSION

This chapter aims at discussing the findings of the current study as presented in the previous chapter and explain as well as relate the findings of this study to previous literature as presented in the second chapter (Literature review) of this dissertation. This will be followed by a discussion on the limitations of the present study as well as suggestions for future research.

5.1 General discussion

Call centre work has become a well-known area of research due to the nature of the call centre environment. Call centres, as discussed in the second chapter, are used synonymously with terms such as "sweat shops" or "modern factories" (Metcalf & Fernie, 1998). The use of call centres by organisations has grown rapidly worldwide and is on a continued spike. South Africa is not excluded from this rise in the call centre equation. These new forms of working practices give rise to various implications for the call centre employees (Metcalf & Fernie, 1998).

A fair amount of findings in the literature on call centres suggest that negative perceptions exist with regard to the experiences of work and work design within call centres (Metcalf & Fernie, 1998; Taylor & Bain, 1999). The implications that may arise as a result of call centre operators' experience of work design (particularly in relation to the performance surveillance), and its effect on overall life satisfaction with particular focus on the impact of hardiness within this relationship appears to be overlooked in the existing literature. Consequently, this research study aimed to assess:

a) The relationship between the characteristics of performance monitoring and life satisfaction and hardiness and life satisfaction in a call centre environment, and

b) the moderating effects of hardiness on the relationship between performance monitoring and life satisfaction in a call centre environment (main aim).

The previous chapter has presented the results of the current study; it is the aim of this chapter to give a more detailed explanation of these results. This chapter will therefore discuss the results according to how they were reported in the previous chapter. Thus, the biographical information and descriptive statistics will be discussed first. This will be followed by a discussion of the correlation and regression analyses for the variables. Thereafter the regression analyses of each IV and the moderator (hardiness) will be discussed. Finally, a discussion on the results of the moderated multiple regression analyses will be presented.

5.2 Biographical information

The demographic variables that were reported in chapter three (Tables 3.5.1-3.5.8 on pages 47-49) are indicative of some of the general characteristics of call centres. The literature suggests that call centres are primarily dominated by young employees, furthermore, the literature suggests that call centre employees/agents are relatively well educated (Zemke, 2003). A study by Bagnara and Marti (2001) found that call centres put the burden of high performance and smooth functioning on young people that possess rather high education but are accepting of low salaries. These characteristics are evident in the findings of the present study (the demographics of

the participants have been described in chapter three). Most of the employees in this study were young and fairly well educated with the lowest qualification being matric. Furthermore, the majority of participants were male. A further study could perhaps investigate the reasons for these findings in order to determine why these so called "toxic" (Kjellerup, 2000) environments are dominated by people who are young and well educated and perhaps ambitious yet choose to work in call centres. A possible reason could be that call centres may be viewed as environments whereby students can work and earn, and also study on a part time basis. Another reason could be that these young employees may consider call centre work to be routine with not much "brain work" or less challenging allowing them a work environment that pays for simple work and also allows for part time study. Kjellerup (2000) for example explains that these young people see call centre work as a stepping stone to better ground rather than an environment of preference or one that yields work satisfaction.

Having established that the demographics of this sample are similar to that of other studies of this nature, and discussed the implications thereof, the following section discusses the descriptive statistics, correlation and regression findings of the present study.

5.3. Descriptive statistics

5.3.1. Performance monitoring subscales

This study has found, similarly to Holman et al. (2002) that the impact of performance monitoring in a call centre environment is not uniform and varies in terms of its effects on the agents. This study considered three aspects of performance monitoring, i.e. the content (feedback), beneficial purpose and the perceived intensity of

performance monitoring (refer to chapter three for a clear explanation of these aspects). The results of the current study indicate (Table 4.1.) that the mean score of the respondents for content of performance monitoring is 41.95, with a standard deviation of 11.04. The majority of the sample have scored between approximately 31 and 53 for the content of performance monitoring (in terms of call productivity and call quality) (midpoint=36) which is more towards the higher end of the scale. A higher score suggests that the sample as a whole is relatively happy with the feedback of performance monitoring and view the feedback process of performance monitoring, both in terms of call productivity and quality as fair, useful and constructive. The mean score of the respondents for the beneficial purpose of performance monitoring was 38.32 with a standard deviation of 5.40. This suggests that the majority of the sample scored between approximately 33 and 43 on this scale (midpoint=30). This indicates again that there is an inclination towards the higher end and this suggests that the agents in this study view the purpose of monitoring in terms of call quality and productivity as useful and fair in identifying strengths and weaknesses and as developmental rather than punitive. These findings show that the agents in this study are relatively satisfied with the manner in which the performance monitoring is applied in terms of the feedback and purpose of performance monitoring and they may perhaps feel that it is in place for the right reasons. These findings are similar to the findings by Moorman and Wells (2003); Grant and Higgins (1989) and Holman et al. (2002) where it was found that performance monitoring can be applied in a fair and useful manner in order to enable employees' skills rather than for punitive reasons. Lastly, the mean score of the respondents for the performance monitoring awareness/intensity subscale was 35.14 with a standard deviation of 6.93 and the majority of the sample scored between approximately 28 and 42

(midpoint=30) which again is leaning towards the higher end of the scale (the items in this scale were not reverse scored and as such a higher score indicates dissatisfaction/unhappiness). This suggests that the agents in this study are neither terribly dissatisfied with this aspect of performance monitoring nor are they very happy with it. There however seems to be a slightly higher inclination towards dissatisfaction with this particular aspect of performance monitoring. This again is similar to findings by Holman et al. (2002) who found that the perceived intensity of performance monitoring was the one aspect that call centre agents felt affected by (in a negative way). Although one of the three aspects of performance monitoring were viewed in a slightly threatening sense to the agents in this study, it appears that the other two aspects were not considered threatening and that the agents in this study seem to be quite satisfied with the application of performance monitoring measures in this call centre.

5.3.2. Hardiness scales

The findings of this study also indicate (Table 4.2) that the mean score for commitment was 28.5 with a standard deviation of 5.29 and the mean score for control was 28.85 with a standard deviation of 4.44. This suggests that the majority of the agents in this study have scored more towards the higher end and this suggest that they feel a sense of commitment (as a dimension of hardiness) and feel a sense of being in control (as a dimension of hardiness). This means that the agents feel a sense of purpose and they express it by becoming involved in life's events rather than being passively involved or running away. Furthermore, they feel that they are influential instead of helpless. This shows that two of the three dimensions of hardiness are evident among these agents suggesting a fair level of hardiness among these agents in

the call centre. The findings however show that the agents in this study do not particularly feel a sense of challenge and therefore do not necessarily see change as something that enhances their growth. This may suggest that the agents may be comfortable with some degree of routine based work (which is often the case in call centre work). The mean score for the overall hardiness scale was 81.91 with a standard deviation of 7.97. The majority of the sample scored between approximately 74 and 90 (Midpoint=75). This gives a better picture of the levels of hardiness in the current sample and suggests that there is more of an inclination towards the higher end suggesting that agents in this sample can again be said to have fair levels of hardiness. The above findings are in agreement with the proposal by Kobasa (1979) who suggests that people who are more committed and in control (as dimensions of hardiness) have a minimised perception of threats in any given situation and feel as though they handle their own destiny and it is not other people or an organisation that determines control over that. The above findings may suggest that it is the agents' hardy personalities that allow them (agents) to feel more accepting of the performance monitoring system in the call centre (with the exception of the perceived intensity). It may be possible that their sense of control and a sense of commitment allows for them to feel that the monitoring is in place for the correct reasons.

5.3.3 The Satisfaction with Life Scale

The findings in table 4.3 indicate that the mean score for the life satisfaction scale was found to be 19.46 with a standard deviation of 6.89 and the majority of the population scored between 12 and 26 on this scale (midpoint=15). This shows that the scores lean more towards the higher end and a higher score implies that the majority of the call centre agents in this study are generally satisfied with life. This again shows

differences with previous literature which suggests that call centre agents are generally less satisfied and report lower levels of well being (example Holman et al., 2005; Metcalf & Fernie, 1998; Taylor & Bain, 1999). It may be possible that it is the agents' hardy personalities that is ensuring their higher levels of life satisfaction.

The first aim of this study was to determine if there exists a relationship between performance monitoring (covering three aspects) and life satisfaction, and hardiness and life satisfaction in a call centre environment.

The following sections 5.4.1-5.4.3 separately discusses the first three hypotheses of this study.

5.4.1 The relationship between the performance related content of performance monitoring (feedback) and life satisfaction in a call centre environment

The following hypothesis is based on the content of performance monitoring, and life satisfaction in a call centre. The findings will be discussed below.

Hypothesis 1: *The content of performance monitoring in terms of call productivity and call quality is related life satisfaction in a call centre environment.*

The Pearson's correlation coefficients and regression analysis (Tables 4.4a and 4.4b) in this study indicate that the content of performance monitoring is (significantly) positively related to and predicts life satisfaction. The findings suggest that the content of performance monitoring had a positive impact on the call centre agents' level of life satisfaction as an increase in the content of performance monitoring is

associated with an increase in life satisfaction. This finding supports the first hypothesis and fulfils the path *a* condition of Baron and Kenny's (1986) moderator model. This is an important finding as it suggests that if the monitoring in call centres is considered fair and constructive, it can play some role in improving employee well-being levels. The above findings of this study are similar to the findings by Holman et al. (2002) who found that the performance related content of monitoring is associated with greater well-being, lower emotional exhaustion, lower levels of depression and high job satisfaction. The findings of the current study are also similar to those by Chalykoff and Kochan (1989) as well as Carayon (1994), which found that the performance related content of monitoring was associated with greater levels of well-being. According to Aiello and Shao (1993) it is the employee's increased ability to cope with demand that produces the improvements in well-being. This study is also in agreement with Grant and Higgins (1989) who state that employees are thought to benefit from monitoring because they can receive accurate, timely and fair feedback, and therefore improve their performance and develop new skills.

The above findings of the present study are also reflective of Smith et al. (1992) which suggests that in order for workers to accept a performance measurement system and feel positively about it, it is imperative that the measurement system is designed to gather information that is considered relevant to the evaluation of their abilities and performance. The current study also supports findings by Bakker, Demerouti and Schaufeli (2003) which found that job resources such as social support, supervisory coaching, and performance feedback were influential predictors of commitment, satisfaction and dedication. In line with findings by Bakker, Demerouti and Schaufeli (2003), this study found that the more the content of feedback (call productivity and

quality) is considered useful, fair and constructive, the more the levels of life satisfaction. This finding seems to support proposal in the literature on life satisfaction, which says that the working conditions of an individual will influence life satisfaction and life satisfaction can be improved or worsened in relation to changes in characteristics of either the person or the environment (Rice, 1984). The findings relating performance monitoring and life satisfaction are also in line with the existing literature which suggests that work has a substantial influence on people's self-concept and esteem levels (elements pertaining to life satisfaction) (Dockery, 2003; Ehrhardt, Saris & Veenhoven, 2000; Kenney & Bhattacharjee, 2000; Veenhoven & Saris, 1996).

A reason for the above finding may be that the agents in this study may consider the feedback process of monitoring as they do due to their hardy personalities. Alternately, the process of feedback in this call centre could be one that is actually fair and in place for developmental reasons; a process which is perhaps understood by the agents.

5.4.2. The relationship between the beneficial purpose of performance monitoring and life satisfaction in a call centre environment.

The following hypothesis is based on the beneficial purpose of performance monitoring and life satisfaction in a call centre. The findings will now be discussed.

Hypothesis 2: *The beneficial purpose of performance monitoring (in terms of call productivity and quality) is related to life satisfaction in a call centre environment*

The correlation and regression analyses in Tables 4.5 a and 4.5 b indicate that the relationship between the beneficial purpose of performance monitoring and life satisfaction is not significant and the beneficial purpose of monitoring does not predict life satisfaction in the call centre. This result indicates that the second hypothesis of this study was not supported and path *a* in the moderator model set by Baron and Kenny (1986) has not been met. A moderated regression was therefore not pursued for the purpose of performance monitoring hardiness and life satisfaction as, according to Baron and Kenny (1986), the independent variable (the beneficial purpose of performance monitoring) should be related to the dependent variable (life satisfaction) even if the relationship is not a strong one (as this is one of the three conditions the for a moderator to exist). The above findings of this study is dissimilar to the findings by Holman et al. (2002) which suggests that the purpose of performance monitoring when considered beneficial, is associated with greater levels of well being. One reason for the difference from the study by Homan et al. (2002) is that the sample size of the current study was much smaller than theirs. This could have had an effect on the difference in results. Another reason for the difference in results could be because the current study was conducted in a single South African call centre environment among people of various backgrounds and the study by Holman et al. (2002) was conducted in the UK in two call centres.

A further reason for this difference could be that the agents may feel unaffected by the monitoring system and neither feel threatened nor consider the process entirely beneficial. They may perhaps simply see the process as part of their job. The interesting part of the current finding is that even though no statistically significant

relationship was found, it can imply that although the agents may not be positively affected by the monitoring, they are also not negatively affected by it.

The findings of the current study that have been discussed above in relation to the content and purpose of performance monitoring are in line with Holman et al. (2002) in that it has shown that dissimilar and contrary to its critics (e.g. Kjellerup, 2000; Metcalf & Fernie, 1998; Taylor & Bain, 1999; Zapf et al., 1999) which interestingly makes up majority of the literature on call centres, that not all characteristics of performance monitoring are seen in a negative light or detrimental to the agents in terms of life satisfaction and hardiness. It may be possible that South African call centres are implementing the performance systems more effectively and in accordance with agents' needs. It may also be possible that due to the high prevalence of unemployment in South Africa, these agents may feel privileged for having a job to start with and they may feel that the performance monitoring systems are simply part of the job and may not give the system as much importance.

In order to support or provide an explanation for the above findings of this study it is necessary to mention an informal discussion that took place between the researcher and three of the call centre agents during a lunch break. During this conversation it was noted that these employees considered working in a call centre as "prestigious, but without any perks". When asked what was meant by that statement it became clear that they believed that people external to the call centre environment view call centre work as professional and skilled due to the image of them using very "advanced computer systems and technologies". It was assumed that the technology which they were referring to was the electronic performance monitoring systems. One

of the employees went as far as to mention that "people think we work in a place like those people who control aeroplanes from their little room (air traffic controllers)… that is a good image to have I would think". The other employee then added by saying "the work is quite straightforward and not that exciting…but at least we have a good image".

In an attempt to unpack these perceptions, and provide possible reasons for the above findings of this study, it may be that some employees may feel affected in a positive way (as indicated in the descriptive statistics of this study) by the impact of the performance monitoring systems due to the belief that they are working in a "technologically enhanced environment" rather than one that is causing levels of distress and lack of autonomy or control. They may also feel a sense of comfort in knowing that they are receiving timely and fair feedback in relation to their performance (as was seen in Table 4.1) instead of not receiving the feedback and being uncertain of how they are viewed by management in terms of performance. They may also feel that all jobs have some form of monitoring or "checking up" as such may feel that their levels of monitoring are no different from the rest of the working world.

5.4.3. The relationship between the perceived intensity of performance monitoring and life satisfaction in a call centre environment

The following section attends to the perceptions of the call centre agents in terms of the intensity of performance monitoring.

Hypothesis 3: *The perceived intensity of performance monitoring is related to life satisfaction in a call centre environment.*

As mentioned earlier under the descriptive statistics, the agents in this study view the monitoring as slightly intensive in terms of the pressure, no sense of escape, and have awareness that they are being monitored. The correlations and regression analyses in Tables 4.6 a and 4.6 b suggest that the perceived intensity of performance monitoring is significantly and negatively related to and predicts levels of life satisfaction among the call centre agents in this call centre. This suggests that the more the call centre agents perceive the monitoring to be intense the lower their levels of life satisfaction. This finding indicates that the conditions set by Baron and Kenny (1986) for a moderator in terms of path *a* have been fulfilled and the third hypothesis of this study was supported.

The above findings of the current study are in line with Chalykoff and Kochan's (1989) and Carayon's (1994) as well as with Holman et al. (2002) studies, who found that the employees' perceived intensity of the monitoring was negatively associated with well-being (i.e. the perceived intensity of monitoring showed strong associations with emotional exhaustion and job control and supervisory support showed associations with depression). Although this finding is similar to findings by Holman et al (2002); Metcalf and Fernie (1999); Taylor and Bain (1998); Kinnie et al.,(2000) and Lewig and Dollard (2003) in terms of the negative implications with regards to performance monitoring, it is necessary to state that the relationship indicating that an increase in perceived intensity of performance monitoring is associated with lower levels of life satisfaction is relatively weak.

Furthermore, the findings on the perceived intensity of performance monitoring show that it is only this particular characteristic of performance monitoring that displays evidence of having a negative impact on the agents in terms of their levels of life satisfaction. The other two characteristics of performance monitoring namely the content and beneficial purpose are not viewed in this negative way. This finding is important as it highlights that focus should be placed on the agents' perceptions of the monitoring systems. More research is perhaps needed in order to further understand and explain the perceptions of agents in terms of how intense they find the system and why. Particularly, more research is needed in examining the electronic performance monitoring system and employees' perceptions particularly in this regard. With this said it is also important to acknowledge that one cannot accept that the agents' levels of life satisfaction are primarily affected by the intensity of performance monitoring. There could be a number of other variables, personal or other organisational situations in their lives or even in the call centre that play a role too for example other personality variables such as self-efficacy (Bandura, 1997) or differences in ways that the agents perceive the system to be or there may even be difficulties with supervisors for reasons other than monitoring. It may be that some agents may feel a sense of demotivation in terms of being monitored as they may feel it is intrusive however it is also possible that others may view it as a necessary part of their job yet still consider the process intense and stressful. Another study addressing a much larger sample or even different measures may perhaps give more insight into this particular concern.

The next sub section attends to the fourth hypothesis of this study.

5.5. The relationship between hardiness and life satisfaction in a call centre environment

The following sub section attends to the relationship between hardiness and life satisfaction.

Hypothesis 4: *There exists a relationship between hardiness and life satisfaction.*

The current study found that hardiness is (significantly) positively related to and predicts life satisfaction among the call centre agents in this call centre. This suggests that an increase in levels of hardiness is associated with an increase in levels of life satisfaction among the call centre agents. This finding both supports the fourth hypothesis of this study and also fulfils path *b* of the conditions for moderator by Baron and Kenny (1986). The above findings of the current research paper are similar to Lounsbury et al. (2004); Ashton (1998); Lounsbury, Sundstrom, Loveland and Gibson (2003); Paunonen et al. (1999) and Lounsbury, Tatum, Gibson, Park, Sundstrom, Hamrick and Wilburn (2003) who purport that the important factor preceding life satisfaction and the domains of experience is personality, which is posited as leading to life satisfaction. The findings of this study are also in line with the statement by Kobasa (1979), who says that people who exhibit a hardy personality accept and attempt to transform any trying circumstances.

Similarities can also be seen with findings by Furnham (1991) who outlines the importance of personality traits in determining satisfaction in work and leisure. The finding of the current study is also in line with Gebhardt et al. (2001) who state that hardiness is a personality composite of commitment, control and challenge and is

directly relevant to health, well-being and overall satisfaction. This is an interesting finding especially in terms of call centre work and the possible considerations that call centre managers could keep in mind. It may be possible that an individual who is more hardy may cope better or "handle" the stress of everyday call centre work better than individuals who do not possess hardy personalities. This may be an important pointer in terms of the recruitment process of call centre agents. Perhaps it could be useful to add a personality instrument to the process of selection of call centre agents, particularly using an instrument that tests the individual's level of hardiness. It may be that over time managers could analyse similarities and differences among agents who were classified as "hardy" and those who were classified as "not hardy". This could lead to a whole new area of research and allow for a better understanding in terms of the "the types of people who would make good call centre agents".

The following section discusses the linear regression findings which included the IVs and the moderator.

5.6. The linear regressions for each IV with the inclusion of the moderator

Tables 4.8, 4.9 and 4.10 indicate that the multiple regression models were found to be significant. The results further indicate that once hardiness is added to all three of the models (Tables 4.8, 4.9 and 4.10), it is only the hardiness variable that has significant main effects on life satisfaction, whereas the content of performance monitoring, beneficial purpose of performance monitoring and perceived intensity of performance monitoring no longer have significant effects on life satisfaction (after hardiness is added to the models). Furthermore, it is noted that the content of performance

monitoring and hardiness explains 31.79% of the variance of life satisfaction (table 4.8), the beneficial purpose of performance monitoring and hardiness explains 29.62% of the variance of life satisfaction (Table 4.9) and the perceived intensity/awareness of performance monitoring and hardiness explains 30.05% of the variance of life satisfaction (Table 4.10). This suggests that approximately 70% of the variance of life satisfaction is explained by factors other than hardiness and characteristics of performance monitoring. These could include a range of different things such as family life, religion, wealth, health to name a few. The above finding suggests that hardiness plays a role in the agents' levels of life satisfaction. This tends to support the assertion by Judkins and Furlow (2006) (particularly considering the perceived intensity aspect of monitoring) which states that hardy individuals possess a belief that allows them to consider stressors as manageable thereby being able to influence their situations. This finding may suggest that hardiness has a mediating role on the relationship between performance monitoring and life satisfaction however that was not the aim of this study and a further study would be needed to confirm this assumption.

The following section discusses the findings of the moderated multiple regressions that were conducted in order to determine the main aim of this study. i.e. if hardiness has a moderating effect on the relationship between the different aspects of performance monitoring and life satisfaction in a call centre environment.

5.7. The Moderating Effects of Hardiness on the Relationship between Performance Monitoring and Life Satisfaction.

The following hypothesis attends to the main aim of the study. An explanation will be given below.

Hypothesis 5: *Hardiness has a moderating effect on the relationship between performance monitoring and life satisfaction in a call centre environment.*

Much of the existing literature suggests that call centre environments are stressful and affect the employees in a negative way (e.g. Aiello & Kolb, 1995; Johnson, Cooper, Cartwright & Donald, 2005; Metcalf & Fernie, 1998; Taylor & Bain, 1999). A significant amount of research has considered the design of call centre work and technologies that can improve employee performance and satisfaction (Knights and McCabe, 1998), but the literature on individual differences points out that along with the design of the job, individual characteristics of employees also influence their reaction in work environments (Dewe & Trenberth, 2004; Kobasa et al., 1982). Call centre work is often characterised as having limited task variety meaning that agents carry out the same tasks monotonously along with a high workload and much stress (Parker & Wall, 1998). Call centre work is also often termed as Tayloristic, electronic sweatshops and electronic panopticons and agents are often termed as "battery hens" (Bain et al, 2001; Metcalf & Fernie, 1997; Taylor & Bain, 1999). Work plays a vital role in one's life and makes up most of one's waking hours in the day. This would suggest that since an individual spends most of his/her day at work, a link between work and levels of life satisfaction may not be surprising.

Hardiness is a personality characteristic that is thought to moderate the effects of stressful situations/environments (Judkins, Reid & Furlow, 2006; Kobasa et al., 1982; Tjiong, 2000). The literature suggests that individuals who possess a hardy personality or have a sense of tolerance tend to deal and cope better with stressful

situations/conditions (Harrisson, Loiselle, Duquette & Semenic, 2002; Kobasa et al., 1982; Soderstrom et al., 2000). In the literature, hardiness is often referred to as a buffer which moderates the effects of stressful situations (Kobasa et al., 1982). In light of this, it was thought that since call centres are perceived as stressful environments (example Metcalf & Fernie, 1997) that negatively affect employee well-being, hardy individuals would cope better or have a sense of resilience and therefore experience less of an effect on their levels of life satisfaction despite the stress since their personality characteristic (hardiness) would moderate these effects.

Although this study has found a significant relationship between hardiness and life satisfaction (Table 4.7 a and 4.7 b) and significant main effects for hardiness (Tables 4.8, 4.9 and 4.10) the main aim was to establish the moderating effects of hardiness on the relationship between performance monitoring (covering three aspects) and life satisfaction in a call centre environment.

The findings from the moderated multiple regression analyses however shows that the conditions by Baron and Kenny (1986) for a moderator have not been met in both models (Tables 4.11 and 4.12) since the interaction terms (in both models) were not found to be significant (path *c* has not been fulfilled and this is the most important condition for a moderator). This means that hardiness does not have a moderating effect on the relationship between the content of performance monitoring and life satisfaction in a call centre environment (Table 4.11). The current study also has shown that hardiness does not have a moderating effect on the relationship between the beneficial purpose of performance monitoring and life satisfaction in a call centre environment since no significant relationship was found between the beneficial

purpose of performance monitoring and life satisfaction- Tables 4.5 a and 4.5 b and according to Baron and Kenny (1986) it is necessary for the IV to be related to the DV even if the relationship may not be strong (in order to pursue a moderator relationship). Finally, this study has also shown that hardiness does not have a moderating effect on the relationship between the perceived intensity of performance monitoring and life satisfaction in a call centre environment (Table 4.12). It was thought that since there was a negative relationship between the perceived intensity of performance monitoring and life satisfaction, hardiness would have had a moderating effect on this relationship; however, it may be possible that hardiness is serving a mediator role in this relationship although more research would be required to confirm this.

The above findings suggest that in this study, the personality characteristic of hardiness does not have a moderating effect on the relationship between performance monitoring and life satisfaction in a call centre environment and as a result the fifth hypothesis of this study has not been supported.

Holman et al. (2002) looked at the role of job control and supervisory support in moderating the impact of the perceived intensity of monitoring on well-being and found that both job control and supervisory support had moderating effects. Although the current study considered hardiness as the moderator, it can be compared to the above-mentioned findings by Holman et al. (2002). The findings are different in that this study did not find hardiness to moderate the effects of performance monitoring on life satisfaction (which is considered to be an aspect of well-being). The finding of the current study is also not in line with research that suggests that hardiness acts as a

moderator or buffer in work situations (e.g. Bartone et al., 1989; Dewe & Trenberth, 2004; Dreher, 1995; Kemeny & Laudenslager, 1999; Kobasa, 1979; Williams & Lawler, 2001).

Majority of the studies on the moderating effects of hardiness have been conducted in medical settings and there is not much research looking into the effects of hardiness in other work domains. The hardiness literature suggests that in order for hardiness to play a moderating role the situation should be one that is "stressful" (Tjiong, 2000). In terms of the current study, initially, it was assumed that hardiness would serve as a moderator since call centre work was thought to be very stressful; however, it was seen in this study (similarly to Holman et al., 2002) that performance monitoring is not considered in a completely bad light and agents are relatively satisfied with its application. If this finding is taken into consideration then it may be possible that hardiness is not necessarily needed as a moderator in this relationship as agents are not dissatisfied with the application of performance monitoring with the exception of just one of the three characteristics i.e. the perceived intensity. In line with this view, it can be deduced that call centre environments with particular focus to the performance monitoring may not be as stressful as believed and it may only be the perceived intensity of monitoring that is negatively affecting agents. It may also be possible that this South African call centre has correctly and fairly inculcated the process of monitoring into everyday work and agents understand its "developmental" purpose.

A further explanation for the result could be that since hardiness was significantly related to two of the three independent variables as was established earlier (Tables 4.4

a and 4.4 b and 4.6 a and 4.6 b) and once the moderator was added to the models in Tables 4.8, 4.9 and 4.10 only the moderator was found to be significant, multicollinearity could exist due to intercorrelations between the independent variables and the moderator.

It may be possible that if a larger sample was used or if more than one call centre was used, there could have been an indication of moderator effects. It is also possible that since it is evident that hardiness has significant main effects on life satisfaction (Tables 4.8, 4.9 and 4.10), it may have a mediating role on the relationship between performance monitoring and life satisfaction in a call centre environment. This may even suggest that call centres should consider employing individuals who possess hardy personalities and individuals with hardy personalities could consider call centre work as it may be possible that they would deal better in such an environment (similar to the suggestion by Ojha and Kasturi (2005)). Further research would however be required to validate this assumption.

The above section has attended to a discussion of the findings of the current study. The following section attends to the implications and limitations of this study and provides suggestions for future research.

5.8. Implications of the current study

This study has shown that two of the three characteristics of performance monitoring in a call centre environment are viewed in a positive sense by the call centre agents and have positive effects on their levels of life satisfaction. It is only the perceived intensity of the performance monitoring that has a negative effect on the agents' level of life satisfaction. An important practical implication that these findings highlight is

that the monitoring systems in call centres should ensure that feedback is frequent, useful, and constructive (Holman et al., 2002) in order to be accepted by the call centre agents (as appears to be the case in the current study). The system should also fairly highlight strengths and weaknesses and enable employee skills and abilities rather than be used for punitive reasons. In doing so, it is more likely that the call centre agents will view the monitoring systems in a positive light and therefore find it easier to cope and feel more satisfied. Another implication is that call centres should perhaps clarify reasons for monitoring and communicate this with the call centre agents in an attempt to remove or lessen the negative perception of the intensity of performance monitoring. Another consideration that should be taken by call centre managers is to involve the call centre agents in the designing process of the monitoring system (Chalykoff & Kohan, 1989). Should call centre management consider such options, employees may perceive the systems to be in place for the correct reasons as can be seen in the current study (with the exception of the intensity of performance monitoring). It may also be that hardy individuals may perceive call centre work as more "tolerable" than non-hardy individuals and this may have some influence on the type of people that should be employed in a call centre. In this study it has been acknowledged that the majority of the agents were relatively hardy people. It may be possible that it is this personality trait that has a mediating effect (it has been earlier established that hardiness does not have a moderating effect on the relationship between performance monitoring and life satisfaction in a call centre environment).

The following section attends to the limitations of the current study.

5.9. Limitations of the present study

Almost every piece of research has some degree of limitation. With this in view it is important to highlight certain shortfalls of the present study.

An important limitation to mention with regards to this study was that the sample itself was of a relatively small number. The study consisted of merely 72 participants. Therefore, it may be possible that the results would have differed if the sample size was larger. Furthermore, the call centre was experiencing a system upgrade during the time of data collection. This could have affected the response rate. A further limitation in relation to the sample was that of the respondents' attitudes and emotions while completing the questionnaires. It is impossible to deduce whether or not the respondents answered the questionnaire with total concentration and honesty. Some may have and others may have not for a myriad of reasons. Participants could have felt obligated (even though it was clearly stated that participation is voluntary) and simply answered for the sake of completing the task or to conform to other participants. The response limitation could also be directly related to the method chosen for the study due to a phenomenon known as response bias (Anastasi, 1990).

Another limitation that is necessary to mention is that this study failed to explore the mediating effects of hardiness on the relationship between performance monitoring and life satisfaction in a call centre environment. It would have perhaps been more useful to use a model that combines mediation and moderation in this study since Baron and Kenny (1986) suggest that this is the strongest prediction of social behaviour from global dispositional variables.

An additional limitation to this study was the use of purely quantitative methods of data gathering. This may have restricted a deeper insight into the study in terms of possible reasons for the findings. A qualitative or triangulation method could have perhaps given more insight into the reasons behind the findings of the study. The results from the quantitative research offer objective results but this method does not account for the human aspect involved and it deprives the researcher of a certain degree of control over the research (due to self-report bias) (Rosenthal & Rossnow, 1991). As highlighted by Babbie and Mouton (2004), these methods are able to gain a general view of concepts, they are not particularly successful at covering complex topics.

A further limitation was in relation to the measures/scales themselves. The scales were all in English. This could be problematic because judging from the biographical data that was collected; it was evident that English was not their first language of most of the sample. This could have affected the study in the sense that some participants may have misunderstood the questions and thus responded inaccurately. However, in defence of this shortfall, a prerequisite to call centre work (at this particular call centre) was the ability to speak fluent English. This means that all the agents were able to speak and understand English.

Another limitation that could exist is that of instrumentation for the hardiness scale since the Cronbach alpha coefficients were not high. Similarly for the beneficial purpose of performance monitoring, it was found that the alpha coefficient was 0.69. The rest of the scales however, had moderately high Cronbach alpha coefficients.

Based on the above limitations and the knowledge gained from this study, the next sub section attends to suggestions for future research.

5.10. Suggestions for future research

From all of the above limitations, it is essential to postulate suggestions for future research. First and foremost, the study could be replicated using a larger sample using different/newer measures in order to validate the current study. Although it was found that hardiness does not moderate the relationship between performance monitoring in a call centre and life satisfaction, a further study could perhaps investigate the role of hardiness as a mediator or a combined model can be considered. According to Baron and Kenny (1986), a model that combines moderator and mediator has the ability to make the strongest prediction of social behaviour from global dispositional variables.

The study could also be revised in terms of race, age and even culture differences to identify whether or not these variables play a role in the relationship. It could be useful to consider using more than one call centre in order to make comparisons between different findings. Future research could perhaps use a triangulation method. i.e. by using both quantitative and qualitative methods in order to gain a more in-depth understanding of peoples feelings and attitudes relating to the surveillance in call centres. This could allow for the researcher to pick up on elements that was not possible to detect by simply using self-report measures.

Researchers might also want to consider conducting a longitudinal study since longitudinal designs have the advantage of providing information describing processes or occurrences over an extended period of time (Babbie & Mouton, 2004).

Researchers could use panel studies in order to ensure this long-term observation. Panel studies examine the same set of people each time (Babbie and Mouton, 2001). This would be useful in this study in determining if there is a stable trend or whether (or not) employee perceptions about the performance monitoring vary.

Also, it may be possible that the reasons for employees' lack of satisfaction (based on results found between the perceived intensity of performance monitoring and life satisfaction) in the call centre environment may be caused by their sense of lack of locus of control rather than the surveillance system itself. This would require a further study using additional variables and may be of some insight in the area of call centre research. An important area that also requires further research is that of the electronic performance monitoring aspect within call centres in order to determine if this form of surveillance is considered in a positive of negative light in terms of employee satisfaction and well-being at large.

This chapter attended to the discussion of the findings of the present study. The following chapter concludes the present study.

CHAPTER SIX: CONCLUSION

Despite the limitations that have been outlined above, the current study has been informative in a number of ways. It has shown, similarly to Holman et al. (2002), that performance monitoring in a call centre does not necessarily have a negative impact on employee well-being; particularly life satisfaction and agents consider the process to be fair and constructive for the most part. It is only the perceived intensity of performance monitoring which is just one aspect of performance monitoring that seems to cause some degree of concern in terms of its negative effects on agents, particularly with regards to life satisfaction. This indicates that performance monitoring does not have to be viewed in a completely detrimental sense as do some authors suggest (e.g. Kjellerup, 2000; Metcalf & Fernie, 1998; Taylor & Bain, 1999).

It is the belief of the researcher that this study could contribute to the area of call centre work since it has found, despite not being able to establish hardiness as a moderator in the relationship between performance monitoring and life satisfaction in a call centre, that personality variables, particularly hardiness has main effects on agents' levels of life satisfaction. It can also contribute to the area of call centre work as it has provided several pointers for future research and in terms of implications for call centre managers. It is the hope of the researcher that this study has added to existing literature and stirred a need for further enquiry, particularly with regards to the role of individual differences among call centre employees.

Reference List

Aiello, J. R., & Kolb, K. J. (1995). Electronic performance monitoring and social context: Impact on productivity and stress. *Journal of Applied Psychology*, *80,* 339–353.

Alder, G. S. (1998). Ethical issues in electronic performance monitoring: A consideration of ontological and teleological perspectives. *Journal of Business Ethics*, *17,* 729–743.

Andrews, F. M., & Withey, S. B. (1976). *Social indicators of well-being: America's perception of life quality*. New York: Plenum.

Ashton, M. C. (1998). Personality and job performance: The importance of narrow traits. *Journal of Organizational Behavior 19*, 289-303.

Babbie, E. & Mouton, J. (2004). *The practice of social research.* Oxford, UK: Oxford University Press.

Bain, P. & Taylor, P. (2000). Entrapped by the electronic panopticon? Worker resistance in the call centre. *New Technology Work and Employment*, *15*(1), 2-18.

Bain, P., Watson, A., Mulvey, G., Taylor, P., & Gall, G. (2002). Taylorism, targets and the pursuit of quantity and quality by call centre management. *New Technology Work and Employment, 17*(3), 170-185.

Bain, P.,Watson, A., Mulvey, G., Taylor, P. & Gall, G. (2001). Taylorism, targets and the quantity-quality dichotomy in call centres. *Paper presented at the 19th International Labour Process Conference,* Royal Holloway College, University of London, 26-28.

Bagnara, S., Gabrielli, F., & Marti, P. (2000). Human work in the call centres. Proceedings of the Human Factors and Ergonomics Society. *Annual Meeting,1*, 553.

Bagnara, S., & Marti, P. (2001). Human work in call centres: A challenge for cognitive ergonomics. *Theoretical Issues in Ergonomic Science, 2*, 223-237.

Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2003). Dual process at work in a call centre: An application of the job demands - resources model. *European Journal of Work and Organizational Psychology, 12*, 393-417.

Bakker, A. B., Demerouti, A., Taris, T. W., Schaufeli, W. B., & Schreurs, P. J. G. (2003). A multigroup analysis of the job demands resources model in four home care organisations. *International Journal of Stress Management*, *10*(1), 16 – 38.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations, *Journal of Personality and Social Psychology, 51*, 1173-1182.

Bartone, P. T., Ursano, R. J., Wright, K. M., & Ingraham, L. H. (1989). The impact on a military air disaster on the health of assistance workers. *Journal of Nervous and Mental Disease, 177*, 317-328.

Batt, R., & Moynihan, L. (2002). The viability of alternative call centre production models. *Human Resource Management Journal, 12*(4), 14-34.

Bonebright, C. A., Clay, D. L., & Ankenman, R. D. (2000). The relationship of workaholism with work-life conflict, life satisfaction, and purpose in life. *Journal of Counseling Psychology, 47,* 469-47.

Bradburn, N. M. (1969). *The structure of psychological well-being.* Chicago: Aldine Publishing.

Braveman, H. (1974). *Labor and monopoly capital.* New York: Monthly Review Press.

Brummet, B. R., Wade, J. C., Ponterotto, B. T., & Lewis, C. (1997). Psychosocial well-being and a multicultural personality disposition. *Journal of Counseling and Development, 85,* 73-81.

Callaghan, G., & Thompson, P. (2001). Edwards revisited: Technical control and call centres. *Economic and Industrial Democracy, 22,* 13-37.

Call Centre Directory. (2008). *Hiring people: New grads or career shifters.* Retrieved March 3 2009, from www.callcenterdirectory.net

Carayon, P. (1993). Effects of electronic performance monitoring on job design and worker stress: Review of the literature and conceptual model. *Human Factors*, *35,* 385–395.

Chalykoff, J., & Kochan, T. (1989). Computer-aided monitoring: Its influence on employee job satisfaction and turnover. *Personnel Psychology*, *42,* 807–834.

Collins, M. A. (1996). The relation of work stress, hardiness, and burnout among full-time hospital staff nurses. *Journal of Nursing Staff Development, 12*(2), 81-85.

Campbell, A., Converse, P. E., & Rodgers, W. L. (1976). *The quality of American life*. New York: Russell Sage.

Costantini, A., Solano, L., DiNapoli, R., & Bosco, A. (1997). Relationship between hardiness and risk of burnout in a sample of 92 nurses working in oncology and AIDS wards. *Psychotheraphy and Psychosomatics, 66*, 78–82.

Cox, T. & Griffiths, A. (1996). Assessment of psychosocial hazards at work. In M. J. Schabracq, J. A. M., Winnubst, & C. L. Cooper, (Eds.), *Handbook of work and health psychology.* New York: John Wiley.

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

Dewe, P., & Trenberth L. (2004). Work stress and coping: drawing together research and practice. *British Journal of Guidance and Counselling*, *32*, 157–169.

Diener, E., Diener, M., & Diener, C. (1995). Factors predicting the subjective well-being of nations. *Journal of Personality and Social Psychology, 69*, 851-864.

Diener, E., Emmons, R. A., Larson, R. J., & Griffin, S. (1985) The satisfaction with life scale. *Journal of Personality Assessment, 49*, 71-75.

Dockery, A. M. (2003), "*Looking inside the unemployment spell*", National Conference on the Household, Income and Labour Dynamics in Australia Survey (HILDA), University of Melbourne.

Dormann, C., & Zljistra, F. R. H. (2003). Call centers: High on technology high on emotion. *European Journal of Work and Organizational Psychology, 12*, 305–310.

Dreher, H. (1995). *The immune power personality: 7 traits you can develop to stay healthy.* New York: Dutton Publishing.

Duquette, A., Kerouac, S., Sandhu, R., Ducharme, F., & Saulnier P. (1995). Psychosocial determinants of burnout in geriatric nursing. *International Journal of Nursing Studies, 32*, 443–456.

Eason, K. (2002). People and computers: Emerging work practice in the information age. In Warr, P. (Ed.), *Psychology at work, 5 edition. (*pp 77-99*),* London:Penguin

Ehrhardt, J. J., Saris, W. E., & Veenhoven, R. (2000). Stability of life-satisfaction over time. Analysis of change in ranks in a national population. *Journal of Happiness Studies, 1,* 177-205.

Eid, M., & Diener, E. (2004). Global judgements of subject well being: Situational variability and long term stability. *Social Indicators Research, 65,* 245-277.

Frenkel, S. J., Korczynski, M., Shire, K. A., & Tarn, M. (1999). *On the front line: Organization of work in the information economy.* Ithaca, NY: Cornell University Press.

Furnham, A. (1991). Work and leisure satisfaction. In Strack, F., Argyle, M., & Schwarz, N. (Eds.), *Subjective well-being: An interdisciplinary approach*,(235-259). Great Britain: Pergamon Press.

Ganster, D. & Fusilier, M. R. (1989). Control in the workplace. In Cooper, C. L., & Robertson, I. T. (Eds.), *International Journal of Industrial and Organisational Psychology*, (235-280). Chichester, UK: John Wiley.

Gauteng Companies. (2007). *Call Centres and Business Process Outsourcing (BPO).* Retrieved January 4, 2010, from www.gautengcompanies.co.za

Gebhardt, W. A., Van de Doef, M. P., & Paul, L. B. (2001). The Revised Health Hardiness Inventory (RHHI-24): Psychometric properties and relationship with self reported health and health behaviour in two Dutch samples. *Health Education Research, 16*, 579-592.

Grant, R. A., & Higgins, C. A. (1989). Computerised performance monitors: Factors affecting acceptance. *IEEE Transactions on Engineering Management*, *38,* 306–314.

Grebner, S., Semmer, N. K., Faso, L. L., Gut, S., Ka¨ lin, W., & Elfering, A. (2003). Working conditions, well-being, and job-related attitudes among call centre agents. *European Journal of Work and Organizational Psychology, 12*, 341 – 365.

Gurin, G. J., Veroff, S., & Feld. S. (1960). *Americans view their mental health*: *A nationwide interview survey*. New York: Basic Books.

Hahn, M. E. (1966). *California Life Goals Evaluation Schedule.* Palo Alto, CA:Western Psychological Services.

Hackman, J. R. & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance, 16,* 250-279.

Hanton, S., Evans, L., & Neil, R. (2003). Hardiness and the competitive trait anxiety Response. *Anxiety, Stress and Coping, 16*, 167-184.

Harrisson, M. (1997). Hardiness, work support and psychological distress in French-speaking nursing assistants in Quebec*. Unpublished Master's Thesis,* University of Montreal*,* Montreal.

Harrison, M., Loiselle, C. G., Duquette, A., & Semenic, S. E. (2002). Hardiness, work support and psychological distress among nursing assistants and registered nurses in Quebec. *Journal of Advanced Nursing, 38*, 584-591.

Heady, B. & Wearing, A. (1992). *Understanding happiness. A theory of subjective well-being.* Melbourne: Longman Cheshire.

Holman, D. (2005). Call centres. In D. Holman, T. D. Wall, C. W. Clegg, P. Sparrow, & A. Howard, (Eds.), *The essentials of the new workplace. A guide to the human impact of modern working practices.* London: John Wiley and Sons.

Holman, D., Chissick, C., & Totterdell, P. (2002). The effects of performance monitoring on emotional labour and well being in call centres. *Motivation and Emotion, 26*, *57*-81.

Holmes, D., & Rahe, R. (1967). The Social Readjustment Rating Scale. *Journal of Psychosomatic Research*, *11*,213-218.

Houlihan, M. (2000). Eyes Wide Shut? Querying the depth of call centre learning. *Journal of European Industrial Training*, 24, 228-341

International Marketing Council of South Africa. (2006). *SA call centres score again*. Retrieved November 8, 2008, from www.sagoodnews.co.za/private/sacallcentres

Jackson, D. N. (1974). *Personality Research Form Manual.* Goshen, NY: Research Psychologist Press.

Jennings, B. M., & Stagger, N. (1994). A critical analysis of hardiness. *Nursing Research, 43,* 274-281.

Johnson, S. Cooper, C. Cartwright, S. Donald, I. Taylor, P & Millet, C. (2005). The experience of work-related stress across occupations. *Journal of Managerial Psychology, 20,* 178-187.

Judkins, S., Massey, C., & Huff, B. (2006). Hardiness, stress, and the use of ill-time among nurse managers: is there a connection? *Nursing Economics.*

Judkins, S., Reid, B., & Furlow, L. (2006). Hardiness training among nurse managers: Building a healthy workplace. *Journal of Continuing Education in Nursing. 37*, 202-207.

Kahn R.L. (1981). *Work and health*. New York: Wiley.

Kemeny, M. E. & Laudenslager, M. L. (1999). Beyond Stress: The role of individual factors in psychoneuroimmunology. *Brain, Behavior and Immunity*, *13,* 73-75.

Kenney, J. W., & Bhattacharjee, A. (2000). Interactive model of women's stressors personality traits and health problems. *Journal of Advanced Nursing, 32*, 249-258.

Kiecolt-Glaser, J. K., & Glaser, R. (1988). Psychological influences on immunity: Implications for AIDS. *American Psychologist*, *43*, 892-898.

Kinnie, N., Huchinson, S. & Purcell, J. (2000). 'Fun and Surveillance': The paradox of high commitment management in call centres. *International Journal of Human Resource Management, 11*, 267-285.

Kjellerup, N. (2000). The toxic call centre. In S. Bagnara, (2000). *Towards tele-work in call centres*.

Knights, D. & McCabe, D. (1998). What happens when the phones go wild? staff, stress and spaces for escape in a BPR telephone banking work regime, *Journal of Management Studies,* 35, 163-94.

Kobasa, S. C. (1993). Inquiries into hardiness. In L. Goldberger & S. Brenznitz, (Eds.), Handbook of stress: Theoretical and clinical aspects. (77-100). New and clinical aspects. (77-100). New York: Free Press.

Kobasa, S. C. (1990). *The third generation hardiness test.* Unpublished manuscript, New York: Graduate School of the City University.

Kobasa, S. C. (1979). Stressful life events, personality, and health: An inquiry into hardiness. *Journal of Personality and Social Psychology, 37*, 1-11.

Kobasa, S. C., Maddi, S. R., & Kahn, S. (1982). Hardiness and health: A perspective study. *Journal of Personality and Social Psychology, 42*(1), 168-177.

Lambert, C., & Lambert, V. (1999). Psychological hardiness: State of the science. *Holistic Nursing Practice, 13, 11*–19.

Lambert, V. A., Lambert, C. E., & Yamase, H. (2003). Psychological hardiness, Workplace stress and the related stress reduction strategies. *Nursing and Health Sciences, 5*, 181-184.

Lambert, C., & Lambert V. (1993). Relationships among faculty practice involvement, perception of role stress, and psychological hardiness of nurse educators. *Journal of Nursing Education, 32,* 171–179.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.

Lewig, K. A., & Dollard, M. F. (2003). Emotional dissonance, emotional exhaustion, and job satisfaction in call centre workers. *European Journal of Work and Organizational Psychology, 12*, 366 – 392.

Lockwood, D. (1958) *The blackcoated worker,* London: Unwin.

Lounsbury, J. W., Gibson, L. W., & Hamrick, F. L. (2004). The development of a personological measure of work drive. *Journal of Business and Psychology 18*, 347-371.

Lounsbury, J. W., Park, S. H., Sundstrom, E., Williamson, J., & Pemberton, A. (2004). Personality, career satisfaction, and life satisfaction: Test of a directional model. *Journal of Career Assessment, 12*, 395-406.

Lounsbury, J. W., Saudagras, R. A., Gibson, L. W., & Leong, F. T. (2005). An investigation of broad and narrow personality traits in relation to general and domain-specific life satisfaction of college students. R*esearch in Higher Education, 46*, 707-729.

Lounsbury, J. W., Sundstrom, E., Loveland, J. M., & Gibson, L. W. (2003). Intelligence, ‘‘Big Five’’ personality traits, and work drive as predictors of course grade. *Personality and Individual Differences, 35*, 1231-1239.

Lounsbury, J. W., Tatum, H., Gibson, L. W., Park, S. H., Sundstrom, E. D., Hamrick, F. L., et al. (2003). The development of a big five adolescent personality scale. *Psychoeducational Assessment, 21*, 111-133.

Luszczynska, A., & Cieslak, R. (2002). Protective, promotive, and buffering effects of perceived social support in managerial stress: The moderating role of personality. *Anxiety, Stress and Coping, 18*, 227-244.

MacDonald, C. L. & Sirianni, C. (1996). 'The Service society and the changing experience of work'. In C. L. MacDonald, & C. Sirianni, (Eds.), *Working in the service society.* Philadelphia: Temple University Press.

Maddi, S. R., Kobasa, S. C., & Hoover, M. (1979). An alienation test. *Journal of Humanistic Psychology, 19*, 73-76.

Maddi, S. R. (2005). Hardiness as the key to resilience under stress. *Psychology Review, 11*, 20-23.

Maddi, S. R., Kahn, S., & Maddi, K.L. (1998). The effectiveness of hardiness training. *Consulting Psychology Journal: Practice and Research*, 50, 78-86.

Maddi, S. R., & Kobasa, S. C. (1984). The hardy executive:Health under stress. Homewood, IL: Dow Jones-Irwin.

Maddi, S. R. (1987). Hardiness training at Illinois bell telephone. In J.P. Optz (Ed.), *Health promotion evaluation*. (101-116). Stevens Point, WI: National Wellness Institute.

Maddi, S. R. (1999). The personality construct of hardiness: Effect on experiencing, coping and strain. *Consulting Psychology Journal, 51,* 83-94.

Mak, W. W. S., Chen, S. X., Wong, E. C. & Zane, N. W. S. (2005). A psycho-social model of stress-distress relationship among Chinese Americans. *Journal of Social and Clinical Psychology, 24*, 422-444.

Marx, G., & Sherizen, S. (1986). Monitoring on the job. *Technology Review 89*, 63-72.

Metcalf, D., & Fernie, S. (1998). (Not) hanging on the telephone: Payment systems in the new sweatshops. *Centrepiece*, 3, 398-427.

Moorman, R. H. & Wells, D. (2003). Can electronic monitoring be fair? Exploring relationships among mentoring characteristics, perceived fairness and job performance. *The Journal of Leadership and Organizational Studies*, *10*, 2-6.

Morrisette, F. (1993). Factors related to professional nurses' vepusement Francophones in intensive care in Quebec. *Unpublished Masters thesis,* University of Montreal, Montreal.

Mulholland, K. (2002). Gender, emotional labour and teamworking in a call centre. *Team Working in a Call Centre*, *31*, 283-303.

Mullarkey, S., Jackson, P. R., Wall, T. D., Wilson, J. R., & Grey-Taylor, S. M. (1997). The impact of technology characteristics and job control on worker mental health. *Journal of Organizational Behavior*, *18*, 471-489.

Nakano, K. (1990). Type A behavior, hardiness and psychological well-being in Japanese women. *Psychological Reports, 67*,367–370.

Neuman, W. L. (1997). *Social research methods.* Boston: Allyn and Bacon Publishers.

Nicholas, P. K. (1993). Hardiness, self-care practices and perceived health status in older adults. *Journal of Advanced Nursing*, *18*, 1085–1094.

Niehoff, B. P., & Moorman, R. H. (1993). Justice as a mediator of the relationship between methods of monitoring and organizational citizenship behavior. *Academy of Management Journal*, *36,* 527–556.

Oishi, S., Diener, E., Suh, E., & Lucas, R. E. (1999). Value as a moderator in subjective well-being. *Journal of Personality, 67*, 157-184.

Ojha, A. K., & Kasturi, A. (2005). Successful call centre employees: Understanding employee attributes and performance evaluation processes. *Management Review, 17*, 93–102.

Ouellette, S.C. (1993). Inquiries into hardiness. In L. Goldberger & S. Breznits. (2nd Eds.), Handbook of Stress: *Theoretical and Clinical Aspects*. New York: Free Press NY.

Parker, S. K. & Wall, T. D. (1998). *Job design: Organising work to promote well-being and effectiveness*. London: Sage.

Paunonen, S. V., Rothstein, M. G., & Jackson, D. N. (1999). Narrow meaning about the use of broad personality measures for personnel selection. *Journal of Organizational Behavior 20,* 389-405.

Perrone, K. M. (2000). Balancing life roles to achieve career happiness and life satisfaction. *Career Planning and Adult Development Journal,* 5, 49-58.

Perrone, K. M., Webb, L. K., & Jackson, Z.V. (2007). Relationships between parental attachment, work and family roles, and life satisfaction. *The Career Development Quarterly, 55*, 237-248.

Perrone K. M., Webb, L. K.., Wright, S. L. & Jackson, Z. V. (2006). Relationship of spirituality to work and family roles and life satisfaction among gifted adults. *Journal of Mental Health Counseling, 28*, 253-268.

Pollock, S. E. (1989). The hardiness characteristic: A motivating factor in adaptation. *Advances in Nursing Science, 11*, 53-62.

Pollock, S., & Duffy, M. (1990). The health related hardiness scale: Development and Psychometric analysis. *Nursing Research, 39*, 218-222.

Rice R.W. (1984). Organizational work and the overall quality of life. *Applied Social Psychology Annual 5,* 155-178.

Rosenthal, R. & Rosnow, R. L. (1991). *Essentials of behavioral research: Methods and data analysis (2nd ed.).* New York: McGraw-Hill.

Roth, D. L., Wiebe, D. J., Fillingim, R. B. & Shay, K. A. (1989). Life Events, Fitness, Hardiness and Health: A Simultaneous Analysis of Proposed Stress-Resistance Effects. *Journal of Personality and Social Psychology*, *57*, 747–768.

Rotter, J. B., Seeman, M. and Liverant, S. (1962) Internal vs. external locus of control of reinforcement: A major variable in behavior theory. In Washburne, N. F. (ed.), *Decisions*, *Values*, *and Groups*. Pergamon, London, 473–516.

Salvatore, N., & Munoz Sastre, M. T. (2001). Appraisal of Life: "Area" versus "Dimension" Conceptualizations. *Social Indicators Research, 53,* 229-255.

Sam, D. L. (2001). Satisfaction with life among international students: An exploratory study. *Social Indicators Journal 53* (3), 315-337

Seyle, H. (1959). The stress of life. New York, NY, US:McGrawHill

Simoni, P. & Paterson, J. (1997). Hardiness, Coping and Burnout in the Nursing Workplace. *Journal of Professional Nursing,* 13,178–185.

Shepperd J. & Kashani, J. (1991).The Relationship of Hardiness, Gender, and Stress to Health Outcomes in Adolescents. *Journal of Personality,* 59, 747–768.

Shevlin, M., Brunsden, V. & Miles, J. (1998). Satisfaction with life scale: Analysis of factorial invariance, mean structures and reliability. *Journal of Personality and Individual Differences, 25*, 911-916.

Smith, M. J., Carayon, P., Sanders, K. J., Lim, S. Y., & LeGrande, D. (1992). Employee stress and health complaints in jobs with and without monitoring. *Applied Ergonomics*, *23,* 17–27.

Soderstrom, M., Dolbier, C., Leiferman, J., & Steinhardt, M. (2000). The Relationship of hardiness, coping strategies, and perceived stress to symptoms of illness. *Journal of Behavioral Medicine, 23*, 311-328.

Spector, P. E., & O'Connell, B. J. (1994). The contribution of individual dispositions to the subsequent perceptions of job stressors and job strains. *Journal of Occupational and Organizational Psychology*, *67*, 1-11.

Sprigg, C. A., Smith, P. & Jackson, P. R. (2003). *Psychosocial risk factors in call centres. An evaluation of work design and well-being.* HSE Research Report. Sudbury, UK: HSE.

Super, D. E. (1990). A life-span, life-space approach to career development. In D. Brown & L. Brooks (Eds.), *Career choice and development*, (pp, 167-261). San Francisco: Jossey-Bass.

Tartasky, D. S. (1993). Hardiness: Conceptual and methodological issues. *Journal of Nursing Scholarship, 25*, 225-229.

Taylor, P. & Bain, P. (1999). An assembly line in the head: The call centre labour process. *Industrial Relations Journal, 30*, 101-117.

Terry, D. & Jimmieson, N. (1999). Work control and well-being: A decade review. In C. Cooper and I. Robertson (eds). *International Review of Industrial and Organizational Psychology.* London: John Wiley.

Tierney, M. J. & Lavelle, M. (1997). An investigation into modification of personality hardiness in staff nurses. *Journal of Nursing Staff Development, 13,* 300-321.

Tjiong, L.A. (2000). *The relationship between emotional intelligence, hardiness and job stress among registered nurses* [doctoral Dissertation]. University of Sarasota, 1-139.

Totterdell, P. & Holman, D. (2001). *Just trying to keep my customers satisfied: a diary study of emotional dissonance in a call centre*. Paper presented at the European Congress of Psychology Conference, 3 July, London.

Tross, S. A., Harper, J. P., Osher, L. W. & Kneidinger, L. M. (2000). Not just the usual cast of characteristics: Using personality to predict college performance and retention. *Journal of College Student Development, 41,* 323-334.

Tucker, K. L., Ozer, D. J., Lyubomirsky,S. & Boehm, J. K. (2006). Testing for measurement invariance in the satisfaction with life scale: A comparison of Russians and North Americans. *Social Indicators Research, 78,* 341-360.

Veenhoven, R. & Saris, W. E. (1996). 'Satisfaction in 10 countries', in Saris, W. E., Veenhoven, R., Scherpenzeel A. C. & Bunting, B. (eds.), *A Comparative Study of Satisfaction with Life in Europe,* , Budapest, Hungary: E¨otv¨os University Press.

Wallace, C. M & Eagleson, G. (2004). 'Computer technology as a substitute for leadership and subordinate intention to turnover in call centres'. *International Employment Relations Review*, *10*, 142-167.

Warr, P. B. (1994). A conceptual framework for the study of work and mental health. *Work and Stress, 8, 84-97.*

White, B. (1998). 'Centres of attention: Motivating call centre staff, *Flexible Working.*

Wiebe, D. (1991). Hardiness and Stress Moderation: A test of proposed mechanisms. *Journal of Personality and Social Psychology, 60,* 89–99.

Wilk, S. L. & Moynihan, L. M. (2005). Display rule "regulators": The relationship between supervisors and worker emotional exhaustion. *Journal of Applied Psychology, 90* (5), 917-927.

Williams, D. & Lawler, K. A. (2001). Stress and illness in low-income women: The roles of hardiness, John Henryism and race. *Women Health, 32*, 61-75.

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

Zemke, R. (2003). Action centre or afterthought…it's your call. *Training, 40*, 38-42.

APPENDICES