

https://dspace.org/

Exploring barriers experienced in an intervention to reduce burnout among a sample of radiation therapists

Roopnarain, Arthee

2016
http://hdl.handle.net/10539/19633

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

CHAPTER ONE: INTRODUCTION, RATIONALE AND AIMS

1.1. Introduction and rationale

Oncology has been described as an exciting and challenging specialty for those who work in the field. For many health care professionals the ability to be directly involved in the care of cancer patients and the desire to help those who are chronically ill serves as motivation for choosing this specialty (Le Blanc, Hox, Schaufeli, Taris & Peeters, 2007). However the cost of caring may deplete this initial excitement and the ability to care, which may ultimately culminate in burnout (Le Blanc et al., 2007; Le Blanc & Schaufeli, 2003). Burnout is a psychological syndrome that involves a prolonged response to stressors in the workplace and is characterised by emotional exhaustion, depersonalization and reduced personal accomplishment (Maslach & Jackson, 1982; Maslach, 2003). Burnout is associated with decreased job performance and commitment, low career satisfaction and is related to a physiological, mental and health problems (Le Blanc et al., 2007).

Few studies have looked at radiation therapists specifically, particularly within the South African context. To date only one study has been undertaken in South Africa by Lawrence (2007) that focused on measuring the prevalence of burnout among radiation therapists working in both the provincial and private hospital setting. Key recommendations aimed at possibly reducing levels of burnout among health care workers were highlighted. These included improving the organisational environment by identifying prominent stressors experienced at work; addressing increased workloads; improving staff recognition and collegial support; promoting better management styles and improving interpersonal skills among radiation therapists (Lawrence, 2007). It follows that identifying recommendations to produce feasible interventions aimed at reducing burnout among radiation therapists is greatly needed.

Initially, the primary aim of the research was to identify recommendations for reducing burnout, which would be feasible (i.e., the ability to perform) and acceptable (i.e., willingness to try), for a South African sample of radiation therapists. The secondary aim (at that point), was to understand the likely motivations and constraints inherent in implementing the proposed recommendations. The initial research was grounded in the Trials of Improved Practices (TIPs) which is a type of formative research (Dickin & Griffiths, 1997). Formative research methodology intends to improve and inform the decision making process during the

development stage of programmes, policy or products and is synonymous with terms such as needs assessment, process evaluation and situational analysis (Akker, 1999; Patton, 2001; Reigeluth, 1989). Consequently formative research takes place in the early design stages of a particular product (or intervention) and tends to focus on the "Why and how" questions, which ultimately improve programs/interventions (Nichter, Acuin & Vargas, 2008; Yin, 1984; as cited in Reigeluth, 1989).

TIPs methodology is underpinned by three fundamental phases. Phase one entails reviewing existing information on the experience of burnout among health care workers, radiation therapists in particular, with the aim of identifying possible research questions (Dickin & Griffiths, 1997). Due to the paucity of information available pertaining to radiation therapists specifically, I reviewed literature on health care professionals who work within a similar occupational setting as well (i.e., oncology nurses and oncologists). Phase two relies heavily on qualitative/ exploratory research, whereby proposed recommendations that are used to reduce burnout among health care professionals are reviewed. My aim was to learn about the experience of burnout, the beliefs and attitudes towards burnout, the coping strategies and the prevalence of use (of the coping strategies) among the radiation therapists. This is referred to as the pre-intervention behaviour (Barnes, Mathee, Krieger, Shafritz, Favin & Sherburne, 2004; Dickin & Griffiths, 1997). I then integrated these recommendations, gathered from the literature to form a proposed intervention (please see appendix F). Phase three consists of integrating and interpreting the information gained, to then inform recommendations with respect to the given intervention (Dickin & Griffiths, 1997). I only completed phase 1 and 2.

TIPs methodology is operationalised using three visits termed the initial, counselling and follow up visits (Dickin & Griffiths, 1997). The aim of the initial visit was to conduct an interview in order to understand and document the pre- intervention behaviour (Barnes et al., 2004; Dickin & Griffiths, 1997). I took some time to analyse the data I gained from the initial visit. The main aim of the counselling visit was to discuss the specific recommendations (gained from phase one) with the radiation therapists. During this visit, the follow up visit would be scheduled among the therapists. The follow up visit would have taken place a few weeks after the initial counselling visit and would have focused on the radiation therapists ability to perform the suggested recommendations; their willingness to implement these recommendations; their reasons for implementing the recommendations; whether they modified the recommendations; what motivated them to implement the given recommendations and the constraints inherent to this process (Dickin & Griffiths, 1997). I

only engaged in the initial visit. The second interview I facilitated was not termed as a counselling visit.

The advantage of using TIPs would have been that the radiation therapists were given a number of recommendations and would have been given a choice, with regards to which recommendations they chose. The radiation therapists would have then been questioned about their choices, ability, willingness, motivations and constraints to engage in these recommendations. This information would have then aided in the development of interventions (Dickin & Griffiths, 1997).

Based on my engagement with phase one and two (mentioned above), the following intervention was proposed (please refer to appendix F) and part of which was explored during the initial visit. The first recommendation posed in the initial visit was the inclusion of a support group. As envisioned, this part of the intervention would be implemented in a group. The remainder of the intervention was to be implemented individually this included the use of stress management skills and cultivating interests and hobbies outside of work.

However the research at that point subsequently changed direction. During the course of the initial visit it became apparent that the radiation therapists were not willing to engage in the intervention proposed. Consequently the aim of the study subsequently shifted. This shift was not based on the reason of convenience, but was considered important to both the literature on TIPs and understanding resistance/ barriers to interventions aimed at reducing burnout. Based on the wealth of information gained from the radiation therapists, this study now focuses on understanding and exploring the barriers that affect the development and the implementation of interventions aimed at reducing burnout among the sample.

Thus to reiterate, no intervention was actually conducted with the sample of radiation therapists. The TIPs methodology was used, partially, to initially provide the framework for a proposed intervention; however during the initial visit it was apparent that the sample was not willing to consider the implementation of an intervention.

1.2. Research aims

The primary aim of the study was to firstly explore barriers inherent to interventions aimed at reducing burnout among radiation therapists. The second aim was to provide recommendations for others (i.e., researchers and practitioners alike) who may be developing interventions aimed at reducing burnout among radiation therapists.

1.3. Chapter outline

I begin in chapter 2, with literature review that describes employment trends and how this may be linked to burnout. I examine some of the literature on burnout and highlight how the field of occupational health psychology applies to this study. I move on to describe who radiation therapists are, by highlighting the work they do and looking at other studies conducted on burnout using this sample. I also highlight prominent stressors that characterise these health professionals' work. This leads to a discussion on intervention development that can be broken down into individual and organisational levelled interventions. I then move on to examine existing literature pertaining to barriers to intervention development. In chapter 3, I describe the study design, the sample, sampling strategy and data collection. I also provide some discussion on issues pertaining to the ethical considerations; reflexivity and quality assurance. In addition, I briefly explain the analytical procedure employed, namely thematic content analysis. In the results and discussion section of the report, chapter 4, I provide an analysis of the themes and sub themes that were highlighted from the corpus of data. In the last chapter, chapter 5, I offer conclusions gained from chapter 4.

CHAPTER TWO: LITERATURE REVIEW

"If you want to truly understand something, try to change it"

(Lewin, 1935, p. 231)

2.1. Employment trends and the link to burnout

When one considers the amount of time an adult spends at work and on work-related activity outside work, we begin to realise just how pertinent the relationship we cultivate with work really is. Schaufeli and Greenglass (2001) highlighted that new trends, which characterise the world of work, seem to place employees in vulnerable positions, in terms of increased stress and may culminate in burnout.

In some cases work may become less intrinsic and may feel like an obligation for employees, as they become aware that organisations function, primarily, to make money (Maslach & Leiter, 1997). Due to the current economic state, most if not all organisations need to do so, in order to remain viable, however the dynamic nature of global economics adversely affects organisations and employees, in terms of downsizing, mergers and restructuring, which requires flexible workforces that are able to respond to change and adapt quickly (Burke & Greenglass, 2001; Parumasur & Barkhuizen, 2009). Moving countries, changing jobs and dealing with wage concessions becomes a lived reality for those affected by economic change.

Work is also characterised by a constant push for productivity, which can be achieved by an increased reliance on technology. Due to advances in technology, individuals are replaced with or supplemented/alienated by machinery, as machines are able to complete tasks faster, more efficiently, in a shorter period of time, and do not require training (Maslach & Leiter, 1997; Parumasur & Barkhuizen, 2009). The redistribution of power, evident in tight human resource management (i.e., micromanagement), which also facilitates increased productivity, may result in feelings of worthlessness and a lack of autonomy/ value among employees (Maslach & Leiter, 1997).

Relationships between employees and employers have also undergone dramatic change as they are punctuated by the pervasiveness of organisational change in the form of downsizing, restructuring and mergers (Edwards & Karau, 2007). Organisational change within the world

of work is a constant feature and takes place in response to a number of factors, some of which are mentioned above (Choi & Ruona, 2011; Maslach & Leiter, 1997).

When employees enter a profession, they are governed by a psychological, social and legal contract. A social contract, according to Edwards and Karau (2007) is developed at a societal level and constitutes a set of norms, assumptions, and beliefs about reciprocity, job security, loyalty, good faith and fair dealings between both parties (employer and employee) which is conceived by the society. In contrast, the psychological contract is developed on a more individual level and is defined by beliefs about what a person is entitled to receive from the employer (Edwards & Karau, 2007; Schaufeli & Greenglass, 2001). The legal contract refers to the laws that govern the work space and employment in general. Consequently when one enters a job, the relationship is characterised by a sense of commitment to a lifetime of work and feelings of being valued and needed (over time). Historically, these feelings (of value and being needed) has a relationship that is directly proportional to the duration/length of employment (Schaufeli & Greenglass, 2001), however due to new trends in the world of work, this is currently changing.

Keeping in mind that employment, other than offering financial viability, is also inexplicably linked to the definition of individual identity and values, change at work and subsequent job loss can be psychologically devastating and tends to culminate in stress and eventually burnout (Dekker & Schaufeli, 1995; as cited in Schaufeli & Greenglass, 2001). Organisational change within the work context results in feelings of anger, hostility, job insecurity and a realisation that the company has failed to meet its obligations, which results in testing the limits of both the psychological and social contract (Edwards & Karau, 2007; Greenglass, Burke & Fiksenbaum, 2001; Schaufeli & Greenglass, 2001). Based on the short description of the trends evident in field of work, it is evident that change is brought about by a number of factors, many of which encompass other spheres larger or external to the organisation itself.

Schaufeli (2004) highlighted 3 interconnected levels: (1) the job environment; (2) the organisational environment and (3) the external environment which may affect the individual employee. The external context refers to the larger context outside the organisation such as economic developments, legislation[1], technological innovations and family/life events (Schaufeli, 2004). The organisational context refers to the factors that take place within the organisation, which may include and incorporate organisational restructuring (downsizing,

[1] This refers to legislation that affects work, health, safety and the rights of the employee.

mergers etc.,), the initiatives that management produce, role conflict and unfairness (Greenglass, Burke & Fiksenbaum, 2001; Schaufeli, 2004; Schaufeli & Greenglass, 2001). Whereas the work context refers to factors that affect the actual work, like job content, work roles, work overload, lack of job control at work. Due to the interconnectedness of these levels, it follows then that change within any of these levels has an impact on the health, safety and wellbeing of the individual employee (Schaufeli, 2004; Schaufeli & Greenglass, 2001).

Morgan (2006) conceptualises organisational life in terms of metaphors, which deepen the understanding of organisational dynamics. Accordingly, the organisation can be likened to an organism, which is a living system comprising of, individuals and groups of individuals, who form an open system with the wider environment. Similar to Schaufeli's (2004) understanding above, the organisation is influenced by the environment in which it operates (Morgan, 2006). This metaphor is based on systems theory, as postulated by Ludwig von Bertalanffy (von Bertalanffy, 1950; Morgan, 2006), where interrelatedness is vital, whereby all systems are related to one another in one way or another, no system occurs in isolation and no system is self-sufficient (Morgan, 2006). Due to interrelatedness, change in one system, tends to have a ripple effect in the other interrelated systems. Taking the above understanding into consideration it is not surprising that as a result of change in other levels individual employees seem to be more prone to stress, burnout and poor health.

Since its emergence, about 38 years ago, the study of burnout continues to pique interest within the field of psychology (Maslach, Leiter & Jackson, 2012; Maslach & Schaufeli, 1993). Subsequently new concepts and the expansion of theory within the field of burnout and the link this has with the development of interventions aimed at reducing burnout, will be examined below, with specific reference to intervention development as this is key to this study.

2.2. Burnout

According to Maslach & Jackson (1982, p. 228) burnout is defined as:

> A syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment that can occur among individuals who do 'people work' of some kind.

According to this definition the understanding of burnout comprises three key components: emotional exhaustion (EE); depersonalisation (DP) and reduced personal accomplishment (PA). Accordingly, EE refers the depletion of emotional resources and is characterised by feelings of being overextended and drained/fatigued (emotionally and physically) (Maslach & Jackson, 1982; Maslach, Leiter & Schaufeli, 2008). According to a number of theorists within the field of burnout, (Halbesleben & Buckley, 2004; Leiter & Maslach, 2001; Maslach & Jackson, 1982; Maslach & Goldberg, 1998; Maslach, Schaufeli & Leiter, 2001; Maslach & Leiter, 2008) EE may be the result of work overload, work characteristics and personal conflict at work. Consequently EE represents the basic stress dimension of burnout and has gained most popularity in burnout research to date (Schaufeli, Leiter & Maslach, 2009). DP, according to Maslach et al., (2008) and Halbesleben and Buckley (2004), is highlighted by a negative shift in relation to others and is thus characterised by callous, cynical, negative or excessively detached responses to other people, withdrawal and irritation. Research acknowledges that DP develops in response to emotional exhaustion and represents the interpersonal aspect of burnout (in helping professions i.e., nurses and doctors) as the person attempts to distance themselves from the overwhelming demands of their job (Maslach, 2003; Maslach et al., 2001; Maslach & Goldberg, 1998). Reduced PA refers to a decrease in feelings of competency (effectiveness) and is characterised by low morale, low self-esteem, decreased productivity/efficiency at work and a lack of accomplishment (Halbesleben & Buckley, 2004; Maslach, 2003; Maslach et al., 2008; Maslach & Jackson, 1982). Leiter and Maslach (2001) and Maslach et al., (2010) mention that reduced PA represents the self-evaluation aspect of burnout and takes place when the individual evaluates him/herself in a negative manner.

The Maslach Burnout Inventory- (MBI) was developed in the late 1970s, with the primary aim of measuring burnout among people who had direct relationships with clients, in a consistent manner. This psychometric test was later adapted to include other samples; non-helping professions (where people do not have to work with other people) (i.e., MBI-General Survey) and educators (i.e., MBI-Educator Survey) (Halbesleben & Buckley, 2004; Maslach et al., 2008). Consequently the three key components mentioned above, may have slightly different labels so as to accommodate the different situational contexts i.e. exhaustion; cynicism; inefficacy. The meaning however has been retained.

This three pronged model of burnout, classifying it as multidimensional in nature, distinguishes burnout from the unidimensional understanding of stress (Maslach & Schaufeli,

1993; Maslach et al., 2001). It also facilitates effective solutions in terms of intervention development as it highlights the mutual interaction between the individual and the situational context of work, which allows for a clearer understanding of the correlates of burnout (Maslach & Goldberg, 1998). By planning and designing interventions in terms of the three components of burnout, researchers and practitioners alike are able to postulate solutions that are relevant to the problem i.e., asking, how will this intervention decrease emotional exhaustion, reduce depersonalisation and increase personal accomplishment? (Maslach & Goldberg, 1998).

Since its conceptualisation, burnout has been grounded in people's experiences and their lived realities at work. Due to its bottom-up (grass roots) approach, the field gained impetus from social commentators/ practitioners and researchers alike (Leiter & Maslach, 2004; Maslach, 2003; Maslach & Schaufeli, 1993). Practitioners, focused primarily on "what they could *do* about burnout" (intervention development) (Maslach & Schaufeli, 1993; Maslach et al., 2012). Researchers on the other hand were more inclined towards the development of a body of knowledge that would facilitate a starting point for effective, theory bound intervention development (Maslach & Schaufeli, 1993; Maslach et al., 2008).Thus the initial trajectory of burnout has been characterised by tension between basic and applied research.

Three decades of knowledge has been gained, that is advantageous as it grounded in lived experience, however moving forward the aim is to now *apply* this knowledge to facilitate the development of interventions (Maslach & Schaufeli, 1993; Schaufeli et al., 2009). This has resulted in an amalgamation between researchers and practitioners alike, whose main aims now encompass two important ideas: Firstly, how best to integrate current and new information gained from research, to stimulate the design and development of effective interventions aimed at reducing burnout (Maslach et al., 2012). Secondly, how to then facilitate the dissemination of interventions that are deemed effective through rigorous evaluation, to people and organisation (Maslach, 2011).

The above understanding and expansion within the field of burnout helps us to contextualise the understanding of burnout and further highlights that much of the research now focuses on pragmatically answering the question of *how* to deal with the problem.

2.3. Occupational health psychology

Keeping the above mentioned relationship between individuals, organisations and burnout in mind, we are able to better appreciate the understanding of health, according to the World

Health Organisation (WHO), which defines health as a complete state of physical, mental and social wellbeing and not just a mere absence of disease (Tetrick & Quick, 2003). As an applied discipline, psychology seeks to use "the application of psychological theories and research findings to solve practical problems of everyday life" (Colman, 1994; as cited in Cox, Karanika, Griffiths & Houdmont, 2007, p. 349). In line with this understanding occupational health psychology (OHP) seeks to promote "[a] healthy workplace[s] in which people may produce, serve, grow, and be valued" (Quick et al., 1997; p. 3 as cited in Houdmont & Leka, 2010). According to Houdmont and Leka (2010, p. 7) OHP is characterised by being evidence driven, oriented towards problem solving, multidisciplinary, participatory and is focused on intervention development, with a strong emphasis being placed on intervention development aimed at reducing stress and burnout experienced by employees. With regards to intervention development, primary interventions tend to target the source of the problem, secondary interventions focus on workers' responses' whereas tertiary responses centre on the outcomes through the provision of support (Houdmont & Leka, 2010; Murphy, 1988; Rothmann, 2003).

The theoretical basis of OHP was chosen for this study as it prioritises the relationship between individuals and their work, recognises and places greater emphasis on subsequent intervention development (as opposed to merely understanding the nature and correlates of occupational stress), highlights the intricacies inherent in intervention development and examines other factors, like organisational change management, and the effect it may have on employees.

In terms of OHP, theoretically, a great leap has been taken, however practically some stagnation has been noted (Maslach et al., 2012). Thus a call for a paradigmatic shift in terms of focus, theory and methodology is needed, with greater emphasis being placed on intervention development and broadening the conceptual links between burnout and intervention development (Cox & Griffiths, 2010; Maslach, 2011; Maslach et al., 2012). Attention will now be placed on radiation therapists and their experience of burnout as these medical professionals form the sample in this study.

2.4. Burnout and radiation therapists

Radiation therapy (RT) is a branch of radiography which involves the administration of high voltage radiation to malignancies while sparing and maintaining the integrity of the normal, healthy surrounding tissue and organs in patients diagnosed with cancer (Levin, Sitas & Odes, 1994; Klosky, Tyc, Srivastava, Tong, Kronenberg, Booker, Armendi & Merchant,

2004). A radiation therapist is trained in this discipline and is involved in assisting with the localisation of the tumour using x-rays and/or Computerized Tomography (CT) and/or Magnetic Resonance Imaging (MRI) which is known as simulation (Bucholtz & Tafas, 1998; Levin et al., 1994). The Radiation therapist is also involved in treatment planning (which encompasses the use of computer programs to plan and calculate of dosage required for treatment) and mould room duties (which involves the production of immobilisation devices including masks and casts which ensure effective daily reproducibility of patient positioning (Bucholtz, 1992). The positioning of the patient on the treatment machine (couch) and the operation of the radiation machinery which delivers the prescribed dose are also key functions of the radiation therapist (Bucholtz, 1992; Bucholtz & Tafas, 1998; Lawrence, Poggenpoel & Myburg, 2011; Levin et al., 1994; Roopnarain, 2011). Since patients may experience fear and anxiety concerning their treatment, it is also the job of the radiation therapist to educate the patient about potential radiation side effects, monitor the patient's clinical progress, physically and emotionally, and alert the radiation oncologist to any problems, experienced by the patient (Bucholtz, 1992; Bucholtz & Tafas, 1998).

Treatment sessions for radiation therapy, in the case of curative treatment, is protracted and lasts between 4-8 weeks, which takes place once a day, 5 days a week. Other forms of treatment are termed palliative and are aimed at alleviating pain only and tend to be shorter in duration. Taking this into account, radiation therapists are more likely to interact with the same patient for a longer period of time. Radiation therapy is generally confused with diagnostic radiography[2] which a branch of radiography that deals with the production of general x-rays in a hospital setting. Taking the above into consideration, a diagnostic radiographer, who sees about 15 to 20 patients a day, will rarely see the same patient again. Thus one of the significant differences between diagnostic radiography and radiation therapy is increased patient contact, (among radiation therapists). This allows for increased rapport and effective communication, and has been noted to be one of the key motivating factors for choosing radiation therapy as a profession (Bolderston, Lewis & Chai, 2010; Roopnarain, 2011).

Studies show differing motivating factors that prompt radiation therapists to choose their field of interest, these include: loving to work with and helping patients; the ingrained notion of caring; building special relationships with the patients; making a difference in the life of

[2] Most radiation therapists either study a year of diagnostic radiography initially or complete the diagnostic degree first before specialising in radiation therapy.

patients; having a job that is rewarding in nature and fulfilling and the personal experience of having someone significant being diagnosed with cancer (Haberman, Germino, Maliski, Stafford-Fox, & Rice, 1994; McManus, Livingston, & Katona, 2006; Medland, Howard-Ruben, & Whitaker, 2004; Newton, Kelly, Kremser, Jolly & Billett, 2009; Papadatou, Martinson, & Chung, 2001). Bolderston et al., (2010) confirmed these studies when it was mentioned that caring was an integral part of the radiation therapists' professional identity. Taking the above job description into consideration, it follows then that radiation therapists spend a prolonged period of time with patients, who are, in many cases, terminally ill. This has been proven to be both, emotionally and psychologically stressful, and has been associated with an increased proclivity towards burnout (French, 2004; Lawrence et al., 2011; Maslach & Jackson, 1982; Probst & Griffiths, 2009). Consequently increased patient contact with cancer patients and the overall prevalence of cancer tends to compound ones proclivity towards burnout. The statistics below highlight this point.

With respect to global statistics pertaining to cancer, Edge, Buccimazza, Cubasch & Panieri (2014) mention that:

> A dramatic rise in the global number of cancer cases is expected within the next 15 years. By 2020 there will be 17 million new cancer cases, by 2050 this figure will rise to 24 million, 70% of these cases will be in the developing world.

In comparison statistics pertaining to Africa, according to the International Agency for Research in Cancer (IARC), as mentioned by CANSA (2012) state that:

> Approximately 681 000 new cancer cases and 512 400 cancer deaths were reported alone in 2008. These numbers are projected to nearly double to 1.28 million new cancer cases and 970 000 cancer deaths by 2030 due to ageing and population growth.

Keeping in mind that Sub Saharan Africa (SSA) comprises 13% of the world population, carries 24% of the global disease, with only 1% of global finances to do so (Edge et al., 2014), an understanding of the statistics pertaining to Africa is imperative, as many radiation therapy units in South Africa are inundated with patients referred from countries within SSA (Levin et al., 1994). Coupled with the increased demand for the utilisation of radiation therapy for certain types of cancers (Probst & Griffiths, 2007), increased workload becomes a prominent stressor among radiation therapists according to research (French, 2004; Lawrence et al., 2011; Probst & Griffiths, 2009; Roopnarain, 2011). Based on the statistics cited, it follows that radiation therapists serve an important function in the treatment of patients

diagnosed with cancer in South Africa and globally. However salient problems experienced among this workforce which include: high turnover and vacancy rates; unsatisfied workforces; moderate levels of organisational commitment; high burnout levels and a lack of efforts to retain these professionals in their field of expertise (lack of interventions) (French, 2004; Lawrence, 2007; Lawrence et al., 2011; Probst & Griffiths, 2007; 2009; Probst, 2012; Roopnarain, 2011) have been noted.

Burnout among oncologists, and oncology nurses has been associated with decreased job performance and commitment, low career satisfaction and is related to a number of physiological, mental and health problems (Le Blanc et al., 2007; Maslach & Schaufeli, 1993; Maslach et al., 2001; Maslach, Leiter & Jackson, 2012). However few studies have looked at radiation therapists specifically, particularly within the South African context, to date only one study by Lawrence (2007) which focused on measuring the prevalence of burnout among radiation therapists working in both provincial[3] and private[4] hospital settings. Results revealed high levels of EE among radiation therapists working in the provincial setting, as compared to therapists working in the private sector. This may have been linked to increased workloads- which may have been complicated by chronic shortage of staff, limited social support and an imbalance in effort and reward (Lawrence, 2007). Lawrence (2007) highlighted that 65% of the sample experienced low levels of PA which is alarming, as radiation therapy in South Africa is already considered a scarce skills, further job dissatisfaction would only decrease a steadily decreasing stream of potential students and therapists. Important factors noted by Lawrence (2007), worthy of investigation, included workload, adequate staffing, ways to promote staff recognition, a system for collegial support, altering management styles, improving interpersonal skills among radiation therapists and the development of interventions aimed at reducing the risk of burnout.

Internationally a similar picture has emerged. Le Blanc and Schaufeli (2003) found that Dutch radiation therapists presented with high levels of EE, which was related to increased workload, the physical nature of the job, lack of autonomy /control (over their working situation, limited in their ability to specialise in other forms of treatment as they were fixed to specific treatment machines), unfair salaries and physical demands (which included lifting and repositioning patients and lead blocks during radiation sessions as lead is used to shield vital organs during treatment as radiation does not pass through the metal). They also

[3] Medical facilities within South Africa that are funded by the government.
[4] Medical facilities within South Africa that are funded by private individual health care insurance.

presented with high levels of DP which was related to an increase in having to work under pressure (due to increased workload). The recommendations highlighted by Le Blanc and Schaufeli (2003) included the need to decrease physical activity, increasing autonomy within the job context and increasing salaries to ensure that the financial reward was in proportion to the work effort being put in.

Akroyd, Caison and Adams (2002), revealed that radiation therapists in the United States of America presented with high levels of EE and DP, due to increased level of personal/ environmental stress and increased workload. Interestingly these therapists presented with high levels of PA, due to reassurance of worth and the availability of guidance, which was negatively associated with burnout levels among the sample (Akroyd et al., 2002).

Using qualitative studies a number of occupational stressors have been identified, which have been shown to increase levels of stress and burnout among radiation therapists. In terms of this study only a brief overview of practical and emotional stressors will be highlighted, in order to contextualise the work environment of these medical professionals. Within the South African and generally, these stressors have been grouped into two broad themes, that being, practical and emotional stressors.

2.4.1. Practical Stressors

Increased workload has been shown to play a significant role in dissatisfaction with work amongst radiation therapists (French, 2004; Lawrence, 2007, Lawrence et al., 2011, Probst & Griffiths, 2009; Roopnarain, 2011) as the radiation therapists felt that they were unable to adequately engage in proper patient care and build rapport with patients. Coupled with the increasing patient numbers, an increase in cognitive work demands was noted in studies, which was conducive to the likelihood of making radiation errors (Dempsey & Burr, 2009; French, 2004; Probst & Griffiths, 2009; Roopnarain, 2011). The consequences of making radiation errors are significant (as a dose once admitted cannot be removed) and was linked to great emotional distress. Other practical stressors noted by French (2004) and Roopnarain (2011) included large volumes of paper work; increasing responsibility without adequate support; inadequate staffing and equipment; equipment breakdown; physically demanding work; an overall poor working environment; and a lack of financial support-inadequate salary. As radiation therapists treat patients in a team setting, which is standard practice in this field and is implemented by law, one of the major stressors pertinent to these health care

professionals was the lack of team dynamic, where teams became incompatible and unsuccessful (French, 2004; Probst & Griffiths, 2009, Roopnarain, 2011).

O'Driscoll & Brough (2010) also highlighted that working long hours negatively impacted on the health and wellbeing of employees, especially female employees, as their responsibilities inherent to their families were disrupted when they spend long hours at work. This link between gender and stress was made as the majority of radiation therapists were female and was also evident in South Africa as well, by Lawrence (2007). O'Driscoll and Brough (2010) and Roopnarain (2011) also found that the long working hours like those in general radiography was one of the primary reasons students chose radiation therapy as opposed to radiography. Thus working hours has been found to be a prominent stressor among radiation therapists. Among radiation therapists, unchallenging work and job content were significantly linked to a lack of autonomy and dissatisfaction with jobs. As a result of increased patient numbers treatment machines became site specific (e.g., a treatment machine that is used to treat patients with breast cancer only), subsequently work became unchallenging and monotonous (Probst & Griffiths, 2009; Roopnarain, 2011). The radiation therapists in these studies reported feelings of lack of autonomy which was further compounded by the lack of professional development within the field (lack of ability to study further, lack of educational initiatives at work) (Probst & Griffiths, 2009; Roopnarain, 2011). French (2004) highlighted a lack of support from supervisors and senior staff in the unit. This was reaffirmed by Probst and Griffiths (2007; 2009) and Roopnarain (2011) who found that radiation therapists also felt that they did not have support from management, moreover many felt that they were not listened to by management; that that there was poor and weak leadership and a lack of empowerment (inability to enact change in their organisation and did not feel part of the decision making process). Communication problems among oncologists, nurses, radiation therapists and management were also noted as an important stressor coupled with a lack of supportiveness (Carvalho, Muller, Carvalho & de Souza Melo, 2005; French, 2004; Probst & Griffiths, 2007).

2.4.2. Emotional Stressors

The emotional work demand among radiation therapists included the fact that many were more likely to feel that they were becoming "over involved" with the patient which resulted in emotional exhaustion (Lawrence, 2007; Probst & Griffiths, 2009; Roopnarain, 2011). Consequently supporting patients and their family members was also noted as a prominent stressor among oncologists (Sherman, Edwards, Simonton & Metha, 2006), oncology nurses

(Barnard, Street & Love, 2006; Cashavelly et al., 2008) and radiation therapists (French, 2004; Roopnarain, 2011; Probst & Griffiths, 2009). Dealing with death and the compounded grief was an important and salient stressor among all staff members within the field of oncology (Barnard et al., 2006; French, 2004; Le Blanc & Schaufeli, 2003; Probst & Griffiths, 2009; Roopnarain, 2011). Treating paediatric patients was a salient stressor among radiation therapists as many therapists associated paediatric patients with their own children which resulted in greater emotional stress (Mucheusi & Engel-Hills, 2006; Roopnarain, 2011).

Due to role conflict and ambiguity, radiation therapists were more likely to convey and communicate bad news to patients about their diagnosis, a job more likely to be handled by the oncologist. In this case radiation therapists felt they did not possess the required skills or resources to fulfil this role (O'Driscoll & Brough, 2010). A lack of control was also common to oncology staff when patients treatment regimens and prognosis changed quickly, moving from a curative course to a more palliative course. Feelings of powerlessness were evident among radiation therapists as they were unable to help and "cure" patients. Thus radiation therapists felt that they were powerless when it came to helping patients (especially when curative course became palliative); were unable to manage with the increasing number of palliative cases and patients were unable to deal with the side effects of their treatment (French, 2004; Roopnarain, 2011). Barnard et al., (2006) found that oncology nurses were more likely to feel helpless and hopeless when treating patients with terminal diagnosis. Lyckholm (2001) and Le Blanc and Schaufeli (2003) also found that a sense of failure and unrealistic expectations (ability to save and cure all patients) were prominent stressors experienced among oncologists.

Taking the above mentioned understanding of the work environment and work related stressors prevalent to the field of radiation therapy, it is not surprising that an increase in stress, ambivalent feelings and burnout among these health care workers has been noted. The prolonged response to chronic stress culminating in burnout is a salient problem among radiation therapists, globally and in South Africa (Akroyd et al, 2002; French, 2004; Lawrence, 2007; Le Blanc & Schaufeli, 2003; 2008; Probst, 2012; Probst & Griffiths, 2007; 2009; Schaufeli & Buunk, 2003). Consequently a need for interventions aimed at reducing burnout among these medical professionals is highly warranted. The section below examines the current trajectory in intervention development.

2.5. Intervention development

There is no dearth of empirical or theoretical studies within the field of burnout, and the translation of new understandings has allowed for greater expansion of the framework of knowledge. Furthermore, collaboration between researchers and practitioners has allowed for a greater impetus towards intervention development (Maslach et al., 2012). Intervention development is firmly rooted within the key tension between the individual and the organisation. Questions such as, "where does burnout originate?" and "whose responsibility it is for initiating change when burnout is experienced?" form the crux of the key tension evident within intervention development (Maslach & Leiter, 1997)

Generally interventions aimed at reducing burnout focus on changing or intervening at the level of the individual or the organisation (Le Blanc & Schaufeli, 2008; Leiter & Maslach, 2001; Maslach & Goldberg, 1998; Maslach et al., 2001). Most theorists tend to acknowledge the benefits of organisational interventions, which is congruent with the consensus that organisational/ situational factors tend to be more predictive of burnout as opposed to individual/personal correlates (Le Blanc & Schaufeli, 2008; Leiter & Maslach, 2001; Maslach & Goldberg, 1998; Maslach, 2003). However, individual interventions still gain most of the popularity within the field of burnout as they are easier to implement and tend to be more cost efficient (Le Blanc & Schaufeli, 2008). This reductionist approach seems to dominate the field of intervention development (Randall, Cox & Griffiths, 2007) and merely highlights the danger of reducing understanding to a single level of analysis (e.g., all organisational versus all individual). Consequently multi-level interventions (combination of both individual and organisational levelled interventions) tend to gain greater acknowledgement as they may outweigh the benefits of the single level interventions, however limited research has been conducted in this area (Akroyd et al., 2002; Maslach et al., 2012; Schaufeli & Buunk, 2003). Below I will begin to highlight the differences between both individual and organisational levelled interventions, and examine some critique levelled against each type of intervention.

2.5.1. Individual level interventions

Individual interventions tend to focus on problems the individual may have and seek to remediate these problems by "changing the person" through the use of individual driven methods (i.e. counselling/ therapy) (Cox, Taris & Nielsen, 2010; Maslach & Goldberg, 1998). Coupled with the fact that burnout first becomes "visible" in the emotions and actions of an individual, the argument of individual rationale associated with burnout, tends to gain more attention (Maslach & Leiter, 1997). Two important assumptions, which include the

understanding that the source of burnout is the individual, as opposed to the situational factors at work; and that it is the responsibility of the person, not the organisation to do something about the burnout, will be examined below (Maslach & Goldberg, 1997).

Homer (1985, p.59) as cited in Maslach and Goldberg (1998) mentions that:

> Burnout is not caused by a stressful work environment alone but, more importantly, by individual's workaholic response to that environment

This understanding epitomises the understanding that the actual source of burnout lies within the individual. Conventional wisdom or taken for granted knowledge includes both positive and negative assumptions that centre on individual causation and burnout. Negative assumptions according to Maslach and Goldberg (1998) include the view that "weaker" people tend to experience burnout faster. Furthermore those who burn out tend to be individuals who have limited resiliency and are unable to cope with the day to day activities of work, which highlights the view that since only the fittest survive at work, "burnout is seen as a failure to survive" (Maslach & Leiter, 1997). Maslach and Goldberg (1998) also highlight the view that work needs to possess a certain degree of stress, which serves as motivation and enhances productivity, and those who are unable to survive this "good stress" are lazy and tend to burnout quicker (Maslach & Goldberg, 1998). Burnout has been conceptualised as another "way of complaining," as Maslach and Leiter (1997) mention, which encompasses the idea that those who experience burnout are generally "unreasonable complainers." Taking the following erroneous perceptions into context it is no wonder then that more emphasis is placed on individual level interventions. Confirmation that burnout is often perceived to be caused by the individual is compounded by the fact that narratives about burnout tend to be rooted in one's lived experience and is thus articulated in personal terms, which may force individuals to seek out personal solutions, like visiting a counsellor or psychologist (Maslach & Leiter, 1997). Furthermore as highlighted by Maslach and Leiter (1997) and Maslach and Goldberg (1998), feelings failure that are linked to the belief/s that one is "weak" a "complainer," or is incapable of "surviving" may cause individuals to shy away and deny their experiences, which becomes detrimental to the well-being and productivity of the individual . The quote below, by Patrick (1984a; 1984b) as citied in Maslach and Goldberg, (1998, p. 70) helps to highlight the points above:

> Because burnout "gets no respect" as a serious problem, people who experience it are often seen as weak wimps who aren't tough enough to handle something trivial, or as whiny complainers who won't take responsibility for their own actions.

On the other hand burnout may be conceptualised as virtuous or noble whereby a person burns out because he/she is an "overachiever" and is thus "trying too hard." (Maslach, 2003; Maslach & Goldberg, 1998). Irrespective of the fact that this understanding may be conceived off as being positive, it still perpetuates the idea of individual causation of burnout, which fuels the development of individual interventions.

The second assumption of individual responsibility for dealing with burnout is epitomised in the quote by MacBride (1983, p. 3) as cited in Maslach and Goldberg (1998) below:

> While organisations can and should assume some responsibility for stress management within the workplace, it is inappropriate and unrealistic for individual employees to abdicate all personal responsibility for combating burnout. Employees must assume responsibility, first of all, for recognising stress within themselves and secondly, for taking appropriate steps to reduce and/or manage stress.

When applying this to the understanding of burnout, we see that individuals should learn to deal with the stressors they experience at work and should not fall into a culture of "blaming the employees" for problems at work (Saksvil, Nytro, Dahl-Jorgensen & Mikkelsen, 2002). This also tends to encourage the assumption that individuals are responsible for dealing with "their" burnout (Maslach & Leiter, 1997). Furthermore it tends to be more cost efficient (in the short term) and easier to change a person as compared to changing an organisation (Le Blanc & Schaufeli, 2008; Maslach, 2003; Maslach & Goldberg, 1998; Maslach & Leiter, 1997).

Due to being cost efficient (in the short term) and easier to implement, studies that have utilised individual interventions are more dominant. These types of interventions have focused on education, stress management (as opposed to prevention), the development of a healthy and balanced lifestyle, cognitive behavioural and /or relaxation techniques, speaking to others (support groups or to a professional) and may culminate in burnout workshops (which encompass all of the above mentioned techniques) (Akroyd et al., 2002; Bragard, Razavi, Marchal, Merckaert, Delvaux, Libert, Reynaert, Boniver, Klastersky, Scalliet & Etienne, 2005; Le Blanc & Schaufeli, 2008; Medland et al., 2004).

However the following criticisms have been levelled against individual interventions. Firstly, they tend to be general in nature (as opposed to being specifically tailored to reduce burnout) and are driven by the individual in question (Shirom, 2010). In most cases individual levelled interventions tend to focus on remediating the "stress element" a person may be experiencing,

thus these types of interventions are considered to be general in nature, as they affect EE only (for a longer period of time). In order for individual interventions to be specifically tailored to reduce burnout, these interventions should affect all 3 dimensions of burnout (as mentioned earlier in this chapter). However much of the research on individual interventions show that these interventions rarely affect the other two dimensions of burnout (DP and [reduced] PA) (Awa, Plaumann & Walter, 2009; Egan, Bambra, Thomas, Petticrew, Whitehead & Thomas, 2007: LaMontagne, Keegel, Louie, Ostry & Landsbergis, 2007; Ruotsalainen, Serra, Marine & Verbeek, 2008). These interventions also tend to focus on merely changing the coping capacity of employees (self-improvement), however this is paradoxically, as employees exist within the structure of the organisation, therefore applying this knowledge to the work setting may be difficult due to the limited control employees have over the organisational structure and stressors (Maslach, 2003; Maslach et al., 2001). In most cases employees are unlikely to apply new knowledge in the form of stress management, coping and relaxation skills as they may operate within various constraints, be it time or resources. Furthermore the work context is action oriented, geared towards productivity and is governed by rules and procedure that stipulate the place and time that all events must take place, consequently employees may find it difficult to schedule relaxation techniques, support groups, team building and other forms of stress relieving strategies in their daily routines (Maslach et al., 2001).

Systematic reviews on intervention development have noted that the effectiveness of individual levelled interventions are generally short lived. Thus these interventions are cost efficient in the short term, however they are not sustainable and thus tend to be more expensive in the long term, as they require constant refresher courses. Furthermore these interventions are problematic as they tend to reduce EE only therefore DP and [reduced] PA are not affected, which would make them more expensive to implement, as other types of interventions need to incorporated to address DP and reduced PA (Awa et al., 2009; Egan et al., 2007: LaMontagne et al., 2007; Ruotsalaine et al., 2008). These interventions are more popular due to philosophical notion of individual causation of burnout and the pragmatic reasoning that it considered cheaper and more efficient to change individuals as opposed to organisations (Maslach, 2003; Maslach & Goldberg, 1998: Maslach et al., 2001).

2.5.2. Organisational level interventions

Since organisational factors tend to greater increase ones proclivity towards burnout, as opposed to individual/ personal factors, it follows then that organisational interventions would be more productive, as they target the relevant stressors and produce longer lasting effects (Maslach, 2011; Maslach et al., 2012; Semmer, 2003; Biron & Karanika-Murray,

2013). By definition organisational interventions seek to remove or modify the job stressors; aiming to improve health and well-being of employees and are able to target relatively large groups of people at once (Cox et al., 2010; Nielsen, Taris & Cox, 2010; Nielsen, Randall, Holten & Gonzalez, 2010c).

According to Sherman et al.,(2006) and Wood and Killion (2007); these interventions may include: flexible work arrangements (which addresses problems with under or inappropriate staffing within the organisation); facilitation of employee growth and learning (which allows for increased training of staff that results in an increase in morale) and/or a change in working conditions (which may include changes in work hours and/or schedules and/or monetary rewards and/or increased staff autonomy and/or increased team building and/or reduced team conflict). As mentioned by Nielsen et al., (2010) and Nielsen et al., (2010c), due to the larger target population organisational interventions tend to improve the quality of the environment for all staff and are not only confined to certain individuals. Furthermore as these interventions tend to have a longer duration (in the workplace), the work setting benefits as it is geared towards improved productivity throughout the course of the intervention (Leiter & Maslach, 2001). Lastly these interventions transcend the notion of individual causation by not "blaming the individual" for the problem and focus rather on the organisational factors conducive to burnout. Taking the above into consideration, it follows then that organisational interventions tend to be more advantageous in nature as compared to individual interventions (Leiter & Maslach, 2001; Maslach & Goldberg, 1998; Maslach & Leiter, 1997).

However it has been suggested that the effectiveness of organisational interventions is questionable due to insufficient empirical evidence (Awa et al., 2009; Biron & Karanika-Murray, 2013; LaMontagne et al., 2007; Randall, Griffiths & Cox, 2005; Randall, Cox & Griffiths, 2007: Ruotsalainen et al., 2008). Reasons for this may include: firstly the major logistic difficulties inherent in designing organisational interventions, the costs involved, the availability of a feasible site for implementation of the intervention and constant follow-up (Le Blanc & Schaufeli, 2008; Maslach et al., 2001). Methodologically, critique surrounding the lack of [appropriate] control groups, paucity of longitudinal studies, the lack of pre and post burnout measures and the omission to control for contextual factors have been highlighted (Maslach et al., 2001; Cox, Griffiths & Houdmont, 2007).

Furthermore as mentioned by De Frank and Copper, (1987) as cited in Akroyd et al., (2002) organisational interventions have been criticised for being "band aids" as they merely

increase productivity and reduce costs. Due to the failure to recognise variety among individuals within the same department, organisational interventions have been further criticised for seeking general, almost universal solutions, to problems within the workplace (Leiter & Maslach, 2001). Consequently acknowledgement needs to be given to personal variability the fact that not all people may experience their work environment as the same, furthermore others may possess different values, thus making them more likely to carry issues from home to work, which has been shown to increase ones proclivity towards burnout (Leiter & Maslach, 2001). As Akroyd et al., (2002) and Le Blanc and Schaufeli, (2008) highlight, when top management plan interventions, that are not centred on employees or unique stressors within the department, the effectiveness of the overall intervention is compromised, as it is not pragmatically driven. Lastly designing interventions at the level of the organisation are highly complex as it calls for change in an complex adaptive system, as an organisation is influenced by other spheres as well (as mentioned above), is expensive, time consuming and requires a lot of effort and collaboration (Biron & Karanika-Murray; 2013; Maslach et al., 2001; Nielsen, Randall & Albertsen, 2007; Randall, Cox & Griffiths, 2007).

Multi-level intervention models seem to be the "gold standard" in intervention development as they highlight that individuals are embedded or entwined within the organisation, therefore interventions need to acknowledge both individuals and the organisation (Akroyd et al., 2002; Maslach et al., 2001; Maslach et al., 2012; Nielsen & Randall, 2013). Studies in this field are still embryonic, and further exploration is needed. In conclusion individual levelled interventions, irrespective of the critique levelled against it, tend to be more dominant in literature as they tend to be easier to implement, focus on changing the individual as opposed to the changing the system and are more cost efficient. Even though, theoretically, interventions aimed at the level of the organisation would ameliorate the correlates of burnout, the success of these interventions are questionable, due to insufficient empirical evidence and methodologically problems. More impetus is now being gained in understanding the prominent barriers inherent in intervention development, which will aim to facilitate the efficient delivery of interventions aimed at reducing burnout among health care professionals.

2.6. Barriers to intervention development

In terms of barriers to interventions aimed at reducing burnout, three major areas of concern are highlighted by theorists within the field. These areas tend to focus on the intervention design [implementation]; the actual intervention [context]; and participants [mental models].

Randall et al., (2007) use different terminology i.e., macroproccesses (which refers to the implementation phase) and microprocesses (which refers to the mental models) which speak to the same defining features. In contrast Nytro et al., (2000); Saksvik et al., (2002) and Saksvik et al., (2007) refer to process factors i.e., only focus on the mental models/ micro processes and further differentiate between barriers that take place before and after the implementation of the intervention. Intervention design and implementation (macro processes) highlights issues around initiation (i.e., who initiated the intervention); what motives fuelled the intervention; what were the roles of the various stakeholders (i.e., senior management; middle management; consultants and participants); whether the intervention reached the participants and how it was communicated to them (Biron & Karanika-Murray, 2013; Nielsen & Randall; 2013; Randall, Cox & Griffiths, 2007). Participants mental models (micro processes/ process factors) according to these authors highlights the participants (individual/ collective or managements) perceptions and appraisal of the interventions (Biron & Karanika-Murray, 2013; Nielsen & Randall, 2013; Saksvik et al., 2002). Lastly intervention context refers to changes in terms of contextual factors, that may compromise the intervention by diluting the intended effect of the intervention (Biron & Karanika-Murray, 2013; Nielsen, Randall & Christensen, 2010a; Randall et al., 2007). I will now examine how these factors are conceptualised as barriers to intervention development in the remainder of this chapter.

2.6.1. Implementation/ design (macroprocesses) factors

2.6.1.1. Initiation

According to Nielsen and Randall (2013) interventions aimed at reducing burnout are initiated, in most cases, to address problems internal to the organisation (i.e., to improve productivity, quality and /or become healthy again), or external to the organisation (i.e., legislative changes) and/or both. Importantly these authors further highlighted that when these interventions were initiated in departments, they were more likley to displace power within organisations, which may then affect buy in from different stakeholders. Therefore in cases where interventions may unintentionally displace power from e.g., middle management, it follows then that up take from these managers would be restricted. Consequently Nielsen and Randall (2013) highlight that it is imperative to identify what the motivating force behind the intervention is and who actually defines the problem statement as this is more likely to affect buy in from different stakeholders, which is imperative for the success of the intervention. Similar sentiments were highlighted by Egan et al., (2007), who determined that when interventions aimed at reducing burnout were driven by motives of increasing

productivity and performance, they were less likely to be successful in terms of employee health (burnout) and wellbeing, as compared to interventions initiated to primarily address these concerns (employee burnout, wellbeing and health).

2.6.1.2. Targeting the correct factors

Nielsen et al., (2010) mention that the main focus of risk assessments should be to identify underlying, focal issues, as opposed to alleviating the symptomatic features evident in the organisation. In other words researchers and practitioners alike, should make use of thorough risk assessments that will assist in the process of defining the real source of the individuals' problems within the organisation (Kompier & Kristensen, 2001; Murphy & Sauter, 2004; as cited in Nielsen et al., 2010). An example of this may be that a perceived problem in organisation A is lack of support and recognition from management, however in the final analysis, the underlying issue maybe an increase in workload, thus increasing support and recognition in that organisation would not be as beneficial or effective, as redistributing the workload or recruiting more employees. Consequently developing an intervention aimed at reducing burnout, that focuses on the arbitrary factors or the mere "symptoms of the problem" will not solve or remediate the problem of burnout, furthermore participants will be less likely to partake in the intervention, as it may seem as it may seem like a waste of their time and effort (Nielsen et al., 2010).

2.6.1.3. Learning from past intervention failures

A paucity of studies that reflect on reasons for increased failure of burnout interventions has been noted within OHP (Nytro et al., 2000). It is not surprising that successful studies of these interventions have been more widely published, however more information pertaining to the unintended consequences of interventions, failures and inconclusive results needs to be reflected upon. This will allow for the development of "best practice strategies" and will facilitate further knowledge development. Limited studies on organisational levelled burnout interventions are due to gross misunderstandings in terms of organisational problems. Another way for organisations to engage in reflection of interventions aimed at reducing burnout is by making use of experiential learning, as postulated by Kolb and Fry, (1975); as cited in Nytro et al., (2000). This will assist in the documentation of reasons as to why the outcomes of the interventions may not have materialised or may not have been as successful. Limited reflection and documentation in organisations leads to a decreased potential in grow and development, furthermore Argyris, (1990); as cited in Nytro et al., (2000) highlights that a "culture characteristic of the inability to learn from failure" results in increased levels of cynicism and scapegoating as opposed to improved and efficient problem solving. In some

cases organisations may be using specific techniques and coping strategies that do not really assist employees, however as no feedback regarding the use and personal experiences of the employees is taken into consideration, a culture of learning from mistakes within the organisation is not achieved. Thus as Nytro et al., (2000, p. 216) mentions "there are probably as many opportunities to learn from organisational failure as from organisational success, but there appears to be strong cultural, social and psychological prohibitions against harvesting knowledge from failure." In this case organisations will be less responsive to hearing their employees as they are more likely to brush over the past mistakes and make them again. Furthermore when burnout interventions are conducted and limited learning has taken place, it has a detrimental impact on the participants' perceptions of other possible burnout interventions to come in the department and willingness to participate in these initiatives decreases as well (Nieslen & Randall, 2013).

In contrast, organisations that engage in healthy reflection and documentation practices according to Nytro et al., (2000) are more likely to explicate and retain learned lessons that are grounded in lived experience and are less likely to repeat past mistakes. Consequently a move towards the creation of an environment within organisations that is more accepting of errors and is less focused on blaming individuals for subsequent failure is greatly needed. If this stance gains greater drive, organisations will be more likely to notice and rectify past mistakes, which may facilitate easier and efficient intervention development.

2.6.1.4. Employee participation

Employee participation according to Parent (2010) refers to the facilitation of individual input regarding the proposed intervention. When a participatory framework is advocated, a conscious effort is made to include the voice of all employees, which has been linked to successful interventions (Nielsen & Randall, 2013). Since employees possess both experience and institutional knowledge of their occupational context, their participation is vital when planning a burnout intervention, as it facilitates optimal fit between the intervention, organisational culture and the context (Nielsen et al., 2010c; Nielsen, Randall & Albertsen, 2007). When participation is limited, interventions that are developed may tend to be miss-matched in terms of fit to the organisational culture. Cunningham et al., (2002); as cited in Nielsen et al., (2010c) found that when a burnout intervention was congruent to the organisational culture, increased levels of trust, cooperation and commitment to the actual intervention was noticed. Conversely when interventions were not in line with the culture of the organisation, were driven by political agendas and /or executive management, and were characterised by "the business of money making" and "hidden agendas," resistance to the

intervention was higher, as the initial organisational culture or the shared norms and values held by employees was not reflected in the intervention (Daly, Teague & Kitchen, 2003); Lines, 2004).

When participation is advocated employees are better able to offer solutions they think may remedy the situation which has been noted to increase their sense of fairness, justice and support. Nieslen et al., (2007) and Nielsen and Randall (2012a) also showed that increased participation was positively associated with perceived ownership of the burnout intervention; increased job satisfaction and lower levels of stress at work. Furthermore when employees are seen as active agents in the development of interventions at work, they become, as Nielsen et al., (2010c) mentions "co-learners" in the empowerment process which facilitates the development of respect and self-esteem. Thus when employees are "co-learners" in a process they were more likely to feel heard, appreciated and valued.

Mikklesen and Saksvik, (1998); as cited in Nielsen et al., (2010c) concluded that when individuals participated in an intervention aimed at reducing burnout, their initial perception of the intervention being the responsibility of management changed and was replaced by a greater sense of responsibility for that given intervention. Nielsen, Randall & Albertsen (2007) showed that an increased sense of responsibility was associated with increased commitment to the intervention which also facilitated the sustainability of the intervention, as employees were more likely to partake in the burnout intervention till the end of its existence. From this it follows that participation is positively associated to commitment to fulfilling goals in terms of the burnout intervention and is thus negatively related to resistance to partake in the given intervention (Lines, 2004; Nielsen et al., 2010c; Nielsen, Randall & Albertsen, 2007).

Conversely if burnout interventions take on a "top down approach" and are thus developed by management/ consultants only, who restrict employee participation, the likelihood of goal achievement and sustainability is limited (Nielsen et al., 2010). When employees are seen as passive recipients of the given intervention and its activities or when participation is limited or excluded, the success of the given intervention becomes questionable as employees are not heard, neither do they feel valued. As mentioned by Nielsen et al ., (2010c), irrespective of the expertise of management, burnout interventions that are based on a top down framework, tend to address concerns that may not be true for employees as their input, which ensures better fit and understanding of the local context, is negated. Therefore in this case, the intervention may address factors that are pertinent to the management but do not reflect the

problems that may be developing among the employees. Based on this understanding the intervention may be inappropriate or useless to employees as it offers symptomatic relief of the issues only and does not aim to remediate the underlying core stressors and problems (Nielsen et al., 2007). In most cases where participation is underpinned by an autocratic decision making style, as opposed to a democratic approach, the effectiveness of burnout interventions are questionable (Lines, 2004). When participation is limited employees are more likely to become resistant to the given intervention and its activities, up take and commitment also tends to decrease drastically (Randall et al., 2005; as cited in Nielsen, Taris & Cox, 2010). Taking the above into consideration it follows then that by promoting greater employee participation, organisations are more likely to achieve better outcomes in terms burnout intervention development and uptake. Thus more emphasis needs to be placed on developing a participatory framework for all employees.

2.6.1.5. Support from senior management

According to Spielberger, Vagg and Wasala, (2003), support which consists of two categories: perceived and social support, is beneficial to employees as it is protective and buffers negative factors at work. Perceived organisational support is the belief that employees have concerning the organisations commitment to rewarding work effort and meeting their need for approval (Eisenberger, Fasolo, & Davis-LaMastro, 1990; Eisenberger, Huntington, Hutchison, & Sowa, 1986, as cited Spielberger, Vagg & Wasala, 2003). Salary increases, promotions, and recognition/incentives of good performance are examples of perceived organisational support, which have been found to be inversely related to both job tension and employee burnout (Cropanzano, Howes, Grandey, & Toth, 1997, as cited in Spielberger, Vagg & Wasala, 2003; p. 192). Cartwright and Cooper (2002) mention that financial rewards are predictive of the type of lifestyle an individual leads and is related to the perceived level of value the organisation has for the person (cited in Vakola and Nikolaou, 2005), it is no wonder then that (in general) a lack support in terms of pay and benefits is linked to a lack of perceived support from management coupled with feelings of lack of value about one self.

Social support, on the other hand, refers to the quality and type of relationship employees have with supervisors and co-workers, and the amount of recognition and assistance with tasks received (Cohen & Wills, 1985; Fusilier, Ganster, & Mayes, 1986; Kottke & Sharafinski, 1988, as cited in Spielberger, Vagg & Wasala, 2003). As mentioned by Spielberger, Vagg and Wasala (2003) social support, especially that from supervisors, has been found to be beneficial to worker performance; wellbeing and "buffers the effects of ill health" (Frese, 1999, p. 187, as cited in Spielberger, Vagg & Wasala, 2003).

Senior managers in an organisation occupy high levels in management. They, in most cases are involved in allocation of resources to the burnout intervention. Furthermore due to their position they tend to act as role models through their attitude and actions (i.e., by being actively involved in the intervention) towards the intervention. Thus employees are more likely to partake in a given burnout intervention when they see that senior management see the benefit and use of the intervention, that senior management approve of the intervention and as a result are actively involved themselves in the intervention (Randall, Cox & Griffiths, 2007; Nielsen & Randall, 2013). Saksvik, Tvedt, Nytro, Anderson, Buvik and Torvatn, (2007) highlight that availability and psychological comfort gained by the visual sight of management is also needed and valued by employees, especially when new changes are taking place (i.e., engaging in an intervention can be perceived as something that is new or a change). Consequently these authors found that the sight and availability of management was valued as employees saw them as "those who had organisational insight and information regarding the change" (Saksvik et al., 2007). In addition Parent (2010) mentioned that support gained from management was positively related to up take in terms of a proposed burnout intervention. Thus once employees felt that they were supported, recognised and that management approved of the support for the intervention, they (employees) were more likely to participate in the given intervention.

However due to increased work load and responsibilities, senior management do not really follow through with the implementation and evaluation of interventions and tend to pass this on to the middle management. Research by Kets de Vries and Balazs, (1997) and Clair and Dufresne, (2004) as cited in Saksvik et al., (2007) revealed that middle management and managers who then become responsible for interventions within organisational contexts, were more likely to withdraw from the context and avoid employees, which resulted in a decrease in information pertaining to the intervention. Thus unavailability of management coupled with the scarcity of information merely fuels resistance to the intervention (Saksvik et al., 2007). It follows then that a lack of support from management, is seen as an occupational stressor that negatively influences the attitude of employees, which may adversely affect the success and sustainability of interventions (Nielsen et al., 2010c; Spielberger, Vagg & Wasala, 2003).

Saksvik, Nytro, Dahl-Jorgensen & Mikklesen (2002) examined the effectiveness of an intervention aimed at reducing burnout in post offices. In this study management only allowed the employees 2 hours, as opposed to a day, to engage in the burnout intervention. Furthermore, in this study, management insisted that they were unable to employ temporary

staff to assist employees while they attended the given intervention. This study showed that when senior management was not supportive of employees' involvement in a burnout intervention and saw their involvement in the intervention as an intrusion to daily work activities, the overall effectiveness of the given intervention was limited. In some cases (like the one mentioned above) managers may think that interventions aimed at reducing burnout take away from work time; are wasteful in terms of resources, and are complex as they require buy in and commitment from unions, management and employees. These notions then tend to feed a lack of interest, on the part of management, which has been shown to adversely affect intervention outcomes (Nielsen et al., 2010c; Nytro et al., 2000).

Saksvik et al., (2002) also found that senior managers were more likely to prefer individual level intervention as opposed to organisational levelled intervention (11 out of 20 managers). This may be motivated by the reasons offered for the dominance of individual interventions (as mentioned above). Importantly employees felt that management were merely shifting the responsibility from themselves back to employees and thus placing the responsibility of improving the working environment on employees (Nytro et al., 2000). This was more likely to create relationships that were characterised by "blaming each party for the problem". Furthermore both management and employees believed that neither party showed enough initiative, which resulted in strained relationships characterised by animosity, friction and distrust (Saksvik et al., 2002). Consequently according to Nieslen et al., (2010c) if management neither see the benefit/ need for an intervention aimed at reducing burnout, nor approve of it, due to the "trickle-down effect" the likelihood of uptake and success of the given intervention will be limited.

2.6.1.6. Support from middle management

As mentioned above, senior management make decisions to implement the burnout intervention and in most cases these interventions are handed over to middle managers, who are then usually responsible for implementing the given intervention and communicating it to the employees (Nielsen & Randall, 2013). Consequently it is evident that middle management plays a crucial role in terms of the implementation of interventions aimed at reducing burnout and therefore they are able to hinder or facilitate the given intervention. Dahl-Jorgensen & Saksvik, (2005); as cited in Nielsen & Randall (2013) showed how middle managers were able to restrict the time employees spent in a burnout intervention at work, which then negatively affected the intervention and also acted as a barrier to the success of that particular intervention. Conversely middle managers who were perceived as being supportive of the burnout intervention, who saw the need for the intervention and thus took

on an active role in implementing the intervention, were linked to higher levels of psychological wellbeing after the intervention and reported positive results in terms of work place intervention (Nielsen & Randall, 2009; as cited in Nielsen & Randall, 2013).

However Saksvik et al., (2002; 2007) highlighted that the job of the middle manager, especially during the implementation of a burnout intervention, became challenging, as they were forced to function as the link between senior management and employees. Keeping in mind the traditional bureaucratic structure of organisations, this role was noted for its restricted amount of freedom. As one middle manager said "As long as the measures in health and work environment don't cost anything we are allowed to do whatever we like to do- they (top management) don't care" (Saksvik et al., 2002, p 48. This quote highlights the frustration that middle management may feel as they are restricted in what they can and cannot do within the organisational context, even when it comes to interventions and the wellbeing of employees.

It follows then that the nature of managerial support given to employees is important as it facilitates uptake of the given intervention and is linked to success of the intervention (Cox, Karanika, Griffiths & Houdmont, 2007). Therefore Nytro et al., (2000) mentioned that priority should be given to training of managers in terms of coping mechanisms for stress, as they will be better equipped to assist employees in terms of burnout interventions. Secondly managers should be convinced of the "sharing of power" as this will be needed to facilitate the active engagement of employees in the intervention process. One was way of facilitating the intervention process is by the seeking the help of organisational consultants or external researchers.

2.6.1.7. Support from consultants

In some cases large organisations tend to employee consultants who then plan, design, implement and facilitate parts of intervention (Nielsen et al., 2010). Nieslen et al., (2006) as cited in Nielsen & Randall, (2013); showed that consultants were able to increase the reach of the intervention as they were able to improve up take among employees in other departments within an organisation, which was noted to increase the proliferation of the intervention and thus improved the success. Consultants and researchers, as a result of their skill sets, are able to develop comprehensive risk assessments which target the correct factors and develop interventions that incorporates the employees' expertise as well.

However there have been a numbers of negative factors associated with the use of consultants. Aust et al., (2010) as cited in Nielsen & Randall, (2013); found that a dispute developed between consultants and participants, in terms of determining what the actual problem areas were for the required burnout intervention. Thus the intervention that was developed, was developed using a top down approach as the consultants did not privilege the experiences/ opinions of the employees, furthermore employee participation was limited as well. In this case the intervention targeted what the consultants presumed where the problems and thus resulted in reduced up take, as the employees saw the intervention as a waste of time and did not participate in it. Furthermore the employees felt that that they did not own the intervention and that the burnout intervention was worthless as it did not address salient issues (Aust et al., 2010, as cited in Nielsen & Randall, 2013). Furthermore when external consultants come into the department, employees are more likely to think that they are the experts in the field and know all the right answers, as a result employees become passive in the intervention development process and may feel that the responsibility of the intervention and dealing with occupational health issues is now automatically shifted to the consultant (Nielsen et al., 2010c). In situations like this consultants then take on full responsibility of the intervention which adversely affects participation, up take and commitment to the intervention by employees. Furthermore consultants end up leaving the organisation. This results in limited infrastructure within the organisation for sustaining and/or continuing improvements the consultants initiated, thus the organisation becomes dependent on the consultant, which reduces the sustainability of the intervention (Dahl-Jorgensen & Saksvik, 2005 as cited in Nielsen & Randall, 2013). Thus an important goal for consultants to priority is the need to encourage the participatory framework as this will allow for the inclusion of all participants and ensure that there is a feeling of joint responsibility for the intervention. This will reduce stagnation (after consultant/s have left) and will ensure that empowerment and learning continue, as over dependence on external consultants/researchers can leave the organisation vulnerable (Nielsen et al., 2010c).

2.6.1.8. Communication

Argenti (1997) as cited in Daly et al., (2003) states that "if a company has lost the faith and goodwill of its employees it faces an uphill battle as it tries to correct its errors and rebuild credibility with the very ones who hold the future of most corporations in their grasps." In keeping with the quote above, Daly et al., (2003), state that employees form the central link and are thus essential to the dynamics of an organisation. Therefore it follows then that the

way in which employees experience and perceive work is important, as they will communicate either positively or negatively about the organisation.

According to Elving, (2005), communication within an organisational context has two goals: that of informing employees about their tasks, the overarching policy and other issues prevalent at the organisation, and secondly, to facilitate the creation of a community. When employees are faced with an intervention aimed at reducing burnout, it for one, marks a change, as the burnout intervention needs to be inculcated into the organisation and the day to day work life. Information that is relayed from management to employees should consist of reasons why the intervention was implemented (Elving, 2005; Daly et al, 2003). Once employees are providing information concerning the intervention, they are able to keep themselves up to date with the anticipated events in terms of the intervention, the consequences of the intervention and the work roles that may be linked to the intervention (Nielsen & Randall, 2013). Clear communication also assists the employee to understand the intentions the organisation may have for implementing the burnout intervention, which has been shown to increase the commitment to and participation in the intervention (Nytro et al., 2000; as cited in Nielsen & Randall, 2013). Understandably, communication also influences employees sense making (i.e., the perceptions they may have about the motives and objectives of the intervention) which has also been closely linked to commitment to the overall intervention (Weick, Sufcliffe & Obstfeld, 2005; as cited in Nielsen & Randall, 2013). Taking the above into consideration, communication has an informative function and may improve up take and buy in among employees (Nielsen et al., 2010c).

Communication aimed at the creation of a community, creates a space conducive to commitment which is needed for the development of group identity and community spirt (Elving, 2005). Postmes et al., (2001, p. 240) as cited in Elving, (2005) mentions that "peoples sense of belonging to the organisation does not primarily depend on the quality of their informal and social-emotional interactions with peers and proximate colleagues, but it is related more strongly to their appreciation of the managements communication." This quote helps us to appreciate the value that is placed on communication within the organisation. Furthermore Postmes et al., (2000) revealed that "employees were strongly committed to their jobs if they obtained information to perform their tasks and this information was presented to them via formal bureaucratic channels rather than informal channels," as cited in Elving, (2005). This quote highlights the fact that through open communication, employees are able to develop commitment to their work. Taken together these quotes relate both goals

of organisational communication (as mentioned above) to another, as "information is necessary, to then create feelings of community" (Elving, 2005).

On the other hand if communication is poorly managed this leads to development of rumours and tend to exaggerate aspects of burnout intervention which culminates in resistance to the intervention (Elving, 2005). According to Daly et al., (2003) when proper lines of communication are not utilised employees are less likely to understand the purpose of the intervention, which may affect commitment to the intervention negatively. Communication should be as factual as possible, therefore management should not raise the expectations of the intervention beyond its actual level, as this will only result in cynicism and a lack of trust among employees (Nielsen et al., 2010c). Consequently organisations need to choose adequate communication strategies that are realistic and transparent that facilitates dialogue about intention behind the intervention that will increase commitment, understanding and participation. (Nielsen et al., 2010c; Nytro et al., 2000).

Furthermore the type of information that employees receive is important. According to a study by Bordia, Jones, Gallois, Callan and Difonzo, (2006) as cited in Parent (2010), employees who received positive information concerning the burnout intervention were less likely to spread rumours and negative perceptions about the intervention, as compared to employees who received initial information that was negative. Furthermore, Schweiger and DeNisi, (1991), showed that employees who received detailed information concerning an intervention aimed at reducing burnout, as opposed to employees who received limited information, experienced reduced levels of uncertainty, and felt that the organisation was more caring, trustworthy and honest as opposed to the other sample (as cited in Parent, 2010). Consequently management and organisations need to be more accountable when it comes to communication, as clear concise communication, that highlights the reasons behind the intervention aimed at reducing burnout have been shown to increase participation and buy in of the intervention (Elving, 2005).

2.6.2. Mental models (microprocesses)

Mental models or microprocesses refer to the perceptions, attitudes and the conflicting agendas employees, management and other stakeholders may have that eventually influence the way in which they react to the given intervention. Research has shown that a mental model specific to managers is that they favour individual levelled interventions. This may be linked to mental models among employees who feel that the organisation is shifting responsibility of the burnout intervention to the employee (Saksvik et al., 2002). The last

mental model worth examination is that employees need to acknowledge that they have problems at work that should be solved and addressed. One way of doing this is by supporting the burnout intervention and participating in activities that may arise (Nielsen & Randall, 2013). This speaks to readiness to change (as mentioned earlier engaging in an intervention aimed at reducing burnout is perceived as something new and is thus conceived as a change).

According to Burnes, (2004b) organisations are in a constant state of change, be it incremental, fundamental or overarching change, change is inevitable (as cited in Choi and Ruona, 2011). Bovey and Hede, (2001); Holt, Armenakis, Field and Harris; (2007); Vakola and Nikolaou, (2005) and Choi, (2011) all concede that the majority of research concerning change in organisations, tends to place more emphasis on the organisational perspective of change as opposed to the individual experience. Consequently most failed attempts at change can be attributed to the negation of the "human, individual experience." When examining the micro-level perspective of change, a core assumption being that "change in the individual organisational member's behaviour is at the core of organisational change" needs to be emphasised (Porras and Robertson, 1992, p. 724 as cited in Choi and Ruona, 2011). From this quote it follows then that change at the level of the individual is a necessity and gives impetus to organisational change, thus according to this view, employees are seen as active interpretors of change and thus play a central role in organisational change (Bovey & Hede, 2001; Choi, 2011; Holt et al., 2007).

Based on the foundational work of Armenakis, Harris and Mossholder, (1993) readiness is understood to be a precursor to resistance to the new change (cited in Holt et al., 2007), consequently readiness becomes an important outcome that should be achieved in order to minimise resistance to the new change. Readiness for change is made up of 5 components which include: belief that the current situation is unhealthy and change is needed; change is thus necessary; change is beneficial; there is managerial support for the change which resonates with the core values of the organisation and a belief that the change will be personal beneficially (Choi, 2011; Holt et al., 2007; Nytro et al., 2000; Weiner, 2009). Consequently, as mentioned by Holt et al., (2007) and Choi, (2011), readiness to change can be understood as an attitudinal response that necessitates whether an individual is "emotionally or cognitively inclined" towards accepting a specific change and encompasses the above 5 components mentioned above.

Based on the above, it follows then that the construct of readiness also takes into consideration the context in which the change takes place (Choi, 2011; Choi & Ruona, 2011). According to Choi and Ruona, (2011) when change is incited, normality is contested within that context, which prompts responses within the individual. Ford, Ford and D' Amelio, (2008), mention that employees try to explicate information and make assumptions about their environment to make sense of the situation and draw conclusions about the likely outcome associated with the new change. Consequently employees tend to form assumptions, expectations and impressions concerning the need for the change which centres on, whether the change is personally beneficial; feasible for the organisation as a whole, appropriate and has the support from the organisation, which then encompasses individuals readiness (Armenakis & Bedeian, 1999; Choi, 2011; Choi and Ruona, 2011; Holt et al., 2007).

A number of factors contribute to the development of readiness among employees, which includes: communication; participation; support from managers; trust; commitment organisational culture of learning and norms. Taking the above into consideration, it follows then that improving employees readiness to change will improve up take, buy in and participation in the intervention.

2.6.3. Context

Many researchers support the observation that the role context exercises on burnout interventions has not received sufficient attention (Biron & Karanika-Murray, 2013; Herold, Fedor & Caldwell, 2007; Johns, 2006; Nieslen et al., 2010; Nielsen et al., 2010c). In many cases it is assumed that interventions fare better in contexts that are stable. This assumption is erroneous as it is based on the understanding that concurrent changes do not take place in organisations. Based on acknowledgement of the ever changing organisational environment (as elaborated upon earlier), Nielsen et al., (2010) highlights the importance of a match between the context and the proposed burnout intervention. Conversely if this match is not made and contextual factors are not taken into consideration, the given intervention may fail to reach the desired outcomes (Nieslen et al., 2010).

When contextual factors are not considered, interventions are more likely to produce null or inconsistent findings; may change the notion of causality between variables being investigated; and threatens the external validity of a study in question (Johns, 2006). According to Gladwell, (2002, p. 140) as cited in Johns, (2006) "we are more than just sensitive to changes in context, we're exquisitely sensitive to it." Taking this quote into

consideration, by negating the effect that contextual factors have on an intervention, the effectiveness of interventions aimed at reducing burnout is hindered.

Johns (2006, p. 386) mentions that context can be understood as the "situational opportunities and constraints that affect the occurrence and meaning of organisational behaviour as well as functional relationships between variables." Context, according to Johns, (2006) and Biron and Karanika-Murray (2013) can be understood as either discreet or omnibus in nature, and may moderate or mediate the effects of burnout intervention. Omnibus factors refers to the overall broader context of the organisation (Biron & Karanika-Murray, 2013; Johns, 2006) whereas discreet factors constitute variables that may shape behaviour/ attitudes and are nested within the omnibus contextual factors. Examples of discreet contextual factors include organisational restructuring, downsizing, conflicting change initiatives and the advancement of new management (Biron & Karanika-Murray, 2013; Nielsen et al., 2010).

When one examines the omnibus context of an organisation during an intervention the following questions are raised: "Who are the participants in the burnout intervention and who drives the intervention?" and "When and where did the burnout intervention take place?" (Nielsen & Randall, 2013, p. 607). These questions centre on how the intervention actually fitted in with the culture of the organisation. In terms of omnibus context, Dahl-Jorgensen and Saksvik, (2005); as cited in Nielsen & Randall (2013) found that contexts that were characterised by high job demands hindered the participation in interventions as employees were far too busy with work to take part in interventions aimed at reducing burnout. In these cases employees were more likely to continue working as it was congruent with the psychological and social contract (mentioned above), much to the detriment of their wellbeing and health. Another omnibus contextual factors noted by Saksvik et al., (2002) that hindered the development of interventions was stringent bureaucratic structure (as highlighted earlier). Lastly Taris et al., (2003); as cited in Nielsen & Randall (2013) noted that workplaces with high levels of support, low demand and low stress levels were better able to involve employees and managers, allocate resources and time and develop interventions. However taking this into account, it follows that these types of organisations (that are characterised by these afore mentioned omnibus factors), may not even need burnout interventions in the first place. Thus in cases where organisations need burnout interventions, omnibus context factors may hinder the given intervention development (Nielsen & Randall, 2013).

With regards to discreet factors, some organisations, are characterised by multiple and overlapping change that becomes a reality for employees, and is termed "turbulent" according to Herold et al., (2007). Cumulative change (as in turbulent contexts), results in cumulative change effects that places increased demands of resiliency and adaptation on employees (Cooper et al., 2001 as cited in Herold et al., 2007). Burke and Greenglass (2001) emphasised this point when it was mentioned that work environments characterised by restructuring/ downsizing and overload (due to repeated change) were conducive to diminished personal efficacy, accomplishment, increased emotional exhaustion and work-family- conflict employees. Furthermore as mentioned by Burke and Greenglass in 2001, due to repeated waves of change within organisations, "survivors" of change were more likely to present with "survivor sickness," which can be described as an accumulation of increased reduced morale, lowered engagement, heightened cynicism and increased anger (Burke & Leite, 2000; Cameron et al., 1987 as cited in Burke and Greenglass, 2001). Therefore even if well-planned change is implemented in an organisation, success and effectiveness of an intervention aimed at reducing burnout cannot be guaranteed, in a turbulent context, due to reduced support from individuals who are overloaded by the experience of change (Herold et al., 2007).

According to Herold et al., (2007), it is role of management, to ensure that the frequency and severity of cumulative change effects is limited, by ensuring that changes are not rolled one after another. Consequently change within organisations should be planned, scheduled and prioritised so as to reduce cumulative effects on individuals and should be handled by management. Changes in the context (discreet factors) may have a direct impact on the working conditions that the intervention may target. Consequently the design of the interventions aimed at reducing burnout, may be altered as the context becomes altered (Randall et al., 2007). Furthermore when faced with restructuring, mergers and the possible loss of jobs employees are more likely to concerned about the safety of their respective jobs as opposed to engaging in burnout interventions.

2.8. Research questions

Based on the above discussion of the literature relevant to the present study, the research questions guiding the study were as follows:

- What are the difficulties inherent to interventions aimed at reducing burnout among radiation therapists?
- What are some of the recommendations gained in terms of developing interventions aimed at reducing burnout among radiation therapists?

CHAPTER THREE: METHODOLOGY

3.1. Study design

The core design of the study was qualitative in nature. Qualitative research, according to Fossey, Harvey, McDermott and Davidson (2002) "…is research that encompasses research methodologies which…describe and explain peoples' experiences, behaviours, interaction and social context" (p. 717). Qualitative research privileges the participants' perspectives and highlights their actions, meanings and experiences (Popay, Rogers & Williams, 1998, as cited in Fossey et al., 2002). The main aim of this study was thus to explore barriers inherent to intervention development that emerged among a sample of radiation therapists. The secondary aim was to highlight possible recommendations for intervention development in an organisational context. For this study I developed a case study of a hospital in the private health care sector.

3.2. Sampling strategy

According to Marshal and Rossman, (1995); as cited in Schurink, (2009, p. 816) qualitative researchers are more likely to physically seek out groups and settings whereby the process studied is more likely to occur. I recruited a sample of 8 radiation therapists from a hospital within the Gauteng province who possessed knowledge on their experience of work. Purposive sampling[5] is favoured in qualitative research as the researcher is able to deliberately seek out and identify an access point (research setting) that is accessible and participants who are informative who then add depth to the study (Morrow, 2005; Schurink, 2009). In line with the above mentioned point Schurink (2009) highlights that the goal of purposive sampling is to choose a sample who is relevant to the study matter and who are able to answer the research questions with a high degree of truthfulness. Consequently, I decided to employ a purposive non-probability volunteer sampling strategy for this study. The size of the sample therefore depended on the number of radiation therapists who were willing to engage in the research as the study was volunteer based. The sample of 8 radiation therapists was considered feasible due to the fact that knowledge generated from this group was rich in depth and thick in description which allowed for the exploration of the questions under study (Patton, 1990; as cited in Polkinghorne, 2005). Data was gathered to the point of redundancy/ saturation, which highlights that no new information was gained (Morrow, 2005). Therefore I had reached the point of "exhaustion or saturation" when my interactions failed to add anything new to my initial understanding; the material I had gained seemed to

[5] Specifically I used a purposive non-probability volunteer sampling strategy.

resonate with what I previously had and did not add on and develop new knowledge in the study (Kelly, 1999).

3.3. Sample description

As mentioned the target population was a group of radiation therapists who practiced radiation therapy in Gauteng, South Africa. Three hospitals within the private medical sector in the Gauteng province were approached based on convenience. No hospitals from the public sector were approached. Consequently the lack of public sector radiation therapists in the sample is a potential limitation of the study. The reason for sampling a hospital within the Gauteng province only was that I would have immediate access to the sample which would ensure more efficient data collection. Subsequently only one hospital allowed me to interview the radiation therapists employed in that department. The main reason cited by the other two hospitals, for the lack of involvement was the increasing patient load and thus the lack of available time. The sample of radiation therapists occupied different occupational roles within the hospital (these different occupational roles are presented in table 1 in this chapter). As radiation therapists from different occupational roles within the department volunteered to be interviewed I was able to gain rich information which added depth and diversity to the case study of a private health sector hospital.

Table 1: Summary of the research participants

Participant	**Title (self-proposed during interview)**	**Interview1**	**Interview2**
P1	Machine radiation therapist	Yes	Yes
P2	Machine radiation therapist	Yes	Yes
P3	Machine radiation therapist	Yes	Yes
P4	Machine radiation therapist	Yes	No
P5	Clinical tutor (occasionally works on the machines)	Yes	Yes
P6	Quality assurance radiation therapist (occasionally works on the machines)	Yes	Yes
P7	Planning radiation therapist	Yes	Yes
P8	Manager (occasionally works on the machines)	Yes	Yes

Table 1: Summary of the participants that took part in the study with their job titles (as gained during the semi-structured interviews) in relation to their participation in terms of the respective interviews.

When describing the sample, all the radiation therapists were female, this however, was not unexpected as the profession is dominated by females in South Africa (Lawrence, 2007). A total of 8 radiation therapists were interviewed in the first round of interviews. The same radiation therapists were then interviewed in the second round of interviews with an exception of 1 machine radiation therapist who subsequently resigned from her job at the hospital. Thus the case study consisted of 15 semi-structured interviews which were gained a different periods in time. A defining feature of qualitative research, triangulation is a process whereby in-depth knowledge is produced when diverse sources of data are sought out and are then integrated (Copper & Endacott, 2007; Shenton, 2004; Willig, 2001). By integrating the semi structured interviews with the field notes and observations I was able to gain a more nuanced perspective in terms of barriers to intervention development. Observations and field notes were used in the results and discussion section.

3.5. Data collection

Semi structured interviews were utilised to collect data on both occasions. Semi structured interviews according to Willig (2008) are favoured due the versatility of the data collected, as it is compatible with various data analysis methods. Furthermore these interviews provided a space for dialogue between the participants and myself. I also employed questions that served as triggers, which in turn encouraged and stimulated discussion and openness (Breakwell, 1995; Willig, 2008). By using semi structured interviews I was able to gain a rich and in-depth understanding of the participants' experiences of their work and barriers to intervention development (Cooper & Endacott, 2007). However semi structured interviews require a certain degree of rapport between the interviewer and the interviewee which allows for development of openness that stimulates the sharing of details and experience (Polkinghorne, 2005; Willig, 2001). A fair degree of rapport also allows for the development of a trusting open relationship that also facilitates a truthful account of the participants life experience as opposed to a mere recollection of events and thin surface level responses (Polkinghorne, 2005). I was able to develop rapport with the sample of radiation therapists which will be explained further in the reflexivity section below. The semi structured interviews were supplemented with field notes and observations that I gained during my experience in the field. As I visited the department on different occasions and waited for the radiation therapists to finish patient treatment sessions and then be interviewed, I spent a lot of time in

the field. As a result I was able to gain information in terms of observations and field notes. Some of the field notes and observations that I gained during my visits to the department, helped to substantiate some of the findings that will be presented in chapter 4 in this research report.

3.6. Procedure

Firstly ethical clearance was obtained from the necessary committees at the University of Witwatersrand. Three hospitals which had a radiation therapy departments on site were approached with the relevant documentation, the hospital permission letter (refer to appendix A). A sample of radiation therapists were gained from 1 hospital only. I first met with the manager of the department and explained the aim of the study. The manager was also supplied with the participant information sheet (refer to appendix B). The manager at a later stage briefed the radiation therapists as they were not available at the time of the initial visit. I was allowed time in the department to observe the setting and was given a date on which I could visit again. During my second visit I met with the radiation therapists in free time between patient sessions. The radiation therapists were supplied with the participant information sheet (please refer to appendix B) which informed them about the aims of the research as well as a brief summary of the objectives and the nature of research. The radiation therapists then completed the participant consent form (please refer to appendix C) and the interview recording consent form (please refer to appendix D). It was at this point that I became aware of the "second department[6]" as some radiation therapists who were interested in participating in the study were allocated to work in the "second department." This department was about 2 kilometres (kms) away from the hospital. I was allowed to use a consultation room in department A and department B. The interview times ranged between 20-70 minutes in duration. The majority of the radiation therapists who were interviewed spoke in their interviews for approximately 20-30 minutes. One radiation therapist in particular during both interviews spoke for approximately 40-70 minutes. Much of her interview focused on how she had experienced and "survived" burnout. This is the reason for the considerable range in interview times mentioned above. I was allowed to observe the treatment room; to walk around both departments; and spoke to other radiation therapists while I waited for the radiation therapists who volunteered to participate in the interview who were busy treating patients. This facilitated further, the establishment of rapport among the

[6] This unit is comprised of two departments which are situated on two different premises. The team of radiation therapists are allocated to a treatment machine in department A or department B. The planning radiation therapists; managers and machine radiation therapists usually walk from one department to another when needed (distance approximately 2kms).

radiation therapists and myself. Furthermore this helped me gain information in terms of observation and field notes.

I then took some time to transcribe the interviews and read through the transcriptions. I tried to gain a time to meet with the radiation therapists on numerous occasions (via telephone, and email) however was told that the radiation therapists and the unit itself was experiencing an increase in patient load and were unable to accommodate me. After much negotiation I was allowed to conduct the second interview. I interviewed the same radiation therapists (4) who were interviewed in the first interview in department A and subsequently visited the department B on another day to interview the remaining 3 radiation therapists. I was then informed that 1 of the radiation therapists who had volunteered to participate in the case study 1 had subsequently resigned from her position in the unit. I did try to contact the radiation therapist in question to query whether she was still willing to volunteer to participate in the second interview, face to face or engage in a telephonic interview, however I was unable to access her. These second set of interviews were then transcribed.

3.7. Data analysis

After the data was collected the recorded interviews were transcribed. I utilised basic Jefferson transcription which privileged the communicative interaction between myself and the interviewees and included pauses, interruptions, intonation, laughter, false starts and repetition of words (Willig, 2008). Please refer to Appendix I for the transcription notation utilised. The recording was listened to repeatedly to ensure that I did not exclude important information.

Thematic content analysis was be utilised to analyse the data. According to Braun and Clarke (2006) thematic content analysis is used to identify, analyse and report themes and patterns that emerge from the data collected. Thematic analysis allowed me to gain in depth and rich data in the form of themes from the interview transcription data. Using the data gained from the case study of the hospital, I was able to develop themes from the responses of the radiation therapists that centred on barriers to intervention development. The following six steps as suggested by Braun and Clark (2006) were used to analyse the data gained: the first step encourages familiarising oneself with the data at hand (Braun & Clark, 2006). I achieved this by reading and re-reading the written transcripts, re-listening to the voice tapes and reviewing my field notes which allowed me to gain a better understanding of the data corpus and more importantly allowed me to appreciate how these bodies of knowledge were

interrelated (Morrow 2005). Specific notes and ideas pertaining to the data were noted down during this phase. I used post-its and highlighters to help in this step. In step two the data was coded according to ideas of interest. The main aim was to arrange ideas of interest into meaningful groups (Braun & Clark, 2006). I used different colours (highlighters and pens) to code information. Phase three consists of searching for or generating themes. I used the "cut and paste" feature in Microsoft Word and created separate theme specific documents. Once these themes were generated phase four began when I reviewed the themes collected. Phase five encompassed naming and defining the themes (Braun & Clark, 2006). The last phase consisted of the writing up of the report.

3.8. Ethical consideration

As stated above, a cover letter was used to inform the radiation therapists about the aims and the nature of the research. Participants were specifically informed that their participation was voluntary and that no risks or benefits associated with the study. Importantly they were able to abandon the study at any time. The informed consent letter was used to ensure that participants were aware of their rights in this study. Anonymity could not be guaranteed due to the fact that I conducted face to face semi structured interview and therefore the participant's identity was known. However no information that would identify the person was used in this study, as I needed to protect the participants' identity as they all spoke about their jobs (which affected their livelihood), management and top management. The data gained from the interview was only processed by myself and the audio recordings were only listened to by me also to protect the participants' confidentiality. Lastly a consent form was issued to all the participants that highlighted that the interviews were to be audio recorded, to inform the participants that they were indeed going to be recorded. A specific question was asked that requested consent to use answers provided verbatim in the research however it was noted that any identifying information would be removed and pseudonyms used so as to protect their identities. Feedback with respect to the outcomes of the research would be provided in the form of a summary to those who contacted me after the completion of the study and were interested in the results, as it is the participants right to know the outcome of the study. The study did not use a sensitive population however it was felt that the contact details of both the South African Depression and Anxiety Group (SADAG) and the Emthonjeni Centre at the University of Witwatersrand should be provided if the radiation therapists required any assistance with regard to dealing with any issues that arose after completion of the interviews. I received ethical clearance from the University of Witwatersrand (refer to appendix H).

3.9. Reflexivity

According to Etherington (2007), as cited in Schurink (2009, p.804) reflexivity is seen as a tool which enables the researcher to include him or herself at any stage of the research, making ones values and beliefs transparent and known as these influence the research process. Furthermore for research to fit the criteria of reflexivity, clear description in terms of the interactions between the researcher and the participant should be privileged to highlight what has been discovered in the study and more importantly how. The above understanding of reflexivity, which is a defining feature of qualitative research, acknowledges three main points: (1) construction of meaning takes place throughout the research process and the researcher is intricately involved in this process, (2) the researcher cannot take on an objective stance with regards to the subject matter (3) awareness of the relationship with participants and the research topic is important (Dowling, 2006; Schurink, 2009; Willig, 2001; 2008). Furthermore as part of reflexivity, the researcher needs to aware of the context and the political environment that inevitably exerts an impact on the study (Hand, 2003 as cited in, Dowling, 2006). By engaging in reflexivity I was able to increase the credibility of the study but more importantly engaged in a collaborative relationship where meaning was actively created by the participant (Fontana, 2004 as cited in Dowling, 2006).

However dominance in relationships is inescapable. This dominance is highly evident in all research and is highlighted in the power relations that develop in the "researcher-researched relationship" (Riley, Schouten & Cahill, 2003). Many of the radiation therapists responded to my questions with responses that ended in "…uhm is that what you want," and "… is that the type of answer you are looking for?" which showed me that they were treating you as a researcher who was "looking for" particular kinds of answers and information and that they were also showing concern as to do what was expected of them as "good" research participants. Furthermore the first two interviews were considerably difficult to facilitate as I noted that the radiation therapists' responses were short in nature and it was harder to gain in-depth, thick descriptions when I prompted. The trigger questions that I used did not stimulate and encourage increased dialogue either. The radiation therapists seemed reluctant to speak about a certain issue and I felt like a complete "outsider" unable to build rapport. However I noticed that when I began the interview with the third participant (during the first round of interviews) and engaged with the other interviewees the responses gained from the radiation therapists changed drastically. The radiation therapists offered me responses that were rich in depth and information. I attribute this change in my experience of the interview process to the

fact that an old colleague with whom I had completed my National Diploma in radiation therapy had noticed me and subsequently asked why I was there. I presume that she had then told the other therapists that I was qualified as a radiation therapist and had practiced in the field, which may have allowed for the establishment of rapport as the radiation therapists may have felt that I was familiar to their work environment and experiences. According to Blackwell (1995, p.239) this is referred to as a researcher effect, whereby people engage in more self-disclosure to an interviewer who they think is similar to them. This researcher effect may have worked in my favour as I felt that I was able to gain an "authentic" understanding of the samples experiences (Seale & Silverman, 1997).

3.10. Quality assurance

Qualitative research is often seen to be advantageous as it privileges the participant experiences and voice, offers data which is rich in detail and is contextually relevant, however it has been criticised for being too subjective to be meaningful (Kelly, 1999). One way of refuting this claim is to ensure proper quality assurance in qualitative research. With respect to qualitative research, terms such as credibility, dependability, transferability and confirmability are important with respect to trustworthiness (Guba & Lincoln, 1983). With respect to this study I tried by all means to ensure that the results were credible by providing as much detail as possible which is referred to as thick description (Tracy, 2010; Morrow, 2005). In terms of the results presented I tried to ensure in depth illustration with abundant detail by using multiple examples that was representative of the context from which it was derived (Tracy, 2010). It was easier for me to become immersed in the context that was studied as I felt that I was able to "ascertain the tacit/ taken for granted knowledge" specific to the department as (e.g. the vocabulary and culture of the work), as I had worked in the field before (Tracy, 2010). Furthermore I visited the unit and the radiation therapists on four occasions, which resulted in prolonged engagement with the radiation therapists and constant observations of the department (as I was only allowed to conduct interviews when the therapists were in between patients).Triangulation was also achieved as I utilised observation, field notes as well as the interview transcripts which allowed for a deeper understanding and exploration of intervention development and the difficulties inherent in this process. I made use of member reflections to a certain degree. According to Tracy (2010) member reflections refer to the insight the researcher may gain when he/she takes the findings one gained from the participants back to the participants themselves, who then recognise whether they are true or accurate. Once I had transcribed the first set of interviews and gained an understanding of

the general trends of the data, I went back to the participants, who acknowledged that the data was correct (i.e., that there were many barriers to the proposed intervention) and further developed these trends in the data with the second set of interviews. Once the interviews transcripts from the first interview were read and understood I was able to visit the radiation therapists again with the aim of verifying the information and unpacking some of the experiences which led to a greater and deeper understanding and also improved the credibility of the study (Tracy, 2010). I tried to be as reflexive as possible by evaluating my feelings in self-reflection and by constantly reflecting on my values and beliefs which may have affected meaning making. In this way I also attempted to enhance the confirmability of the study.

Transferability is the degree to which the findings of the study are able to be transferred to other settings (Morrow, 2005; Tracy, 2010). This study was based on a case study of a private hospital, therefore these findings may be transferred to other hospitals that form part of the private health sector that has a radiation therapy unit and thus employs radiation therapists.

CHAPTER FOUR: ANALYSIS AND DISCUSSIONS

The aim of the research was to explore barriers to an intervention aimed at reducing the experience of burnout among a sample of radiation therapists in Gauteng. By exploring these barriers, the report also aimed to highlight some recommendations for others (researchers and practitioners alike), when developing and implementing an intervention aimed at reducing burnout among radiation therapists.

The above mentioned aims guided the analysis and write up of the present report. Existing literature was used, where appropriate, in support of the findings. Four primary themes emerged, within the present themes; further sub-themes are discussed in support of the relevant findings (as documented below):

Theme 1: The source of the intervention as a barrier to intervention development

1.1. Management as the source of the intervention

1.2. External researcher as the source of the intervention

Theme 2: The institution of time, work and commitment to the job as barriers to intervention development

2.1. Understanding time as a barrier to intervention development

2.2. Commitment to the profession as a barrier to intervention development

2.3. The nature of work as a barrier to intervention development

Theme 3: Resistance by management to intervention development

3.1. Defending the organisation

3.2. Individual response towards the intervention

3.3. Understanding the dominance of individual levelled interventions

Theme 4: Resistance from employees towards the intervention

4.1 Experiencing burnout as an individual problem

4.2. Individual assumptions concerning the intervention

4.3. Past experience with interventions

For the analysis, direct quotes (which are supplied in extracts) were used, where relevant, field notes and observations were also utilised as well. The themes in this chapter are interlinked and thus certain sub-themes, in most cases, speak to other main themes/ sub themes as well. Consequently these themes have been discussed individually to enhance analytical reasoning, however, overlap is noted. In this case I will explain the theme under the relevant theme heading (or subtheme) and cross reference accordingly.

Theme 1: The source of the intervention as a barrier to intervention development

This theme focuses on who initiates the intervention, or who the source of the intervention is and how this may affect whether the radiation therapists will accept or reject the proposed intervention. Based on this corpus of data there are two possible sources, that being management and the external researcher which, are examined in the two sub themes that follow.

1.1. Management as the source of the intervention

In the extract below, P4 begins to elaborate on why she thinks a support group may not be feasible or beneficial in the department. She draws on her past experience of the "Thursday meetings" that are held in the department and moves on to speak about the role of management in that meeting. She raises an important barrier to intervention development, in terms of who initiates the intervention or who the source of the intervention is.

Extract one:

1. *P4: >You know what (.) uhm I don't know< (.) but let me give you this, we have*
2. *<u>Thursday meetings</u> here for an hour (.) where we sit together talk about the*
3. *department (.) if we have issues we just talk about that and and >we've called*
4. *<u>management</u> to those meetings before< not the present management the*
5. *previous management which was (0.2) good to us, very good if I may say that,*
6. *so (.) and they would sort out issues, they would you know talk to us about*
7. *issues, but this <u>new management</u> we don't know much you see and then, so I*
8. *don't know if a support system would be, from other people outside or just us*
9. *inside, if it's us inside I will say we actually <u>support</u> each other from all of this.*
10. *I: Mmm okay I see.*

The extract above highlights how P4 makes sense of her uncertainty towards the implementation of a support group. P4 in lines 2-3 highlights that they (staff) do indeed have a "*Thursday meeting"* in place, which provides the same function as the support group I proposed initially. In line 4, P4 mentions that management, previous management, as she highlights, attended these "meetings" as well. She then proceeds to praise her "previous

management" by mentioning that according to her, the previous management where "good" to the staff (line 5) and that they (management) seemed to be active in these meetings as they "sorted out and talked about the issues"(lines 6 and 7). Therefore according to P4, previous management were good as they were interested in the staffs' problems, were open to discussion and were responsive to what was being discussed. Thus P4 makes sense of her experience of past management by praising them and elaborating why she thinks they were "good."

She then highlights in line 7 that with respect to her "new management," [she] does not know much about them. Thus we are able to see in this extract that P4 clearly avoids criticising the present management and also withholds any judgment that she may have of them on the basis of having insufficient knowledge (in line 7).

P4 mentions that as she does not know much about the new management, she is, as a result of this, uncertain about where the "support system," would come from, "*from other people outside or just us inside."* This immediately highlights, that P4 is questioning "who" the source of this intervention is, i.e., who is initiating/ implementing the intervention. Secondly it highlights an "insider versus outsider" dynamic as well, with the "insider" being the radiation therapists, possibly. As P4 uses the pronoun "us" twice in line 8 and 9 when she refers to the "inside[r]." I am unsure who/ what the "outside" refers to, as P4 does not clarify whom she refers to explicitly. In line 9 P4 mentions that "*I will say we actually support each other from all of this.*" From this we can appreciate that if the source of the intervention was an "inside[r]" then she or they (radiation therapists) who are privy to the inner dynamics of the department and the relationships among the staff would know that a support group might not be feasible as they (the radiation therapists) already have the Thursday meeting in place and they (the radiation therapists) already support each other adequately. It follows then that an "outside[r]" may not be privy to this type of understanding.

In extract P4 highlights an important point that of who initiates the actual intervention in the department as this (which can see above) has an effect on whether the radiation therapists accept or resist the intervention. This was confirmed by Nielsen and Randall (2013) who highlighted that identifying the source of the intervention was as important as identifying what the motivating force behind the intervention was and who actually defined the problem statement. These authors mentioned that these factors would more likely affect buy in from different stakeholders, which is imperative for the success of the intervention. P4 further in this extract highlights the notion of an "insider versus outsider" dynamic in relation to who

initiates the intervention. Thus from above we deduce that if the source of the intervention was an "insider" (the radiation therapists), they would have been less likely to propose an intervention (in the form of a support group), as the radiation therapists already have a Thursday meeting, that already fulfils the needs that the proposed support group would have sought to do. This reason can be understood as a barrier to the proposed intervention. Furthermore as highlighted by P4, they (the radiation therapists) already support each other in the department, which would then also negate the use of the proposed intervention as the need for the support group decreases further.

This extract also highlights that the radiation therapists in this department may not perceive that they have problems/ issues at work that should be addressed which speaks to readiness to change (Nielsen & Randall, 2013). Consequently they may not belief that the current situation is unhealthy and change is needed. From the above we can see that they (the radiation therapists) already seem to have a solution in place (the Thursday meeting) which already meets the needs they may have and thus a new intervention is not entirely necessary.

In the extract below, P2 offers another distinction in terms of management. She differentiates management along the lines of immediate management and those "higher up." She then perceives both types of management as being as "insider" or an "outsider" which subsequently determines whether she accepts or rejects the proposed intervention.

Extract two:

1. *I: Why do you think that maybe an intervention may not work (.) as you say (.) uhm*
2. *mmm or what for you are the reasons that me coming in here trying to implement an*
3. *intervention aimed at reducing burnout actually may not work?*
4. *P2: Uhm I don't know (.) I think it's (.) uhm there's more to the whole thing (.) like*
5. *there's more underlying issues and uhm like maybe everyone feels like the the*
6. *↑management isn't there to help them but they also sort of they are on their little thing*
7. *to I don't know (.) uhm not to gain for themselves but >just like they uhm everyone, I*
8. *think feels like they are not not uhm (.) it doesn't matter what they say (.) it's just they*
9. *tell you what's going to happen and that's what happens. But then in saying that I*
10. *don't think uhm uhm ↑I think there's like a missing link because it's not our (.) our*
11. *immediate management can't do anything in any case. Look it's sort of like a ↑little bit*
12. *higher up and as much as you go ↑blue in the face and try to change stuff >it doesn't<*
13. *so then that's why everyone is so frustrated so ya you probably right (.) I don't think an*
14. *intervention on our level would work.*

P2 in extract two highlights two important points, firstly the relationship between staff and management at differing levels ("immediate management'- line 11 versus "higher up"- line 12) and her "resistance" to the intervention. In lines 4 to 9, P2 highlights that the staff (as she

mentions "everyone" twice in lines 5 and 7) in her opinion, may feel unsupported by management, may feel a fare degree of uncertainty (about the role management plays- in terms of what they can and cannot do), and that management is seen as being powerless in their "managerial" role. When we utilise the "inside versus outside" dynamic that was mentioned by P4 above, to understand how the source of the intervention or who initiates the intervention may be seen as a barrier to intervention development, we are able to note the following. In this instance (lines 4 to 9) "immediate management" is seen as an outsider. P2 begins to elaborate on this point further and states that "*there's like a missing link because it's not our (.) our immediate management can't do anything in any case,"* (in line 10 and 11). P2 highlights that their immediate management are accountable to top management (who she terms as *"higher up"* in line 12) and that they (immediate management) are unable to make overall decisions as they need approval from those higher up. P2 now seems to be defending their "immediate management" and even calls them "our" immediate management- which speaks to seeing this management as hers, as an insider, as the same as her. From this extract we gain an understanding that "immediate management" seems to play the role of both insider and outsider during different times. Immediate management is perceived as outsiders, when they appear as being "out of favour" with the staff and insiders when they are perceived as being "in favour" with the staff. This extract also helps us to understand that the immediate management in this department, tend to be helpless in their current situation due to the bureaucratic organisational structure of the department.

The extract also helps us to see the type of relationship employees (in this case P2) has with those who are "higher up" (top management). When P2 defends "immediate management" and in this way treats them as "insiders" she then acknowledges those who are "higher up (i.e. top management) as outsiders. P2 in her reference to those who are higher up, mentions that *"as much as you go ↑blue in the face and try to change stuff >it doesn't<*" which highlights that she makes sense of top management as being resistant to the potential of an intervention. She highlights that irrespective of how hard immediate management may try to change the situation at work (in this case implement an intervention), they (immediate management) still needs to report and gain approval from top management ("higher up"). Furthermore top management, according to P4, seem to come across as being resistant to any change, which then makes an intervention in the department highly unlikely. Thus when P2 mentions that *"[she doesn't] think an intervention on [their] level would work"* she herself resists the potential for an intervention based on the assumption she has made about top managements "resistant orientation" towards it.

In this extract P2 highlights the differentiation within management, as she puts it-immediate management and "higher up." This confirms the theory available by numerous authors (Randall, Cox & Griffiths, 2007; Nielsen & Randall, 2009; 2013; Saksvik et al., 2002; 2007) who highlight the role both senior and middle management play in terms of interventions and how this affects buy-in from participants. This extract highlighted that depending on who the source of the intervention is, (i.e., immediate management or those "higher up") this would reportedly affect whether or not the radiation therapists accepted the proposed intervention. However in this extract a new understanding, unique to this study which built on the "inside versus outside" dynamic (as highlighted above) emerged, that of, immediate management playing the role of both and insider and an outsider. In this extract no indication is given by P2 that even when immediate management is perceived of as an insider, they (the radiation therapists) would be more likely to accept the intervention initiated by the (immediate management) and can be considered as a barrier to the intervention. This extract also helps us to understand that the immediate management in this department, tend to be helpless in their current situation due to the bureaucratic organisational structure of the department. Saksvik et al., (2002; 2007) highlighted that development of interventions was hindered in organisations that were characterised by stringent bureaucratic structure as the role of middle management was restricted in terms of the freedom they had to make decisions concerning the given intervention and the wellbeing of employees. In most cases all decision making authority was left with senior management. In this extract we are able to see that P2 uses this understanding to perceive management as an outsider.

P2 moves on to highlight that she perceives those "higher up" as being outsiders. Furthermore she also perceives those "higher up" as being resistant to any change in the department. Thus P2 herself then resists the potential for the proposed intervention, based on the assumption she has made about those ones "higher up" (i.e., senior managements) "resistant orientation" towards it and acts as a barrier towards intervention development. Thus based on her assumptions of who she thinks is more likely to initiate the intervention, and based on her understanding that those "higher up" have the authority to make all decisions, P2 resists the proposed intervention. Further on in the same interview P2 highlights another important aspect, that of the relationship between staff and management and how this may affect whether or not the radiation therapists accept the intervention.

Extract three:

1. *I: So what do you think needs to be done (.) >do you think something needs to be*
2. *done<?*

3. *P2: I think I do do definitely think something needs to be done (.) I think that the*
4. *biggest thing is (13:00) uhm if we just sort of know where we we stand and everything*
5. *is out on the table (.) like what's happened is (.) >they'll come and they'll talk to you*
6. *and they'll tell you one thing< and then a week later it's something else (.) so no one is*
7. *really very trusting, well I'm not very trusting from the whole thing.*

When asked what she thinks should be done in the department, P2 mentions that she believes that if they (the radiation therapists) knew where they stand and if everything was known- "everything is out on the table," things would be better. This highlights a sense of uncertainty in terms of the changes that are going on at work. Further on P2, remarks that "*>they'll (management) come and they'll talk to you and they'll tell you one thing< and then a week later it's something else*" (line 5 and 6). However I am unsure as to which management she speaks of (immediate management or those higher up), as she does not specify. Coupled with this P2 mentions that "no one is trusting," which may imply that no one in the department (among the radiation therapists) are trusting of management, but then goes on to individualise her comment, to state that she is not really trusting anymore. This extract helps us to see that the orientation of the staff towards management is characterised by a sense of uncertainty (lines 5-6) and distrust (line 7) which can be based on a lack of transparency in terms of decisions made at work.

In this extract we see that P2 expresses a sense of uncertainty and distrust towards management. Therefore based on who she thinks initiated this proposed intervention (be it immediate management or those "higher up") she is less likely to accept the intervention as she would tend to be less trusting and uncertain towards the intervention as well. This would then manifest as a barrier towards the proposed intervention and would reduce P2s acceptance thereof and her buy in/ participation in the intervention.

P7, hints a little to the concurrent changes that were taking place in the department as well (that of a takeover of their department by another private sector medical company). This extract highlights the orientation of P7 towards management as a result of the change and how this may have affected P7 assumptions towards the proposed intervention.

Extract four:

1. *I: mmm*
2. *P7: unfortunately it's like that for ↑everything (.) that is the bottom line and we have*
3. *become pawns in a big game and manage- (.) uhm not so much our management, >I*
4. *don't know if somebody has explained the whole set up to you< ↑one big company*
5. *with a lot of smaller companies and its all about what they can get (.) and us <u>little</u>*
6. *<u>pawns</u> just being played here at the bottom and ↑being done in (hhh) (.) >I said*
7. *luckily we working more hours we've got less time to spend money< because we*
8. *having so much less ↑most of us have taken like 4 to 5 thousand less a month cause*
9. *we are ↑not working overtime. I: So the cut in salary coupled with the increased*
10. *working hours seems to be a major sore point right now?*
11. *P7: Ya definitely (.) being told we will stay at 6 and a half definitely and it is stated*
12. *on the contract (.) they saying that it is 6 and a half equals to 8…. and they promised*
13. *uhm (.) they said they'll leave it as is uhm and it would stay like that. ↑Which is*
14. *actually the <u>reason</u> that people stay here and then just we were just told everything is*
15. *(.) just, just do it just do it (.) ↑change even our contracts we had to sign within two*
16. *weeks otherwise ↑you don't get a salary. It was very <u>forced</u>.*
17. *I: okay, I have heard-*
18. *P7: [there was no choice (.) we had no time to make a plan to or in order to change it*
19. *(.) it is just, it's a very uhm how would I say (.) it's not a democracy it's a*
20. *↑monarchy it's almost like a ↑monarchy (.) you are being told what to do and by the*
21. *rest and ya (.)it's just the way how things have been done. Without consideration (.)*
22. *we are just being told (.) I don't mind the long hours >I worked 16 hours a day*
23. *almost< and I ↑coped but you know ↑what do it in a <u>caring</u> <u>way</u>.*

In extract nine P7 highlights the relationship between staff and management based on her experience and construction of meaning. P7 mentions they (the staff) have become pawns in a big game. Thus P7 uses the analogy of a chess game and feels that she (and the rest of the staff- as she use the pronoun "we") identifies with the chess piece the pawn, which is least significant piece in that game. In line 3, P7 mentions that it's not so much *"our"* management (which may refer to immediate management, as she mentions the word "our," thus in reference to their immediate management). Thus we see that P7 attempts to defend immediate management and moves automatically to the situation at hand. That of one big company taking on smaller companies, as mentioned in lines 4 and 5. P7 highlights that this "game" is all "*about what they can get."* The "they" in this statement may refer to the big company or as the P2 (above) calls them "those higher up." P7 remarks that they (staff) are: "*<u>pawns</u> just being played here at the bottom and ↑being done in."* Thus P7 highlights that the "big company" has monopolised in this situation as they are in the process of taking over smaller companies, furthermore the staff in this company are also taken advantage off as they, like the little companies, are mere pawns in this game. Thus their (the staff's) welfare is not taken care of and the evident outcome is that their salaries have been reduced (as seen in line 8). Thus in lines 2 to 9, we are able to see that there is a certain degree of animosity between

staff (as highlighted here by P7) and management (in this case the "big company"). This animosity and bitterness may stem from the fact that staff (as mentioned by P7) may feel as if they have been taken advantage off, that they are less significant, have no authority in this situation and have also lost a fare monetary amount in terms of their salaries.

P7 mentions (in lines 11 to 17) that working 6 and half hours was one of the reasons many radiation therapists chose that department, however this has subsequently changed. P7 mentions that they were promised that their working hours would remain the same however this changed and the staff were "forced" to sign their contract (with the new working hours). Thus it follows that that those in power, "the big company", used their authority to "force" staff to sign the contract and used the staff salaries as an intimidation tool (according to P7) in (line 16). Lines 11 to16 highlight feelings of mistrust between P7 and management, as they (the staff) were promised certain conditions initially, which did not materialise and were then changed. Furthermore increased work hours equates to increased productivity thus another plausible reason for P7s animosity and the friction between staff and management, may center around the feeling that management is trying to merely increase productivity of the staff and get the most out of them (in this way improve profitability), but at a minimal cost (as the staffs salaries have been reduced significantly as well).

In lines 18 to 23 P7 continues to mention that there was no choice in terms of signing the contract and that "[*it was] not a democracy it [was] a ↑monarchy."* The fact that it was not a democracy highlights that there was no participation, no consensus that was reached and definitely no say (from the radiation therapists) involved in signing the contract. Those in power, the "big company", made the decision and the "pawns" had to listen (similar to a monarchy) follow and were unable to say anything. This may be why P7 used the word "pawn" earlier, because at that point the she may have felt like the least significant person, as she had no say in what was happening at work. P7 follows this by mentioning that this change was done with no consideration, she mentions in the final analysis, that it does not have anything to do with the actually change in working hours, as she has coped working 16 hours a day (P7 worked in diagnostic radiography before at a military hospital and is thus accustomed to longer shifts), but she feels that the change could have been implemented in "a caring way."

This shows then that coupled with the animosity and mistrust that characterises the relationship between staff and management (as highlighted by P7), she feels that management are not concerned, neither do they genuinely care about the staff they employ. Therefore even

though "caring" forms a central tenant in the hospital environment, becomes an ingrained value and forms the culture of that organisation P7 highlights in this extract that management, the 'big company" is more focused on capitalising and taking over all the smaller companies, increasing productivity, and reducing their costs, which subsequently exploits the employees

Discreet contextual factors according to Biron and Karanika-Murray, (2013) and Nielsen et al., (2010) include organisational restructuring, downsizing, conflicting change initiatives and the advancement of new management. Consequently discreet factors constitute variables that may shape behaviour/ attitudes and are nested within the omnibus contextual factors (Biron & Karanika-Murray, 2013; Johns, 2006). The information in this extract is unique as it highlights P7s orientation towards management in response to the discreet contextual factors that were taking place in the department. As mentioned above we are able to understand were the orientation of mistrust and animosity stems from in terms of the discreet contextual changes and how these changes were implemented by the "big company." In terms of barriers to intervention development, and who initiates the given intervention, similarly to P2 above, P7 is likely to resist the proposed intervention based on her orientation towards the big company. Therefore she is less likely to trust the given intervention which prompts her resistance towards the intervention.

Furthermore in this extract we are also able to see that P7 questions the motivation behind the discreet changes taking place in the department. Based on her experience with the "big company", that of the decreased salary as overtime as been reduced and the increased working hours, she deduces that they (the staff) have been taken advantage of, are the pawns in this situation and were not allowed to negotiate in the terms of the change. Consequently management (top management) are seen as trying to get the most out of the employees for the minimal cost, thus it follows that the any intervention initiated by them could be seen as mere tool aimed at increasing productivity and profitability, rather than genuinely being based on a concern for the employees' wellbeing. In this case we see that interventions that are not perceived as being in line with the culture of the organisation, may be driven by political agendas and /or executive management (the big company), or driven by "the business of money making" are linked to increased resistance towards the intervention. In this case the initial organisational culture or the shared norms and values held by employees are not reflected in the intervention (Daly et al., 2003; Lines, 2004). Thus P7 is less likely to accept an intervention initiated by higher management (or the big company as she calls them) that are motivated by these underlying factors. This extract was also confirmed by Egan et al., (2007), who determined that interventions driven by motives of increased productivity and

performance were less likely to be successful in terms of employee health and wellbeing, as compared to interventions initiated to primarily address these concerns (employee wellbeing and health).

1.2. External researcher as the source of the intervention
Extract five:

1. *I: Uhm do you think a >support group would help in this department<? In a support*
2. *group (.) I mean like maybe getting together and speaking about your problems and*
3. *then devising a way for management to somehow (.) hear those problems? By a*
4. *supportive group I mean a group (.) uhm where you can talk open and support*
5. *eachother (.) you know (.) do you think-*
6. *P5: Uhm I don't know (.) then maybe it would be like something is getting done, and*
7. *stuff and that's uhm just we all get upset and we all talk about it and it happens again*
8. *next week again. <So I do think that will definitely help>↑ even just to like air it, often*
9. *you find if you say it out loud then maybe it's not as bad as you think in your head (.) or*
10. *if some else says you know what, that's normal, that's not even such a big thing (.) it's*
11. *maybe just you feeling more stressed this week so maybe you feeling it's worse but it's*
12. *not even, so ya I think that will be very helpful.*
13. *I: Okay (.) uhm lastly in trying to come up with some sort of intervention to maybe*
14. *reduce stress here in the department (.) uhm (.) what would you recommend to do here*
15. *in the department and try to implement?(22:40)*
16. *P5: Uhm I think the support thing that you spoke about (.) I think that would be very*
17. *helpful, uhm, the only thing is time again. (0.3) Like where do you even get time? But*
18. *ya (0.2) something like that and I think, something, I think that would help, it would be*
19. *a start you know. But uhm (0.2) I don't know what else really.*

P5 initially is uncertain about the recommendation of a support group as she states that *"[she] doesn't know,"* and that it would be like *"something is getting done"* (line 6). In line 7 and 8 P3 states that "*we all get upset and we all talk about it and it happens again the next week,"* the *"happens again next week"* is an interesting point as this may highlight how P5 makes sense of her experience of work. Therefore even though they (the staff speak about their problems in their Thursday meeting- as mentioned by other staff members), the same issues may seem to crop up again. This gives us the sense that P5 does not really feel like the Thursday meeting may be working well in the department, as problems are not solved and seem to surface again later. P5 proceeds in lines 8 to12 to substantiate why she believes a support group would assist. She highlights that there would be space to *"air"* the issues and to *"say it out loud"* and that by having other colleagues in the support group that would assist in verifying what *"is normal"* and that it (the problem) may not be such *"a big thing."* P5's choice of words centre around "being heard" and "speaking about ones problems" which highlights how I posed the initial question to P5 in lines 1 to 5. Thus when constructing her own understanding of a support group, P5 may have drawn upon the information in my question to build her answer. Thus as an external researcher (and a future research

psychologist), I may have, to a certain degree, possibly influenced P5s opinion of a support group as she possibly saw me as the source of the intervention i.e., the one implementing the intervention in her department.

Based on this understanding I, at the end of the interview, probe again about the recommendation of a support group and P5 remarks that the *"support thing that we spoke about "* would be helpful however she highlights a practical limitation to this recommendation. This limitation according to P5 *"is time again"* and she further elaborates on this by posing a rhetorical question *"like where do you even get time?"* (line 17). This is a viable limitation of interventions at the work place as discussed in theme 2 (this theme will be elaborated on later in this chapter). It is interesting that P5 only mentions this point at the end of the interview, even though she initially mentioned that the recommendation of the support group would be feasible. Possibly, as the recommendation came from me, P5 may have felt that she could not offend me and simply agreed with my recommendation, however the way in which P5 constructed her meaning showed glimpses of doubt as picked up on in lines 7 and 8 and line 17. Based on these last few lines, 17 to 18, P5 also highlights her stake as a committed employee, who acknowledges that engaging in an intervention at work would result in time away from her actual work. This theme is elaborated later in this chapter.

In this extract P5 mentions that she initially thinks the support group may help as she highlights that the Thursday meeting currently in place at the department seems to allow for exchange in terms of communicating problems, however some problems are not resolved and tend to surface again. However when I prompted further P5 mentions an important point in terms of the time that an intervention like the support group would need if it were to be implemented in the department. Thus in this case, P5 saw me as the source of the intervention (i.e., the one wanting to implement the given intervention) and may possibly have felt that she did not want to offend me by resisting my option outright, however she still resisted the proposed intervention (later on in the interview and substantiated further why she did so). Later P5 however highlights another unique subtheme, that of her commitment to her job (which will be highlighted later in this chapter as well) when she mentions the time needed to engage in the intervention, time that would need to possibly be taken away from patients. Thus taken together these two sub themes (i.e., who initiates the intervention and the time needed to engage in an intervention) serve as prominent barriers to the proposed intervention.

Theme 2: The institution of time and work as barriers to intervention development

A prominent theme of time being a barrier to intervention development will be discussed in subtheme 2.1 below. In this sub theme radiation therapists felt that engaging in an intervention would require them to take time away from their work which was not feasible for them, consequently these radiation therapists were more likely to reject the proposed intervention.

2.1. Understanding time as a barrier to intervention development
Extract six:

1. *I: Ya (.) okay (.) here in your department I'm trying to look at like (.) >coming up with*
2. *some sort of intervention< to help reduce and deal with burnout and stress. In your*
3. *opinion what would be some of the recommendations that I could use?*
4. *P2: (0.6)>Uhm I know the one thing that really helps in this department< is when we*
5. *have a (.) group outing of some sort.*
6. *I: Okay (.)*
7. *P2: For example (.) a week ago we had team building and we played stupid games*
8. *okay, with inflatable goods. Then you have fun and you laugh and you just get back*
9. *together ↑just being normal people. I really think group activity is without uhm, stress,*
10. *just for pure fun (.) are its what works well. >On a day to day basis< (.) I can't think of*
11. *anything off hand. I just think those group activities are very good. Over the years we*
12. *have done alot of those kinds of stuff atleast once a year and you know you feel better*
13. *once you've come back (.) you sort of reconnect with your colleagues on a normal level*
14. *as opposed to a stress level.*
15. *I: Yes that true (.) uhm (0.1) how often do you have these [team building*
16. *P2: -team building]? Once a year, once a year.*
17. *I: In your opinion do you think maybe it should be done more often?*
18. *P2: (0.2) Uhm (.) I would like to see it being done more often but I don't see the budget*
19. *allowing it (.) because it's expensive.(11.04)*
20. *I: Yes okay*
21. *P2: -Cause, A- you have to uhm give everybody the day off and B >you have to pay*
22. *somebody to do it<*

Extract six, above highlights a response from P2, who when asked about what she would recommend as an intervention to help reduce burnout in the department, takes some time to think about a possible recommendation. P2 mentions that group outings really help in her department (line 4). P2 elaborates on the team building session she attended recently and highlights that she enjoyed the session as "*[she] sort of reconnect[ed] with [her] colleagues on a normal level as opposed to a stress level."* This highlights that P2, like others in the department, may feel "stressed" at the moment or that stress is normally associated with the type of work these radiation therapists do (which highlights the nature of work she is accustomed to). Based on qualitative studies numerous occupational stressors among radiation therapists have been identified, which have been shown to increase levels of stress and burnout among these health care professionals. Most of these stressors have been

grouped according to practical and emotional stressors which contextualise the work environment these medical professionals work in. These studies confirm, the stressful nature of work thus it is not surprising that an increase in stress, ambivalent feelings and burnout among radiation therapists has been noted both globally (Akroyd et al, 2002; French, 2004; Le Blanc & Schaufeli, 2003; 2008; Probst, 2012; Probst and Griffiths, 2007; 2009; Schaufeli & Buunk, 2003) and in South Africa (Lawrence, 2007).

However the important point highlighted in this extract, taking P2's recommendation into consideration, we gain an understanding that P2 is able to recognise that her job is stressful and that she and her fellow work colleagues need some form of assistance in order for them to address the stress and strains of their work.

When prompted about how often this team building session takes place, P2 acknowledges that it only takes place once a year. She then highlights two important limitations with respect to a team building session. The first being the cost of hiring someone to facilitate the team building session and the second, that all the staff members need to be "off" on that day, in order for the entire team to attend the session. With respect to radiation therapy, curative treatment takes place once a day, every day, 5 times a week for a period of 6-8 weeks. In terms of radiobiology associated with the discipline, once treatments are skipped, cancer cells regenerate which adversely affects cell death (Bucholtz, 1992). Consequently taking a day "off" may not be the advisable in terms of treatment delivery and prognosis. Secondly, since the department is part of the "private sector," it is safe to assume that the cost incurred for a day taken off, to implement a team building session, will be great and that another day will have to be used to compensate for both money and treatment sessions that have been lost. Thus in most cases, patients can be treated on a Saturday to catch up with treatment, which is considered overtime. However as noted in this chapter (theme one- subtheme 1.1) overtime in this department has been cut, which may also be another reason as to why, getting a day off, for a team building session, is not feasible.

In this extract P2 also highlights her stake as a dedicated employee and her commitment to her job, as she notes that engaging in this activity (the team building), would require time away from her work. This subtheme will be further developed later on in this chapter.

The institution of work is structured, rule bound and may restrict and control employees, necessitating that they follow a time and activity bound schedule (Maslach, 2003; Maslach et al., 2001). However the aim in most organisations is to remain profitable and meet daily targets, in terms of numbers treated, or the amount of money made (Maslach & Leiter, 1997).

In this case we are able to see that engaging in this type of intervention (team building) interferes with the daily routine of work productivity and profitability, thus the frequency of the intervention is reduced substantially, as mentioned by P2 in the extract above. Consequently this type of intervention is not sustainable. Thus we are able to see that participants like P2 are grappling with a dilemma, they recognise the stressful nature of their work (as confirmed by other research), and the need for ways to address that stress, but they also recognise and understand the problem with taking time off work to engage in such activities i.e., the team building session. Furthermore when these participants endorse an activity that would involve taking time away from work, as highlighted by P2, could be taken as demonstrating questionable commitment to their work.

In extract seven, P4 (who is a manager in the department) is asked why she thinks an intervention will not work in the department. P4 begins to speak about the constraints of time as well.

Extract seven:

1. *P4: ↑You understand how resistant we are to change (.) ya new (.) now imagine doing*
2. *something that they ↑don't normally do ok and uhm from my point of view ah ah I*
3. *would have loved that but time constraints >are the reasons why we haven't been able*
4. *to meet you half way< where that is concerned ya (.) we ↑still extremely busy (.) we*
5. *picking up so much uhm between January and February we scanned 100 patients so*
6. *there just uhm wasn't time to to (.) you know to actually look into that ya ya (0.2)*
7. *I: uhm (.) to then actually get a group to do a group session-*
8. *P4: >not possible<*
9. *I: -uhm it won't be feasible?*
10. *P4; Yes yes (.)to pull them away from the machines>that would not be possible<*
11. *I: Okay (.) that but there were other resistance besides ↑time. For me it felt like most of*
12. *the staff may not have seen the value of that sort of thing-*
13. *P4: ↑Of the intervention?*
14. *I: Yes*
15. *P4: (28:20) this is why I'm saying that it ↑might have come through that way but it's*
16. *still uhm (.) more change to have to accommodate something ok (.) uhm and that that*
17. *uhm besides what they are going through work wise they they just see that as ↑an add*
18. *on to everything else that they are going through you see (0.2)-*

P4 answers this question by drawing on common sense knowledge of human resistance to change or doing something new, which may seem like a hard task initially. Therefore P4 maintains that "they" (here we assume that she is referring to the radiation therapists), will be less likely to participate in an intervention as it is something they do not normally do and is thus new to them. Therefore we can see that P4 seems to attribute resistance to her employees rather than to herself. P4 proceeds to mention that **she** would have loved it if we were able to implement some sort of intervention (line 3), which may hint towards support for an

intervention, but she immediately notes a prominent limitation, that of time constraints. The point worth highlighting is that P4 was also possibly influenced by the fact that it was me who was trying to implement an intervention, so by her saying that she *"would have loved it but…"* may be a way of avoiding personally offending me by undermining something I was trying to do (this relates to the theme of who is initiating the intervention- as discussed in sub theme 1.2 above). P4 then builds on the issue of time constraints to further illustrate her point to me.

P4 mentions how busy the unit has been since my last visit to the department and mentions that, that is the reason why "*[they] haven't been able to meet me (the researcher) half way" (line 3 and 4).* When I speak in line 7 and highlight that "*to then actually get a group to do a group session,*" P4 quickly, (as she cuts me of in midsentence) remarks that it's not possible (as she may have heard it as a question). The reason for this as we see in line 10 is that it would not be possible to "pull them (radiation therapists) away from the machine." Based on the observation that three staff members resigned, the department barely had enough staff to operate all machines, and both managers were working on machines as well, thus this could be one reason as to why P4 felt it was impossible to pull staff away from their machines. Another reason, as P4 mentions in lines 4 and 5, could be the increase in patient numbers, which would put further strain on the dwindling amount of staff.

So there is a clear sense here that, independent of whether management and staff would support an intervention in principle, there are still constraints in terms of time and human resources that would serve as an additional barrier even if there was support from the relevant stakeholders.

In this extract P4 highlights an important point that shows that even if an intervention (a support group) where to be implemented in this department, the likelihood of buy in and participation would be reduced as employees exist within a larger system, that of the organisational structure which inevitably exerts pressure on and controls what employees can and cannot do. Maslach (2003) and Maslach et al., (2001) reaffirmed this point when they mentioned that individual interventions were paradoxical in nature, as it is assumed that the person has a certain degree of freedom and power to engage in strategies that may reduce burnout. It is further highlighted that this is not so and that employees exist within the structure of the organisation, therefore the ability to apply knowledge and engage in activities to reduce burnout in the work setting may be difficult, as employees do not have substantial control over their work situation or the actual organisational structure (Maslach, 2003;

Maslach et al., 2001). In this extract we are able to see that P4 thinks it is unlikely that a support group will gain impetus in the department and uses the reason of "time," thus new knowledge and skills that may arise from the support group may be hindered as the radiation therapists in this department may be operating under the constraints of time (as mentioned by P4) and resources (in the form of staff- which will be highlighted later).The work context (in this specific setting i.e., the private health care sector) tends to be action oriented; geared towards productivity and profitability; and prioritises servicing the "client" to the best of ones' ability. P4 acknowledges that she (and possibly others in the department) may find it difficult to schedule time for a support group in their daily routines.

In the extract below we gain a slightly different understanding of time being a barrier to intervention development. In this extract we see that the participant is being critical of the notion of time and that she questions the reason behind the reduced time per patient. Thus we see that the claim made above and by other radiation therapists in this study, as to the fact that they cannot partake in an intervention may be open to criticism, depending on their (the radiation therapists) sense of why it is that their time at work cannot be negotiated.

Extract eight:

1. *I: Ya definitely (.) and then considering that you guys are still working with the same*
2. *amount of staff but a reduction in time >so I think that will be<-*
3. *P8: Well for me (.) it's not even uhm (.) if you can give me a ↑proper reason as to why*
4. *we should do it (.) yes >I would do it happily< (.) but if your reason is just to make*
5. *more money I mean uhm*
6. *that's just ah ridiculous (.) you know what I mean? >So*
7. *that's my honest answer< like really we used to work 10 minutes a patient that side and*
8. *uhm it was just the way it was, the way like whatever (.) but obviously 15 minutes is*
9. *better for the radiographers but ↑mainly for the patients and though uhm (.) unless*
10. *there is a logical reason why it should be changed then ya.*

In this extract, P8 begins to speak about the time constraints that are pertinent in the department and we are thus able to gain an impression of how this may then affect the implementation of an intervention. In this extract, we gain a different perspective and a sense that P8 is potentially critiquing the idea that the employees are facing additional time pressures. This is highlighted in lines 3-5 where P8 mentions that "*if you can give [her] a ↑proper reason as to why [they] should do it (.) yes >[she] would do it happily< (.) but if your reason (managements reason) is just to make more money…"* Thus P8 suggests that reasoning behind reducing the time they (i.e., the radiation therapists) spend with patients is possibly fueled by a need to "just make more money" as opposed to being an unavoidable

necessity. Therefore if the time slots for patients is reduced to 10 minutes (as opposed to 15 minutes), it follows that more patients can be accommodated for treatment during the work day, which will equate to more money and thus increased profit. This understanding also possibly suggests that the claim made by the other radiation therapists, who mention that they can't spare the time to engage in an intervention may actually be open to criticism. This extract reflects that it actually depends on the radiation therapists' sense of why it is that their time at work cannot be negotiated. Therefore is it that they (the radiation therapists) cannot spare the time because they need to be able to serve their patients adequately (which would then equate to longer 15 minute long patient slots as mentioned by P8 in lines 7-8), or is it just the organisation and management, more so, who are trying to ensure that they make as much money as possible, even if it is at the expense of employees' wellbeing which was a unique sub- theme that arose in this study.

2.2. Commitment to the profession as a barrier to intervention development
Extract nine:

1. *I: (13:58) okay.*
2. *P6: but >I'm not leaving without a fight< because hum I love this job (.) and I (0.2)*
3. *hum also the changes with the 9 hours yes we all were <u>against</u> it because we were <u>so</u>*
4. *<u>Used</u> to that >6 and half hour shift< then I said (.) hum think maybe it will be better (.)*
5. *and it hasn't been that bad >yes we work a full day< we just we got spoilt basically*
6. *(.) working a 6 and a half hour shift because you had more time and stuff like that now*
7. *We don't so now you have to just <u>adapt</u> to that because that is what everybody does (.)*
8. *>they work a normal day<.*

In this extract P6 highlights her stake as a dedicated employee and we gain a sense of her commitment to her job and the work she does. This commitment is highlighted when P6 speaks about her willingness to "adapt." The adaptation P6 speaks of is adapting to the new working hours, that of 9 hours as opposed to 6 and a half hours. Thus we gain a sense that P6 is willing to work these extra hours, that she has accepted them and adapted to this change. Furthermore, we see that P6 reframes from criticising the organisation or the management even though she has to deal with adapting to new working hours, which may also reflect her dedication to her job and the commitment she has towards the work she does. This was a unique subtheme that arose in this study among most of the radiation therapists.

Multiple studies have highlighted an array of differing motivating factors (Bolderston et al.,2010; Haberman et al., 1994; McManus et al, 2006; Medland, et al., 2004; Newton et al., 2001) that prompted radiation therapists to choose their field of interest which include: loving to work with and help patients; the ingrained notion of caring; building special relationships

with the patients they treated; making a difference in the life of patients and having a job that was rewarding in nature and fulfilling. Thus it follows that these health care professionals would be committed to their jobs and their daily work.

Furthermore when employees enter a profession, they are governed by both a psychological; social and legal contract. A social contract highlights the norms, assumptions, and beliefs that society have about reciprocity, job security, loyalty, good faith and fair (Edwards & Karau, 2007). In contrast, the psychological contract focuses on beliefs concerning what a person is entitled to receive from the employer and is thus conceived of on an individual basis (Edwards & Karau, 2007; Schaufeli & Greenglass, 2001). Consequently when one enters into a job, the relationship is characterised by a sense of commitment to a lifetime of work and feelings of being valued and needed (over time). Historically, these feelings (of value and being needed) have a relationship that is directly proportional to the duration/length of employment (Schaufeli & Greenglass, 2001). This can be seen in the extract above as well as all the extracts that speak to commitment of the professionals towards their jobs.

During the course of the interview with P3, she highlighted that she had experienced burnout which was further compounded by personal problems and personal loss (in terms of family deaths) at home. Much of her interview is based on the fact that has "survived burnout" and has learnt how to cope with this problem. The question posed to P3 highlights that I am acknowledging the fact that P3 has experienced burnout and that I try to steer the conversation to the recommendation of having a support group in the department.

Extract ten:

1. *P3:I still think that not, a refresher should be done as such, that we should have you*
2. *know just a reminder (0.2) and uhm maybe on a yearly basis or a you know it should*
3. *be we do all these things for CPD points and stuff like that well atleast maybe once a*
4. *year it should be ya, something like that, >remember this what happens and this is how*
5. *some people cope and this remember that you mustn't take it all<, you know I think*
6. *it's just a reminder because we do become totally unaware of how much we taking on*
7. *and unless somebody likes taps you on the shoulder and says no (.) >I think you have*
8. *actually it'stoo much now, or whatever<, I mean you don't want to get to that stage*
9. *where it is too much, you just want to be able to have a nudge back in the right*
10. *direction. So you don't want to feel off course totally and then you know…*

P3s suggestion is that a more educational stance should be taken when planning an intervention. P3 states that this information will serve as a reminder of what happens at work *(lines 5-6)* which will highlight *"how some people cope and this [may help radiation therapists to] remember that [they] mustn't take it all."* Therefore this type of intervention

will allow participants the opportunity to learn about salient occupational stressors, which will aid identification of these stressors and thus assist individuals with self-awareness and may prompt individuals to seek help. P3 also mentions that this intervention could be used to gain (Continuing Professional Development) CPD[7] points (in line 3). This highlights P3's stake as a committed employee whose interests lie in maintaining her level of performance at work.

P3 mentions that this type of intervention will serve as a reminder to encourage radiation therapists that they should not take it all on, P3 then elaborates on what she means by *"you mustn't take it all"* (in line 13). According to P3 radiation therapists show willingness to take on more work than is reasonable, even at personal cost, and even without consciously recognising it, as others tend to point it out to them.This highlights a sense of taken-for-granted commitment to the job and the organisation that serves to resist any possible suggestion that claims of burnout is just an excuse not to work hard, or not to take on the kinds of burdens that being involved in this profession is known to involve.

This sub theme helps us see that the radiation therapists may be engaging in some form of "impression building." By this I mean that the above sub theme highlights how these health care professionals may be striving towards portraying themselves as being committed and "good" radiation therapists. The extract above and the other in this sub theme highlight a strong performance of the self-sacrificing and diligent worker.

2.3. The nature of work as a barrier to intervention development
Extract eleven:

1. *I: ya that's true (.)*
2. *P3: ya you'd benefit, you'd kill two birds with one stone, but the thing is, it also ya,*
3. *you reminding and I don't think as I say maybe (.) 15 years ago whatever I would*
4. *have like looked at you and thought please like you know, and ya maybe experiencing*
5. *it, but like I'm saying hearing it from one of my students it makes me (0.1) I think if*
6. *every student we've had in this department, I think I've had a very similar*
7. *conversation with, uhm so I know it affects everybody, and if you think that in our*
8. *department of 14 radiographers 8 of them, >I think<, has come back (counting- 0.8)*
9. *yes 8 of them are my previous students.*

[7] CPD (continuing professional development) points forms part of professional development which is aimed towards supporting employees in terms of their educational development. Radiation therapists attend seminars, symposiums and conferences which is beneficial for them educationally and allows staff to be aware of recent developments and research in terms of their respective field. These points are then accumulated and allow the radiation therapist to be retained on the list of professional at the Health Professions Council of South Africa. (HPCSA) (retrieved from www.hpcsa.co.za)

In this extract P3 speaks about her recommendation of implementing an educational intervention that could be accredited by the Health Professions Council of South Africa (HPCSA). P3 then highlights this type of intervention would be beneficial as she (and the other radiation therapists) would be able to gain CPD points as well and would also be reminded of burnout and ways that one could cope with it (as highlighted above). P3 then highlights that the prevalence of burnout (which she calls "it") in the department is high and says that "*15 years ago whatever [she] would have like looked at [me] and thought please like you know"* (line 3 and 4), hinting that she would not have thought that burnout would have been an issue for her 15 years ago. P3 mentions that she has spoken to a number of students about their experiences of "it" (burnout) who have subsequently started working as qualified radiation therapists in the same department (which is highlighted when she mentions that "8 of them [were her] previous students").

According to Maslach and Goldberg, (1998) people who are perceived as "weaker" tend to experience burnout faster. Furthermore individuals who may have limited resiliency and who are perceived as being unable to cope with their day to day activities at work, are more likely to burn out (Maslach & Goldberg, 1998).Taking the above into consideration one needs to be "fit" to survive work, consequently when a person experiences burnout, it is seen as a "failure to survive" in the work setting (Maslach & Leiter, 1997). Maslach and Leiter (1997) and Maslach and Goldberg (1998) also highlighted that feelings of failure linked to the belief/s that one is "weak" a "complainer," or is incapable of "surviving," may predispose individuals to shy away and deny their experience of burnout which becomes detrimental to the well-being and productivity of the individual, as the problem of burnout does not receive sufficient attention. This extract helps us to see that this understanding may be open to criticism. Lines 3-9 points out the widespread or systemic nature of burnout in this profession, as P3 highlights that *"it (burnout) affects everybody"* and furthermore resists the potential assumption that burnout is "something" that affects only "weak" people, by suggesting that it is part of the nature of the profession rather than an individual problem.

In extract below, P7 explains the situation at work in terms of protocol and staff shortages and how this may affect patient care.

Extract twelve:

1. *I: Mmm (.) ok can you explain that for me?*
2. *P7: (23:59)ya (.) uhm it's not so much external management but internal management*
3. *(.) if they can get protocols into place uhm but we're too few staff so they have to cover*

4. *machines and they ↑don't really >care to tell you the truth about the protocols and*
5. *stuff< so ya uhm I just think people just have the attitude that uhm (.) I just work here*
6. *(.) uhm nobody cares anymore, we care about the patient but the work ethic that type of*
7. *thing(.) everybody is too tired (.) we've been <u>messed</u> <u>around</u> with too much and ↑we*
8. *don't care anymore. Actually <u>unfortunately</u> that in the long run affects the ↑patients*
9. *negatively because the protocols help and this (.) uhm we push push push to do a*
10. *patient in a shorter time(.) >do more patients< we ↑don't have time to interact with*
11. *them and do patient care which comes from management and their view of patient*
12. *care(.) everybody differs so much. ↑It is so difficult.*
13. *I: Okay (.) so you are saying that the ↑patient care is lost?*
14. *P7: ↑Yes >it's all about the money now<*

P7 mentions that, she believes, that "internal management" should get (more[8]) protocols together. However she then offers, what she thinks is problematic in the department, the fact that there are "*too few staff [9]so they (internal management) have to cover machines,"* however according to P7, she mentions "*they ↑don't really >care to tell you the truth about the protocols and stuff."* From the above we are able to deduce that even though P7 believes that protocols should be in place at work to facilitate efficient treatment delivery and improve patient care. This issue is compounded by the fact that staff numbers are dwindling and that management, now have to fill in spaces left empty, by those staff members who have resigned, do not seem to follow or "care about" these protocols. She goes on to mention that "people" have the attitude that "they just work here" and that nobody cares, with respect to the word "people" we are unsure whether this refers to fellow staff members and management, however, further on she mentions that "*we care about the patient,"* thus we can deduce that the "we" here refers to herself and fellow radiation therapists and we can conclude that "people" may refer to management or else she would have used the pronoun "we" as well. In lines 2-5 we are able to gain a sense that P7 is critiquing management as there is a suggestion that a major problem in the department is that they are understaffed and that management are actually failing to ensure adequate staffing in the department. The implication here is that if the department was adequately staffed, then the staff may be less prone to burnout and/or more able to participate in time-consuming interventions to address burnout.

Much of the research shows that radiation therapy units in South Africa are inundated with patients referred from countries within SSA (Lawrence, 2007; Lawrence et al., 2011).

[8] I inserted the word "more" as based on observation, there are protocols for treatment, planning and simulation in place already. However with the opening of the new department, protocols began to differ, thus it can be assumed that P7 is hinting to this issue in the department.

[9] Based on observation, I noted that three of the staff members resigned within the space of the two interviews. Therefore the two managers were assisting at treatment machines, furthermore radiation therapists were constantly moving from one department to the next.

Coupled with the increased demand for the utilisation of radiation therapy for certain types of cancers (Probst & Griffiths, 2007), increased workload becomes a prominent stressor among radiation therapists (French, 2004; Lawrence et al., 2011; Probst & Griffiths, 2009; Roopnarain, 2011). Even within the South African context, Lawrence (2007) found that high levels of EE among radiation therapists working in the provincial setting, as compared to therapists working in the private sector, which may have been linked to increased workloads, which was complicated by a chronic shortage of staff, limited social support and an imbalance in effort and reward. Thus it follows that increased workload (or a decrease in the amount of staff available) has been shown to play a significant role in dissatisfaction with work amongst radiation therapists (French, 2004; Lawrence, 2007, Lawrence et al., 2011, Probst & Griffiths, 2009; Roopnarain, 2011) as the radiation therapists felt that they were unable to adequately engage in proper patient care and build rapport with patients. Extract 10 highlights that as mentioned in research, shortage of staff is a prominent stressor among the radiation therapists in this department. However in terms of intervention development, had there been an adequate number of staff, staff would have possibly been less prone to burnout and/or more able to participate in time-consuming interventions to address burnout.

P7 moves on to elaborate that the lack of protocols may affect the patient negatively in the long run, and moves on to mention that "*uhm we push push push to do a patient in a shorter time (.) >do more patients< we ↑don't have time to interact with them and do patient care which comes from management and their view of patient care (.) everybody differs so much. ↑It is so difficult."* These lines help us also gain a sense of the relationship between management and P7. We are able to discern two important points worthy of elaboration can be gained from this quote.

When P7 mentions that "*we ↑don't have time to interact with them and do patient care"* she also mentions that *"[this] comes from management and their view of patient care (.) everybody differs so much. It is so difficult."* This reflects that according to P7, management (we are unsure which management this is, immediate or executive/higher as P7 does not specify) is compensating for the increased number of patients, by decreasing the treatment time (as seen in lines 9-10), which will allow for the treatment of more patients which is symbolic of managements view of patient care as P7 puts it. Based on P7s understanding, we conclude that reduced treatment time is conducive to reduced patient care. She moves on to mention that everyone differs so much, which we can assume is a personal reflection on herself and management and the fact, that according to her, they differ in terms of how much value they (she and management) place on patient care. P7 mentions that this is difficult,

which highlights that the difference in terms of the core values and culture that she and management (may) have is difficult to navigate. This may result in anger and friction between staff and management.

The important point P7 makes is that *"[they] care about the patient,"* which reaffirms that caring for patients is a vital norm and value that is held by radiation therapists. P7 by highlights the fact that caring for patients and prioritising that relationship is important, shows that those qualities forms an integral part of her sense of self. When questioned as to whether patient care will decrease (as a result of the increasing the workload) P7 answers "yes," and then mentions that *"it's all about the money now."* Thus P7 believes that the aim in the organisation is to make more money which is fuelled by her comment that "*uhm we push push push to do a patient in a shorter time (.) >do more patients"* as an increase in patients will be more profitable for the company. This may also result in feelings of animosity between staff and management, as the core values that radiation therapists embody, according to P7 is being challenged. This speaks to the relationship with management- therefore when looking at who is the source of the intervention (theme 1) P7 is less likely to accept the proposed intervention, as according to her (P7) they (management) are more concerned about making money, treating more patients and thus making a profit which again is a strong marker of the context within which this study took place (i.e., the private health care sector). Consequently the core element of the job, that is caring for the patients and upholding the best standards in terms of patient care, is lost at the expense of making more money and increasing profitability.

In terms of this theme the following conclusion can be reached, due to the commitment to the job and the nature of the work, radiation therapists find themselves in situations where they may take on too much (which would more likely increase their proclivity towards burnout). The sub theme of commitment also highlighted an important point, that being of the performance, of being diligent and self-sacrificing employees. Thus these radiation therapists may have also engaged in "impression building" as they wanted to be perceived as being "good" health care professionals. Time however acts as a barrier, thus if these therapists were to participate in an intervention, they would most likely do so during work time. For the majority of the staff, they may be perceived as less committed if they do indeed take part in an intervention. Therefore these radiation therapists find themselves in a vicious cycle. A cycle of work characterised by increased commitment and increased stress (due to the nature of the work), which may result in increased levels of burnout and less time for an in intervention to assist them with their levels of stress and burnout. Consequently in this case

commitment is seen as being iatrogenic in nature, as the more committed the radiation therapists are, or want to be perceived as being, the less inclined they would be to participate in an intervention, as this would result in questioning their (the radiation therapists) sense of commitment. Therefore these health professionals find themselves in a position where by they are more likely to be prone to burnout.

Theme 3: Resistance by management to intervention development

3.1. Defending the organisation

This theme focuses on resistance from management towards the intervention proposed. This department had two managers, I was able to interview 1 of managers and was thus able to understand the stake management has in terms of implementing a proposed intervention.

Extract thirteen:

I: okay for you personally (.) do you think uhm maybe a support group would help you in this department. By a support group I mean uhm sitting in a group that is supportive, were open dialogue is appreciated and solutions are collectively gained (.) whereby you and the staff uhm (.) speak about issues or prevalent issues and you have a messenger, >if I can put it that way< or a link that then takes this information to management maybe, higher management (.) do you think this would help?
P6: (0.2) uhm ah (.) < it would I suppose ya it would>. As management normally we do have those meetings, we sit down and then whatever is escalated to me ↓and my colleagues are and the we take that and ↑we escalate it to the doctors and higher management okay so we do there is a system like that already in place ya (.) and sometimes it works and sometimes it doesn't because sometimes issues are not resolved the way it staff would have liked it to be resolved okay and there are times when both parties are fine with everything yes.
I: okay, so you do have something – [like this
P6: ↑-[we do, we do sit] in a meeting and <you know> there is a we discuss the business of the department and then there is the general thing of when people can actually speak and also we've got a social worker who is open to patients as well as to the people to ↑us you know who can you know so ↑few people have gone to see her and speak to her ya.
I: (0.1) okay (.) uhm for your staff specifically uhm would you recommend any sort of strategy that could be used in order to help them if they are (.) experiencing any sort of stress or burnout. What would you recommend?
P6: (0.2) ah (.) uhm the thing is uhm (.) they (.) are individuals alright, professional help I think they would have to seek it out themselves you can't force that on them.
↑Okay.
I: Okay

In response to the question I posed, pertaining to the recommendation of a support group in the department, P6 (who is one of the managers of the department[10]) immediately notes that there is a "meeting" in place in the department (line 8). P6 goes on to elaborate in lines 8-12, what the "meeting" entails and highlights (in line 10) that "there is a system like that already

[10] There are two managers in this department.

in place" (thus P6 understands the support group as I have defined it in lines 1-6, and the meeting which she describes in lines 8-11, as the same). In line 10, P6 is effectively resisting the terms of the question I have posed to her by claiming that the support group I proposed, as a potentially useful intervention, is already essentially in place. In doing so, she (P6) is also highlighting that, as a manager, she is already aware of the kinds of solutions or interventions her employees need to engage with, that may help them to manage and/or cope with potential burnout.

Secondly the question I posed also may imply, subtly, that management have not been sufficiently attentive to the problem of burnout and thus an external researcher (myself) comes in and now proposes a "intervention" that I think may help her (P6) employees further. This relates to who is initiating the intervention, i.e., who is the implementing/ the source of the intervention (as highlighted in theme 1 in this chapter). Thus P6 is also resisting this implication in my initial question, by mentioning that the intervention I proposed, is indeed, already in place and begins to defend herself and the organisation. In lines 1-13, P6 is using a particular understanding of what I have asked, concerning the feasibility of a support group as a basis for denying that there is a need for it, because they (staff and management) already have ways of addressing the needs a support group would address (i.e. the meeting implemented in their organisation).

I probe in line 14 as to whether a support group does exist. This highlights that I show some skepticism about P6's answer to the initial question by asking the participant to confirm that they already "have something – like this" (line 16). Thus there is some evidence here that I am not immediately willing to accept that P6 is talking about the same thing that the question was referring to. Even though, at that point, I may have felt that P6 subverted the definition of a support group I had offered, her perspective should be privileged, thus the meaning she is constructing in this extract highlights what they as management have implemented to date (i.e. the meeting) is effectively no different from the kind of intervention that I am proposing to her.

P6 re-confirms her claim and substantiates her point that a support group is already in place, by offering further elaboration in lines 15-19, which further highlights that P6 is defending what she and her organisation already have implemented, which thus obviates the need for further intervention development. P6 moves on to then highlights that "a social worker" (in line 17) is available for the staff and patients and that a few *"people have gone to see her and speak to her"* (line 18-19). Lines 17-19 yet again highlight that the organisation is in fact

doing something to support their employees, in terms of facilitating a supportive space for communication with the social worker. This may be another reason as to why P6, again defends the organisation from the suggestion that further intervention is called for, as there are indeed feasible options available to the radiation therapists who work in the department.

In terms of barriers to intervention development, the extract above tells us something about the stake of management in this organisation. In this case the proposed intervention may effectively serve as an accusation that the organisation (more so management) have not done enough to assist employees who may be vulnerable to burnout. Taking this understanding into consideration management then resists any suggestion that interventions are needed because to do anything else would be to admit that they (management) are guilty of not having previously done enough for their employees in this regard. This notion of defending the organisation may also be particular to this study as the intervention, in this case, was suggested by an outside researcher (myself), as opposed to being adopted from within the department (which relates to theme 1 in this chapter). According to Nielsen and Randall (2013) interventions are initiated, in most cases, to address problems internal to the organisation (i.e., to improve productivity, quality and /or become healthy again), or external to the organisation (i.e., legislative changes) and/or both which may come from inside or outside the organisation (in the form of an intervention proposed by an external consultant or a researcher). Importantly these authors further highlighted that when interventions were initiated in departments, they tended to displace power within organisations, which may then affect buy in from different stakeholders. Therefore in the extract, above, we see that interventions may unintentionally displace power from management (in this case). It follows then that up take from the manager (for the intervention) would be restricted. Therefore the lack of buy in from management as seen above confirms the above research highlighted by Nielsen & Randall (2013).

3.2. Individual responsibility towards the intervention

As mentioned above, P6 notes that the organisation has made provision for a social worker for staff. When asked what recommendation she would offer for staff, who may experience burnout, P6 highlights that "*they (.) are individuals <u>alright</u>, professional help [she] think[s] they (the radiation therapists) would have to seek it out themselves you <u>can't force</u> that on them*" (lines 23 and 24). In saying this P6 highlights that it is the responsibility of the individuals (i.e., the employees) to seek out this help offered to them. She goes on to effectively blame employees for not making use of whatever help might be available to them,

without it being "forced" on them. In this case we see that the manager is emphasising that the employees should learn to deal with the stressors they are experience at work, they should not fall into a culture of "blaming the employers" for problems at work and should thus take it upon themselves to seek help (Saksvil, Nytro, Dahl-Jorgensen & Mikkelsen, 2002). This also tends to encourage the assumption that individuals are responsible for dealing with "their" burnout (Maslach & Leiter, 1997). In most cases this type of intervention (individual levelled intervention) tends to be more cost efficient and are considered to be easier, as one would change a person as compared to changing an organisation (Le Blanc & Schaufeli, 2008; Maslach, 2003; Maslach & Goldberg, 1998; Maslach & Leiter, 1997). Therefore in the case of the private health care sector, implementing individual interventions would also be prioritised as it could be considered to be profitable, as these interventions are more cost effective (as highlighted above).

Thus P6 uses the distinction between the organisational responses (which she claims are already in place) and individual responses (where she blames employees for not making use of) as a basis for disavowing any responsibility management has for the problem of burnout. Thus P6 highlights that the experience of burnout is in fact an individual problem for her employees, as the onus for seeking help lies with them (the individual) and in this case management has already provided the means for the needed support, thus they (management) are not responsible for the problem of burnout.

This extract also confirms research by Saksvik et al., (2002) who found that senior managers were more likely to prefer individual level intervention as opposed to organisational levelled intervention. This may be motivated by the reasons offered for the dominance of individual interventions (as mentioned above). The last sub theme in the theme helps us to understand why this may be the case in this department.

3.3. Understanding the dominance of individual-leveled interventions:

During the course of the interview with P6, she mentions an important point as to why individual interventions may be favoured in this department, which is highlighted in the extract below. This extract helps us to appreciate that in this department the option of providing solutions other than individual-focused ones is not feasible because at the moment management are not in the position to change the working conditions.

Extract fourteen:

1. *P6: "The situation has gone worse (.) it has deteriorated (.) everybody is doing a little*
2. *bit more uhm ah than what they used to do ok (.) like our QA ((person in charge of*

3. *quality assurance)) normally doesn't work on the (.) machine (.) uhm she is now*
4. *working on the machines. (0.1) I don't normally work on the machine uhm (.) I've been*
5. *working on the machines. Likewise ((mentions the name of the other manager)) the*
6. *other uhm head of department is on the machine (.) ya (.) also so we uhm sort of ya*
7. *everybody has got to do extra ok. Ya (.)"*

This extract helps us to reason that P6, even though she is a manager, has started working on the treatment machines, which she normally would not do (line 4). She also speaks about others, including the lady in charge of quality assurance and the other manager, who are taking on tasks that they normally wouldn't be expected to do (i.e. working on the machine) as examples to substantiate her view, that there are stressors that occur which are beyond the control of management. I observed these radiation therapists (the other manager and the quality assurance radiographer work on the treatment machines when I visited the department on various occasions). Thus in this case, as seen in the extract above, the department may be short staffed as those who previously haven't worked on treatment machines, are now required too. It may be that management were, at that point, unable to hire new staff that will allow for a better distribution of machine radiation therapists. Therefore since the organisation is unable to do anything more to relieve or remediate these organisational stressors, this may be a reason as to why the organisation has opted to provide individual-focused resources (i.e., the social worker). Even though above, P6 effectively blames the employees for not seeking help and highlights that their experience of burnout is an individual problem P6 may not necessarily be endorsing an individualistic view of burnout, but here we see that she is claiming that the organisation can't provide any solutions other than individual-focused ones because at the moment they (management) are not in the position to change the working conditions while still fulfilling the functions that are expected of them. This reflects that organisational-focused solutions are not feasible in the current circumstances, and thus employees who may be experiencing burnout are making use of whatever solutions they see as being available (when they seek out the assistance provided for by management).

THEME 4: Resistance from employees towards the intervention

4.1. Experiencing burnout as an individual problem

In extract fourteen, P7 is talking about her personal experience of burnout and how she coped during that time in her life. This sub theme helps us to understand how individuals may see and experience burnout as an individual problem, which may have implications for the type of intervention they are willing to partake in.

Extract fifteen:

1. *I: okay, how did you feel?*
2. *P7: mmm like work was my worst enemy (hhh) ya (.) like you know >everyone knows*
3. *that you have to work well I suppose not everyone has to work< but ya (.) most of us*
4. *have to work and to know that you have to go there every day (.) you get like this*
5. *dreaded feeling (.)> like a sinking feeling in your stomach< that's not cool (.) that's*
6. *not how I want to see work. So that's how I did feel at the time (.) but uhm also like I*
7. *could just sleep at any time at that stage (.) most (.) like if if uhm I was going to work*
8. *late then I would sleep late into the day and then I would get ready for work (.) and*
9. *then I'd go to work or whatever >and then if I was on morning shift< (.) then I'd go to*
10. *work and come home and just sleep through the afternoon and stuff (.) because I was*
11. *just like (.) you know work (.) there is just this thing that I think it just takes away from*
12. *you your life as well (.) in general it just like you know you don't even think about other*
13. *things that are like out there that you can enjoy (.) or that you usually do enjoy*
14. *your family and stuff(.) you just whatever (.) I'm sick of this you know.*
15. *I: mmm*
16. *P7: so ya (0.2)*
17. *I: Right (.) okay (.) how did you cope with this?*
18. *P7: (0.4)*
19. *I: Did you cope?*
20. *P7: (hhh) mmm I'm not 100% sure (.) I think I don't know at one stage my boyfriend*
21. *was like ya you sleep too much and whatever (.) and so he probably brought that to my*
22. *attention... (0.6) uhm I think last year I went to see] a uhm (.) a psychologist. Her*
23. *name was ((mentions the psychologists name)) and uhm ya (.) then I went and chatted*
24. *to her (.) and >explained stuff to her and then she would like< uhm give me homework*
25. *and stuff to do and stuff, so ya that definitely helped. Ya I did that as well, I actually*
26. *forgot about that. (hhh) but ya that was helpful (.) so ya I would definitely agree with*
27. *that (.) true ya.*

When I ask how she (P7) felt, she mentions that she felt like work was her worst enemy (with a laugh), however becomes more serious when she mentions that *"you get… a dreaded feeling, like a sinking feeling in your stomach."* P7 highlights that that is *"not cool"* (line 5) and that she did not want to see work like that. P7 then elaborates further about the fact that she could sleep at any time, at that stage. Furthermore P7 mentions how the things she previously enjoyed doing, no longer appealed to her. When I query about how P7 coped, she takes some time to think about her reason, which prompts me to question whether she did in fact cope.

P7 mentions that she's actually unsure and then highlights that her boyfriend brought it to her attention that she was sleeping too much. Thus in lines 6 to 12, P7 claims that sleeping a lot (or more often than usual) was a direct result of her burnout, therefore sleeping may have been a form of escapism from her experiences at work and her experience of burnout. Furthermore we are able to see how P7's reported experience of burnout affected her family life, as she no longer wanted to do things that she normally liked to do, like spend time with

her family (lines 13 and 14) and her personal life, as her boyfriend noticed that she was sleeping too much (lines 20 and 21), which shows that her experience of burnout was affecting her day to day life. This extract also helps us to appreciate that the experience of burnout became "visible" in P7's emotions and actions. In this case the "emotions" may refer to the initial feelings P7 had towards work, the feeling of dreading going to work, *"the sinking feeling in her stomach"* which can be associated with nervousness and anxiety; and the intense feeling of knowing that this is not how one should feel towards work. With respects to actions, someone close to P7 (her boyfriend) was able see that something was different about her and that her day to day routine was changing (in order to accommodate her extended sleeping pattern). This extract serves as confirmation that narratives of burnout tend to be rooted in one's experience and are thus articulated in personal terms, which may force individuals to seek out personal solutions such as visiting a counsellor or psychologist (Maslach & Leiter, 1997), which may highlight that burnout is purely an individual problem.

However, important to note, P7 is suggesting that despite feeling overwhelmed, dreading her work, sleeping a lot, having had her normal social activities disrupted and having her boyfriend point out to her how much she was sleeping, she continued to fulfill her work responsibilities. P7, also mentions that she did seek outside and professional help from a psychologist, which she notes *"was helpful."* This does amount to an implication that she treated burnout as a personal rather than organisational matter, however it also serves as evidence of her stake in showing that she is a committed employee, who was prepared to get on with her work, even at great personal expense to herself.

Thus in comparison to the manager in the previous extracts (theme 3-sub theme 3.1), who showed a stake in defending the organisation and portraying it (the organisation) as doing whatever it reasonably could to assist employees with their experience of burnout, P7 (an employee) shows her stake in demonstrating her commitment to her profession (and the organisation within which she practices) as far as she reasonably could. However as mentioned in theme 2, it may be that this strong commitment perpetuates a vicious cycle of burnout among these medical professionals, as they tend to give too much of themselves due to their commitment to their jobs and due to the stressful nature of their jobs, are less likely to participate in interventions, as it would take away time from their patient treatment slots. In this case, these professionals' find themselves in a vicious cycle of burnout.

Secondly in terms of barriers to intervention development this extract highlights that employees are concerned to show themselves to be good and committed, than participating in

an intervention (as opposed to getting on with their work and dealing with burnout, when this is called for, as an individual matter), could be seen as being an excuse for not continuing with their work, or not being fully committed employees. The outcome is that both managers and employees end up reproducing an individual-focused sense of what burnout is and what can/should be done about it, which may hamper any potential effort to develop more organisational-focused interventions. Thus management and employees might have a stake in conceptualising burnout in predominantly individualistic ways.

4.2. Individual assumptions concerning the intervention

In this extract below we are able to deduce that P6 assumes that the intervention I am proposing is an individual levelled intervention. She then highlights that she does not think this option would be feasible in this department. This extract also highlights that commitment on the part of the radiation therapists, which has been a constant trend in this chapter, becomes questionable (for this participant specifically).

Extract sixteen:

1. *I: Okay and you believe that me doing an intervention with you therapists on that level*
2. *won't work? And you can say yes or no (.) because I have received very good answers*
3. *which helps my research but it may >helps people coming into this environment <*
4. *trying to bring about ↑change.*
5. *P6: ya ↑I don't think any intervention here will help us (hhh) that doesn't help you hey*
6. *(hhh) (0.1) I think this (.) everybody here needs routine that is why everybody (.) uhm*
7. *why you don't work in ↑radiography (.) I don't know if you worked in diagnostics then*
8. *you work night shift and that is why people went out of diagnostics to do radiotherapy*
9. *and now we working all shifts (.) we getting older (.) ↑I'm flipping going to be 40 this*
10. *year for God sake! (.) and I don't need this.*

In extract fifteen we see that P6 does not think that an intervention will help her or her fellow colleagues. P6 is using the question about whether an intervention will be feasible or not as an opportunity to complain about the working conditions and the changes in the structure of the shifts. This is evident when P6 mentions right away that she believes that "*everybody [in the department] needs routine"* (line 6) and how radiation therapists are working different shifts all the time. Thus, important to note, P6 seems to be implicitly assuming that an intervention would not be able to address these kinds of problems, so she seems to be assuming that an intervention would be focused on individual-level factors rather than the organisational matters she is complaining about here.

P6 then moves on to question me as to whether I had worked in diagnostic radiography before[11] in line 7 "*(.) I don't know if you worked in diagnostics."* She then proceeds to mention that one of the reasons that she and other colleagues chose to leave diagnostic radiography was the fact that they worked different shifts constantly and night shifts as well. Radiation therapy as mentioned in other chapters and this one, seems to be a more stable option due to that fact that treatment can only take place during the week. The contrast with radiography as highlighted by P6 is also interesting, because she is suggesting that her commitment to her current profession is based, partly, on assumptions about how it actually differs from other potential options (e.g., with respect to shift structures, as highlighted above), and thus that the removal of this distinction, coupled with factors like age, is a valid basis for no longer having the same commitment. This is noted in lines 9-10 where P6 mentions *[they are] getting older (.)↑I'm flipping going to be 40 this year for God sake! (.) and I don't need this.* This is a contrast to some of the extracts above (and theme two specifically) where the participants have showed their unconditional commitment to their profession. This extract shows what some of the limits of that commitment might be, which has implications for the kind of intervention that might be necessary in order to address the kinds of issues that (according to this participant) could result in burnout and/or leaving the organisation. Again this extract highlights how commitment can be seen as being iatrogenic in nature. Consequently due to their increased sense of commitment to their work, these radiation therapists have less time for an intervention, as participating in an intervention would mean taking additional time away from their work (which would also make their commitment questionable). Thus these health care professionals find themselves in a vicious cycle, where they are more likely to experience burnout (due to the nature of their work) and less likely to engage in interventions which may possible help to reduce their levels of burnout.

This extract highlights that this department may require more organisational levelled interventions as opposed to individual interventions (as highlighted by P6 above).

4.3. Past experience with interventions

In this extract, like the one above we are able see how the assumption of the proposed intervention being individually levelled, based on past experience of an intervention in the department may reduce the likelihood of acceptance of the given intervention.

[11] Diagnostic radiography as mentioned in the previous chapter, is branch of radiography that deals with the production of general x-rays in a hospital setting.

Extract seventeen:

1. *I: Yes sure. If we were uhm (.) to implement any sort of strategy here at work uhm (.)*
2. *maybe a support group where you guys sit together and talk about your issues (.) do*
3. *you think that would help?*
4. *P1: I somehow doubt it cause we have tried that with ((names the social worker)) (.)*
5. *<where everybody here just says something> (.) but eventually you see (.), you see a*
6. *like you see at <certain times of the year people are actually> and then you have, (.) I*
7. *suppose in ↑every company it's the bitching and moaning among the girls, (.) with*
8. *women. So we did try that with (name-social worker) it eventually comes back to stage*
9. *one again. Because everyone ↑is not as honest or straight forward, if they having a*
10. *shitty day at home then they come here (.) they come to work with it, and they, that*
11. *affects other people which isn't fair. I mean me personally (.) if I had a shitty day at*
12. *home last night, I wouldn't bring it to work, where other people (.) can't cope with that*
13. *and they bring it here and <you see moodiness and> uhm (.) but you can't do that with*
14. *sick patients (.) be miserable.*

P1's understanding of a support group is based on her past experience of a support group in the department, which was facilitated by the social worker. This experience however leads P1 to declare that she "somehow doubt[s]" a support group would work (line 4). P1 then begins to substantiate her answer of *"I somehow doubt it,"* by elaborating on her experience of the departmental support group. She notes that the support group was characterised by *"everybody just saying something"* which seems to be rather vague and gives the impression that P1 felt that maybe people said "something" because they felt obligated to. However P1 then builds on this by noting that eventually *"at certain times of the year"* and based on common stereotyping practice, that woman are more likely to complain and moan which may lead us to assume that the support group became a space conducive to "*bitching and moaning among the girls"* which may not be conducive to the supportive environment that is open and honest, promotes dialogue and disclosure without judgement, which is characteristic of a support group.

Thus P1, as seen in this extract seems to be assuming about the nature of the intervention that I proposed in my question in lines 1-3. That is, P3 seems to be assuming that the intervention would just be an opportunity to talk about problems, similar to the likes of a group therapy session, without necessarily leading to any changes in the conditions at work that are actually causing the problems. This assumption made by P3 is justifiable, given the way I phrased my question in lines 1-3. Consequently P3 seems to be rejecting the possibility of an intervention on the basis that it would be individual-focused.

P1 thinks mentions that *"[it] always comes back to stage one"* because, as she puts it everyone is *"not as honest or straight forward"* (line 9) as they should be and she attributes

this to the fact that her colleagues are unable to prevent spill over from work and home and vice versa. Therefore according, to P1, when her fellow staff members were unable to be as honest as they could be, in terms of their experiences at work, and were unable to keep their work and home lives separate, the success of the support group was limited. In sum P1 highlights the fact that she personally *"doesn't [bring] this to work"* (this refers to the problems she may have at home), thus she is, according to her own self-report, able to keep her work and home life separate. From this we gain an understanding that P1 feels that each individual should learn to deal with their own problems.

Therefore P1's past experience of a support group, which didn't really work coupled with her assumptions about the nature of the intervention I proposed, we gain an understanding that P1 is more likely to disagree with the implementation of a support group at work, as it would not deal with the organisational-level problems which seem to raise the employees proclivity towards burnout.

The two extracts above (16 and 17) are interesting both in terms of barriers to intervention development as we see that participants may resist potential intervention based on their assumptions about the individual-focused form that they think the intervention would take.

The last extract below highlights the view that individual levelled interventions are generally more dominant in the field. As mentioned previously P3, highlights that she had experienced burnout previously. Much of her interview is based on the fact that has "survived burnout" and has learnt how to cope with this problem.

Extract eighteen:

*I: okay (.) coming back to work (0.1) because as you say you >obviously experienced your burnout and you've you've< (.) grown from that and you've built up mechanisms. If we look at developing an intervention here (.) what what do <u>you</u> think are (.) would be feasible to recommend***?** *P3: uhm the thing is you, it's actually very hard to do because you've got very different personalities and to do something across the board is going to be very difficult I think, because people do deal with things differently but one of the things that I think should be brought, I know that uhm students do psychology at or in their course I still think that not, a r<u>efresher</u> should be done as such, that we should have you know just a reminder (0.2) and uhm maybe on a yearly basis or a you know it should be we do all these things for <u>CPD points</u> and stuff like that well atleast maybe once a year it should be ya, something like that, >remember this what happens and this is how some people cope and this remember that you mustn't take it all<, you know I think it's just a <u>reminder</u> because we do become totally unaware of how much we taking on and unless somebody likes taps you on the shoulder and says no (.) >I think you have actually it's too much now, or whatever<, I mean you don't want to get*

16. *to that stage where it is too much, you just want to be able to have a nudge back in the*
17. *right direction. So you don't want to feel off course totally and then you know…*

When asked what she thinks would be feasible in this department P3 firstly offers her understanding of the difficulties inherent in developing an intervention in the department. P3 highlights that she thinks (she individualises this claim by saying that *"I think"*-line 6) that coming up with a universal solution may not be feasible in the department, as one needs to take into consideration the various ways in which her colleagues deal with the issues at hand. P3, in lines 7-8 also individualises the solution she thinks may be beneficial to the department (as she repeatedly mentions *"I think"..."I still think"*). P3s suggestion is that a more educational stance should be taken when planning an intervention. P3 states that this information will serve as a reminder of what happens at work *(lines 9-10)* which will highlight *"how some people cope and this [may help radiation therapists to] remember that [they] mustn't take it all."* Therefore this type of intervention will allow participants the opportunity to learn about salient occupational stressors, which will aid identification of these stressors and thus assist individuals with self-awareness and may prompt individuals to seek help. She is proposing something systemic and educational but this still nonetheless places responsibility on individuals to refresh their education and be individually aware of possible burnout. Thus P3 highlights that the option of an individual intervention would be better suited to the department.

Based on the findings that were gained from this chapter conclusions and recommendations will provided in the last chapter.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

In this report I have demonstrated how a sample of radiation therapists faced with a proposed intervention, aimed at reducing burnout, highlighted different barriers to implementing interventions in genral. Based on these meanings I am able to provide recommendations that may assist other researchers and practitioners alike, who may want to develop/ implement interventions among this sample.

With regards to theme 1, this study highlighted that the source of the intervention (i.e., who implemented the intervention), would affect whether radiation therapists accepted or rejected the intervention. In this way the study contributed to understanding by highlighting that who implements an intervention, be it management and/or an external researcher, may act as a barrier to intervention development, as this would affect whether staff accepted or rejected the proposed intervention.

With regards to theme one, this study showed that in terms of management two different levels were noted (senior management and middle management), and based on who participants assumed initiated the intervention they were more likely to either accept or reject the proposed intervention. In this study a unique understanding of management being an insider or an outsider emerged. Thus when management (be it middle or senior management) was perceived as being on the outside, radiation therapists were less likely to accept the proposed intervention. This study also highlighted that staff conceived of their immediate management (middle management) as being both insiders and outsiders. This subsequently affected whether they (i.e., staff) would accept the intervention. In this case the radiation therapists did not accept the intervention. Another factor highlighted in this study focused on what the motivating force for initiating the intervention was and how this would then affect whether the staff accepted the intervention or not. In this case once radiation therapists felt that the motivating force for the intervention was to merely increase productivity of the staff and improve profitability (which was a key defining feature of the setting in this study i.e., the case of private health care sector) and was not aimed at improving wellbeing of the employees, they (i.e., employees) were less likely to accept the intervention.

This theme also highlighted that the relationship staff had with management also affected whether the radiation therapists accepted the intervention or not. In this study it was suggested that relationships characterised by mistrust and animosity (possibly due to a lack of transparency) between staff and management was not conducive to the acceptance of the intervention.

The role of the external researcher/ psychologist as the potential source of the intervention was also important. It seemed that the participants did not want to offend the researcher by directly opting to not accept the intervention. This point needs to be kept in mind as it will definitely affect whether interventions are accepted or not. More research is warranted in this area.

During the course of this study it was evident that changes (in the form of a takeover) were taking place in the department. Although this was not the main focus in this study, changes, be it discreet or broad, have an effect on acceptance or rejection of an intervention. In this study we saw that the changes inherent to the department affected staffs' relationship (in this case negatively) with management, which inevitably affected whether they (i.e., staff) accepted the intervention or not.

Thus a sound needs assessment is required to find out what problems may be evident in the department. Furthermore other important factors like learning more about the department, that is, are there concurrent changes taking place and learning about the relationship staff may have with management, all affect the planning of intervention. Another important recommendation is prioritising communication. Participants need to be adequately informed when it comes to any changes that may involve them. They need to be made aware of the reasons for the given intervention, how the intervention may affect them and their jobs and who initiated the intervention. Explaining and communicating efficiently affects buy-in from the participants and will also improve employee commitment to the given intervention. Furthermore the roles played by management and consultants and/or external researchers should be explained as well, to ensure that all staff understand these roles and agree with them. Another recommendation would be to stimulate participation among employees constantly, so they feel more involved, are more committed to the intervention and possess a sense of ownership of the intervention.

The second theme in this study focused on firstly the nature of the work that these radiation therapists are involved in. This sub theme confirmed previous research which highlights that the work completed by these medical professionals is stressful and may increase ones proclivity towards burnout, as these radiation therapists engage with terminally ill patients over a long period of time. A second important point that was unique to this study was that, contrary to research and assumptions surrounding burnout, burnout among radiation therapists (due to the nature of their work) is widespread and affects most employees. Another unique subtheme that developed involved the strong sense of commitment these

health care professionals had for the work they do. This strong sense of commitment towards ones job was positive, however another unique understanding that emerged was that radiation therapists were more likely to over extend themselves and "give more of themselves" in their field of work as a result of their strong sense of commitment to the profession. This sub theme also highlighted an important point, that being of the "performance" of being diligent and self-sacrificing employees. Thus these radiation therapists may have also engaged in "impression building" as they wanted to be perceived as being "good" and committed health care professionals.

The radiation therapists highlighted an important barrier to intervention development, that of time in this theme. For many radiation therapists the ability to participate in an intervention aimed at reducing burnout would mean that they (i.e., radiation therapists) may then have to "take time away" from the treatment session. For these health care professionals taking part in an intervention, during work time, was then questioning their strong sense of commitment to their work, as in essence they would be using time that was meant to treat a patient, to now focus on themselves and their problem of burnout. This theme highlighted that due to the commitment to the job and the nature of the work, radiation therapists may find themselves in situations where they take on too much. Therefore these radiation therapists may find themselves in a vicious cycle characterised by increased commitment and increased stress (due to the nature of the work), which may result in increased levels of burnout and less time for an in intervention to assist them with their levels of stress and burnout (as participation becomes questionable in terms of their commitment). Consequently commitment and an intervention may be seen as being iatrogenic in nature. The more committed the radiation therapists are, or want to be perceived as being, the less inclined they would be to participate in an intervention, as this would result in one questioning their (i.e., the radiation therapists) sense of commitment. Therefore these health professionals find themselves in a position whereby the more committed they are, the more prone they are to burnout. In terms of the intervention, the less they participate, the more prone they are to burnout as well.

Theme three focused and highlighted resistance from management towards the given intervention. The sub theme of "defending the organisation" was highlighted in this study. This theme showed that firstly management felt that an intervention was not needed as they already had an "option" in place. Interesting to note, the manager highlighted her stake of defending the organisation, as she may have felt that an implication in my question (s)

was/were that management was not doing all they could to support the radiation therapists in the department. Thus in this case the manager defended the organisation and highlighted that there was assistance provided to staff, thus management was aware of the problems faced by the employees and was providing the needed resources.

A unique understanding gained from this theme was that management was fully aware of the organisational level problems specific to the department (i.e., the lack of staff) however they were at that moment unable to deal with the problems. However they (management) were trying to allow for the availability of more individual levelled interventions. This insight helps us to understand the dominance of individual levelled interventions in this department. This dominance (of individual levelled interventions) was not surprising due to the context in which this study took place (i.e., the private health care sector), where cost efficiency is a priority. Individual levelled interventions focus on changing the individuals' coping mechanisms and thus how the person deals with stress, rather that changing organisational levelled structure, in this way individual interventions tend to be cost efficient however as mentioned in the literature review this is short lived, as these interventions focus on reducing EE (long term) whereas the other two dimensions of burnout are not affected in the long term and is not sustainable.

With regards to this point this theme also highlighted that management effectively blamed individuals for not making use of the options that were provided to them. However this point should not be confused with the understanding that she (management) bought into the individualistic understanding of burnout. What it does highlight is that the organisation could not provide any solutions other than individual-focused ones because at that moment they, (management) were not in the position to change the working conditions. This raises an important learning in terms of developing interventions, whereby developing interventions at the level of the organisation are complex and require change of an entire system, as opposed to merely changing an individual and/or the way a person responds to stress and burnout.

With regards to the last theme, that of resistance from employees towards the given intervention, the subtheme of conceptualising burnout as an individual problem highlighted why burnout interventions tend to be focused on the level of the individual. Thus this theme highlighted how burnout can be related in terms of the individual and one's experience there off. However this theme was also related to the commitment radiation therapists showed. This highlighted once again, that radiation therapists with high levels of commitment were

more likely to find themselves in a vicious cycle of burnout (as commitment was noted to be iatrogenic in nature, as mentioned above).

This theme also highlighted that due to the radiation therapists' assumptions concerning the individual nature of the intervention they were more likely to reject the proposed intervention as they may have perceived the problems in the department to be at the level of the organisation. Thus they may have felt that an individual level intervention would not be feasible in this case. This understanding was also based on the radiation therapists past experiences with interventions in the department.

A possible recommendation to this finding would be more reflection on reasons for increased failure of interventions in the given department. In this case by being more responsive to hearing employees experiences of past interventions practitioners and researchers alike would be less likely to brush over the past mistakes and make them again.

In conclusion this report highlighted the barriers inherent to an intervention aimed at reducing burnout among a sample of radiation therapists in Gauteng. The report also provided recommendations for others (i.e., researchers and practitioners alike) who may be developing interventions aimed at reducing burnout among radiation therapists. Importantly this report also highlighted themes/ subthemes that were in some cases confirmed by research in the field and unique themes/ subthemes that were specific or unique to the context in which the study took place. Consequently these findings can be transferred to other hospitals that form part of the private health sector, that has a radiation therapy unit and thus employs radiation therapists.

Reference list

Akker, J, van Den., (1999). Principles and methods of development research. In J. Akker, K. Van Den, N. Gustafson, T. Nieveen, and J. Plomp (Eds.). *Design approaches and tools in education and training* Dordrecht: Kluwer

Akroyd, D., Caison, A., & Adams, R. D. (2002). Burnout in radiation therapists: the reductive value of selected stressors. *International Journal of Radiation Oncology Biology Physics*, *52*(3), 816-821.

Armenakis, A. A., & Bedeian, A. G. (1999). Organisational change: a review of theory and research in the 1990s. *Journal of Management, 25,* 293-315.

Awa, W. L., Plaumann, M., & Walter, U. (2010). Burnout prevention: A review of intervention programs. *Patient Education and Counselling*, *78*(2), 184-190. doi:10.1016/j.pec.2009.04.008

Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career development International*, *13*(3), 209-223. Doi: 10.1108/13620430810870476

Bakker, A. B., Schaufeli, W. B., Leiter, M. P., & Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work & Stress*, *22*(3), 187-200. Doi: 10.1080/02678370802393649

Bakker, A. B., & Schaufeli, W. B. (2008). Positive organizational behaviour: Engaged employees in flourishing organizations. *Journal of Organizational Behaviour*, *29*(2), 147-154. Doi:10.1002/job.515

Barnard, D., Street, A., & Love, A.W. (2006). Relationship between stressors, work support and burnout among cancer nurses. *Cancer Nursing*, *29* (4), 338-345.

Barnes, B. R., Mathee, A., Krieger, L., Shafritz, L., Favin, M., & Sherburne, L. (2004). Testing selected behaviors to reduce indoor air pollution exposure in young children. *Health Education Research*, *19*(5), 543-550. doi:10.1093/her/cyg075

Biron, C., & Karanika-Murray, M. (2013). Process Evaluation for Organizational Stress and Well-Being Interventions: Implications for Theory, Method, and Practice. *International Journal of Stress Management.* Advance online publication. Doi: 10.1037/a0033227

Bolderston, A., Lewis, D., & Chai, M. J. (2010). The concept of caring: Perceptions of radiation therapists. *Radiography, 16*(3), 198-208. Doi: 10.1016/j.radi.2010.03.006

Bovey, W. H. & Hede, A. (2001). Resistance to organisational change: the role of cognitive and affective processes. *Leadership and Organisation Development Journal, 22,* 37282.

Bragard, I., Razavi, D., Marchal, S., Merckaert, I., Delvaux, N., Libert, Y., & Etienne, A. M. (2006). Teaching communication and stress management skills to junior physicians dealing with cancer patients: a Belgian Interuniversity Curriculum. *Supportive care in cancer*, *14*(5), 454-461.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3, 77-101. Doi:10.1191/1478088706pq063oa

Breakwell, G.M. (1995). Interviewing. In G.M. Breakwell, S. Hammond & C. Fife-Schaw (Eds.). Research Methods in Psychology (pp. 230- 242). London: Sage

Bucholtz, D. J. (1994). Issues concerning the sedation of children for radiation therapy. *Oncology Nursing Forum*, *19*(4), 649-655.

Bucholtz, D. J., & Tafas, C. M. (1998). Radiation Therapy. In B. L. Johnson & J. Gross (Eds.). *Oncology Nursing*. . London: United Kingdom: Jones Bartlett Publishers INC.

Burke, R. J., & Greenglass, E. R., (2001). Hospital restructuring, work-family conflict and psychological burnout among nursing staff. *Psychology & health*, *16*(5), 583-594. Doi:10.108./08870440108405528

Cancer Association of South Africa. (2014) Research Register (online). Retrieved from the World Wide Web on August 2, 2014 from http://www.cansa.org.za/files/2009/10/Global-factsheet-2012.pdf

Carvalho, E., Muller, M., Carvalho, P. B & de Souza Melo, A. (2005). Stress in the profession of oncology nursing. *Cancer Nursing*, 28, (3), 187-193.

Choi, M., (2011). Employees' attitudes toward organizational change: A literature review, *Human Resource Management*, *50*(4), 479-500. Doi: 10.1002/hrm.20434

Choi, M., & Ruona, W. E. A., (2011). Individual readiness for organisational change and its implications for human resource and organization development. *Human Resource Development Review, 10,* 46-73. Doi: 10.1177/1534484310384957

Cooper, S., & Endacott, R. (2007). Generic qualitative research: a design for qualitative research in emergency care? *Emergency Medicine Journal*, *24*(12), 816-819. Doi: 10.1136/emj.2007.050641

Cox, T., Karanika, M., Griffiths, A., & Houdmont, J. (2007). Evaluating organizational-level work stress interventions: Beyond traditional methods. *Work & Stress, 21*(4), 348-62. Doi: 10.1080/02678370701760757

Cox, T. & Griffiths, A. (2010).Work related stress: A theoretical perspective. In S. Leka & J. Houdmont (Eds.). *Occupational Health Psychology* (pp. 31-57).United Kingdom: Wiley-Blackwell.

Cox, T., Taris, T. W., & Nielsen, K. (2010). Organizational interventions: Issues and challenges. *Work & Stress, 24*(3), 217-218. Doi: 10.1080/02678373.2010.519496

Daly, F., Teague, P., & Kitchen, P. (2003). Exploring the role of internal communication during organisational change. *Corporate Communications: An International Journal*, *8*(3), 153-162. Doi: 10.1108/13563280310487612

Dempsey, S. E., & Burr, M. (2009). The level of confidence and responsibility accepted by Australian radiation therapists in developing plans and implementing treatment. *Radiography, 15*(2), 139-145. Doi: 10.1016/j.radi.2008.02.002

Dickin., K and Griffiths, M. (1997). Designing by dialogue: A program planner's guide to consultative research for improving young child feeding. Report for the Health and Human Resources Analysis Project, USAID, Washington DC.

Dowling, M. (2006). Approaches to reflexivity in qualitative research. *Nurse researcher, 13*(3), 7-21.

Edge, J., Buccimazza, I., Cubasch, H., & Panieri, E. (2014). The challenges of managing breast cancer in the developing world-a perspective from sub-Saharan Africa. *SAMJ: South African Medical Journal*, *104*(5), 377-379.

Edward, J. C., & Karau, J. S. (2007). Psychological contract or social contract? Development of the employment contract scale. *Journal of leadership and Organisational Studies, 13 (3), 67-78*

Egan, M., Bambra, C., Thomas, S., Petticrew, M., Whitehead, M., & Thomson, H. (2007). The psychosocial and health effects of workplace reorganisation. 1. A systematic review of organisational-level interventions that aim to increase employee control. *Journal of Epidemiology and Community Health*, *61*(11), 945-954. Doi: 10.1136/jech.2006.054965

Elving, W. J. L., (2005). The role of communication in organisational change. *Corporate Communications: An International Journal, 10,* 129-138. Doi: 10.1108/13563280510596943

Ford, J. D., Ford, L. W., & D'Amelio, A. (2008). Resistance to change: The rest of the story. *Academy of management Review*, *33*(2), 362-377.

Fossey, E., Harvey, C., McDermott, F., & Davidson, L., (2002). Understanding and evaluating qualitative research. *Australian and New Zealand journal of Psychiatry*, 36, 717-732.

French, H. C. (2004). Occupational stresses and coping mechanisms of therapy radiographers- a qualitative approach. *Journal of Radiotherapy in Practice*, *4* (1), 13 -24

Greenglass, E. R., Burke, R. J., & Fiksenbaum, L. (2001). Workload and burnout in nurses. *Journal of Community & Applied Social Psychology*, *11*(3), 211-215. Doi:10.1002/casp.614

Guba, E. G & Lincoln, Y. S. (1983). Epistemiological and methodological bases of naturalistic inquiry. *Educational Communication and technology*, *30* (4), 233-252

Haberman, M. R, Germino, B. B, Maliski, S., Stafford-Fox, V., & Rice, K., (1994). What makes oncology nursing special? Walking the road together. *Oncology Nursing Forum,* 21(8), 41-48.

Halbesleben, J. R., & Buckley, M. R. (2004). Burnout in organizational life. *Journal of management*, 30(6), 859-879. Doi: 10.1016/j.jm.2004.06.004.

Herold, D.M., Fedor, D.B., & Caldwell, S.D. (2007). Beyond change management: A multilevel investigation of contextual and personal influences on employees' commitment to change. *Journal of Applied Psychology*, *92*, 942-951. Doi: 10.1037/0021-9010.92.4.942

Holt, D. T., Armenakis, A. A., Field, H. S. & Harris, S. G. (2007). Readiness for organisational change: the systematic development of a scale. *Journal of Applied Behavioural Science*, 43, 232-255. Doi: 10.1177/00211886306295295

Houdmont., J and Leka., S. (2010). An introduction to occupational health psychology. In S. Leka & J. Houdmont (Eds.). *Occupational Health Psychology* (pp. 1-31).United Kingdom: Wiley-Blackwell.

Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G. Lerner (Ed.). *Conversation analysis: Studies for first generation* (pp. 13-31).Philadelphia: John Benjamin Publishing Company.

Johns, G. (2006). The essential impact of context on organizational behavior. *Academy of Management Review*, 31 (2), 386-408.

Kelly., K. (1999). Calling it a day: Reaching conclusions in qualitative research. In M. Terre Blanche & K. Durrheim (Eds.). *Research in practice: Applied methods for the social sciences* (pp. 421-437). Cape Town: UCT Press.

Kushnir, T., Rabin, S., & Azulai, S., (1998). A descriptive study of stress management in a group of paediatric oncology nurses. *Cancer Nursing*, 20, 414-421.

LaMontagne, A. D., Keegel, T., Louie, A. M., Ostry, A., & Landsbergis, P. A. (2007). A systematic review of the job-stress intervention evaluation literature, 1990–2005. *International Journal of Occupational and Environmental Health*, *13*(3), 268-280.

Lawrence, H., Poggenpoel, M., & Myburgh, C. (2011). Experiences of being a therapy radiographer: original research. *Health SA Gesondheid*, *16*(1), 1-7. Doi: 10.4102/hsag.v16i1.596

Lawrence, H. A. (2007). *A National Study of Burnout in Radiotherapists Registered with the Health Professionals Council of South Africa*. Unpublished Master's Thesis University of Johannesburg, South Africa

Le Blanc, P., Hox, J. J., Schaufeli, W. B., Taris, T. W., & Peeters, M. C.W. (2007). Take care! The evaluation of a team based burnout intervention program for oncology care providers. *Journal of Applied Psychology, 92* (1), 213-227. Doi: 1037/0021-9010.921.213

Le Blanc, P., & Schaufeli, W. B. (2003). Burnout among oncology care providers: Radiation assistants, Physicians and nurses. In M. F. Dollard, A. H Wineheld, & H. R. Wineheld (Eds.). *Occupational stress in the service professions*. (Pp201-215). London: Taylor and Francis Publications.

Le Blanc, P., & Schaufeli, W. B. (2008). Burnout interventions: An overview and illustration. In J. R.B. Halbesleben (Eds.). *Handbook of stress and burnout in health care*. (pp. 201-215). Nova Science Publishers INC

Leiter M. P., & Maslach, C. (2000). Burnout and health. In A. Baum, T. Revenson, J. Singer (Eds.). *Handbook of Health Psychology* (pp. 415-426). Hillsdale, NJ: Lawrence Erlbaum.

Leiter, M. P., & Maslach, C. (2004). Areas of worklife: A structured approach to organizational predictors of job burnout. In P. Perrewe´ & D. C. Ganster (Eds.). *Research in occupational stress and well-being* (pp. 91–134). Oxford, United Kingdom: Elsevier.

Leiter, M. P., & Maslach, C. (1999). Six areas of worklife: a model of the organizational context of burnout. *Journal of health and Human Services administration*, 472-489.

Levin, C. V., Sitas, F., & Odes, R. A. (1994). Radiation therapy services in South Africa. *South African Medical Journal= Suid-Afrikaanse tydskrif vir geneeskunde, 84*(6), 349-351.

Lewin., K. (1935). *A dynamic theory of personality*. New York: McGraw Hill Custom Publishing

Lines, R. (2004). Influence of participation in strategic change: resistance, organizational commitment and change goal achievement. *Journal of Change Management, 4*(3), 193-215. Doi: 10.1080/14697010420000221696

Lyckholm, L., (2001). Dealing with stress, burnout and grief in the practice of oncology. *The Lancet*, 2, 750-755.

Maslach, C., (2011). Burnout and engagement in the workplace: New perspectives. *The European Health Psychologist*, *13*(3), 44-47.

Maslach, C., Leiter, M. P., & Jackson, S. E. (2012). Making a significant difference with burnout interventions: Researcher and practitioner collaboration. *Journal of Organizational Behaviour*, *33*(2), 296-300. Doi: 10.1002/job.784

Maslach, C., & Schaufeli, W. B. (1993). Historical and conceptual development of burnout. In W. B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional Burnout: Recent Developments in Theory and Research* (pp. 1-19). Washington, DC: Taylor & Francis.

Maslach, C., & Jackson, S. E. (1982). Burnout in health professionals: A social psychological analysis. In G. S. Sanders & J. Suls (Eds.). *Social psychology of health and illness*. (pp. 227-250). USA: Lawrence Erlbaum Associates.

Maslach, C., Leiter, M.P., & Schaufeli, W.B. (2008). Measuring burnout. In C. L. Cooper & S. Cartwright (Eds.). *The Oxford Handbook of Organizational Wellbeing* (pp. 86-108). Oxford: Oxford University Press.

Maslach, C., & Goldberg, J. (1999). Prevention of burnout: New perspectives. *Applied and Preventive Psychology*, *7*(1), 63-74.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52(1), 397-422.

Maslach, C., & Leiter, M. P. (2008). Early predictors of job burnout and engagement. *Journal of Applied Psychology*, 93(3), 498-512. Doi:10.1037/0021-9010.93.3.498

Maslach, C. (2003). Job Burnout New Directions in Research and Intervention. *Current directions in psychological science*, 12(5), 189-192.

Maslach, C., & Leiter, M. P., (1997). *The truth about burnout: How organisations cause personal stress and what to do about it.* San Francisco, CA: Jossey-Bass.

McManus, I, C., Livingston, G., & Katona, C., (2006). The attractions of medicine: The generic motivations of medical school applicants in relation to demography, personality and achievement. *Bio Medical Central Medical Education*, *6*(11), 1-15.

Medland, J., Howard-Ruben, J., & Whitaker, E., (2004). Fostering Psychological Wellness in Oncology Nurses: Addressing Burnout and Social Support in the Workplace. *Oncology Nursing Forum*, *31*(1), 47-54.

Morgan. G., (2006). *Images of organisations.* United States of America: Sage Publications

Morrow, S. L., (2005). Quality and trustworthiness in qualitative research in counselling psychology. *Journal of counselling psychology*, *52*(2), 250. Doi: 10.1037/0022-0167.52.2.250

Mucheusi, L., & Engel-Hills, P., (2006). An evaluation study of the perceptions of oncology staff on the problems and solutions in care of children undergoing radiotherapy. *The South African Radiographer, 44* (1), 10-15.

Newton, J. M., Kelly, C. M., Kremser, A. K., Jolly. B., & Billett. S. (2009). The motivations to nurse: an exploration of factors amongst undergraduate students, registered nurses and nurses managers. *Journal of Nursing Management*, *17*(2), 392-400.

Nichter, M., Acuin, C. S., & Vargas, A. (2008). Introducing zinc in a diarrhoeal disease control programme: guide to conducting formative research. Retrieved from http://whqlibdoc.who.int/publications/2008/9789241596473_eng.pdf

Nielsen, K., Taris, T. W., & Cox, T. (2010). The future of organizational interventions: Addressing the challenges of today's organizations. *Work & Stress*, *24*(3), 219-233. Doi: 10.1080/02678373.2010.519176

Nielsen, K., Randall, R., Holten, A. L., & González, E. R. (2010c). Conducting organizational-level occupational health interventions: What works? *Work & Stress*, *24*(3), 234-259. Doi: 10.1080/02678373.2010.515393

Nielsen, K., Randall, R., & Christensen, K.B. (2010a). Developing new ways of evaluating organizational-level interventions. In J. Houdmont & S. Leka (Eds.), *Contemporary occupational health psychology: Global perspectives on research and practice* (pp. 21-45). Chichester, UK: Wiley-Blackwell.

Nielsen, K., Randall, R., & Albertsen, K. (2007). Participants' appraisals of process issues and the effects of stress management interventions. *Journal of Organizational Behavior*, *28*(6), 793-810. Doi: 10.1002/job.450

Nielsen, K., & Randall, R. (2012). The importance of employee participation and perceptions of changes in procedures in a team working intervention. *Work & Stress*, 26(2), 91-111. Doi: 10.1080/02678373.2012.682721

Nytro, K., Saksvik, P. O., Mikkelsen, A., Bohle, P., & Quinlan, M. (2000). An appraisal of key factors in the implementation of occupational stress interventions. *Work & Stress*, 14(3), 213-225. Doi: 10.1080/02678370010024749

O'Driscoll, M. P., & Brough, P. (2010). Work organization and health. . In S.Leka & J. Houdmont (Eds.). *Occupational Health Psychology* (pp. 57-88).United Kingdom: Wiley-Blackwell.

Papadatou, D., Martinson, I. M. & Chung, P. M. (2001). Caring for dying children: A comparative study of nurses' experiences in Greece and Hong Kong. *Cancer Nursing*, *24* (5), 402-412.

Parent, J. D., (2010). Individual Adaptation to the Changing Workplace: A Model of Causes, Consequences, and Outcomes. In J. Houdmont & S. Leka (Eds.). *Contemporary occupational health psychology: Global perspectives on research and practice.* United Kingdom: Wiley- Blackwell.

Parumasur, S. B., & Barkhuizen, N., (2009). Organisational Change and Stress Management. In S. P. Robbins, T. A. Judge, & G. Roodt (Eds.), *Organisational Behaviour: Global and South African Perspectives*. Cape Town, South Africa: Pearson Education

Patton, M. Q. (2002). *Qualitative Evaluation and Research Methods* (2nd Ed.). Newbury Park: Sage.

Polkinghorne, D. E. (2005). Language and meaning: Data collection in qualitative research. *Journal of Counselling Psychology*, *52*(2), 137. Doi: 10.1037/0022-0167.52.2.137

Probst, H., (2012). Burnout in therapy radiographers in the United Kingdom. *British Journal of Radiology*, 85 (1017), (pp760-765).

Probst, H., & Griffiths, S. (2007). Retaining therapy radiographers: What's so special about us? *Journal of Radiotherapy in Practice*, *6*, 21-32. Doi: 10.1017/S1460396907005043

Probst, H., & Griffiths, S. (2009). Job satisfaction of therapy radiographers in the UK: Results of a phase I qualitative study. *Radiography*, *15*(2), 146-157. Doi: 10.1016/j.radi.2008.02.003

Randall, R., Griffiths, A., & Cox, T. (2005). Evaluating organizational stress-management interventions using adapted study designs. *European Journal of Work and Organizational Psychology*, *14*(1), 23-41. Doi: 10.1080/13594320444000209

Randall, R., Cox, T., & Griffiths, A. (2007). Participants' accounts of a stress management intervention. *Human Relations*, *60*(8), 1181-1209. Doi: 10.1177/0018726707081660

Reigeluth, C.M., & Frick, T.W. (1999). Formative research: A methodology for creating and improving design theories. In C.M. Reigeluth (Ed.). *Instructional design theories and models: A new paradigm of instructional theory*, New Jersey: Lawrence Erlbaum

Riley, S., Schouten, W., & Cahill, S. (2003). Exploring the dynamics of subjectivity and power between researcher and researched. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research 4*(2).

Roopnarain, A., (2011). *Exploring the perceptions of radiation therapists in South Africa.* Unpublished Honours Thesis University of the Witwatersrand

Rothmann, S., (2003). Burnout and engagement: A South African perspective. *SA Journal of Industrial Psychology*, *29*(4), 16-25.

Ruotsalainen, J., Serra, C., Marine, A., & Verbeek, J. (2008). Systematic review of interventions for reducing occupational stress in health care workers. *Scandinavian journal of work, environment & health*, 169-178. Doi: 146.141.1.80

Saksvik, P. O., Nytro, K., Dahl-Jorgensen, C., & Mikkelsen, A. (2002). A process evaluation of individual and organizational occupational stress and health interventions. *Work & Stress*, *16*(1), 37-57. Doi: 10.1080/02678370110118744

Saksvik, P. O., Tvedt, S. D., Nytro, K., Andersen, G. R., Andersen, T. K., Buvik, M. P., & Torvatn, H. (2007). Developing criteria for healthy organizational change. *Work & Stress*, *21*(3), 243-263. Doi: 10.1080/02678370701685707

Schaufeli, W. B., & Greenglass, E. R. (2001). Introduction to special issue on burnout and health, *Psychology & Health*, *16*(5), 501-510.

Schaufeli, W. B., (2004). The future of occupational health psychology. *Applied Psychology*, *53*(4), 502-517.

Schaufeli, W. B., & Buunk, B. P. (2003). Burnout: An overview of 25 years of research and theorizing In M. J. Schabracq, J. A. M. Winnbust and C. L. Cooper (Eds.). *The handbook of work and health psychology*, (pp. 383-425). United Kingdom: John Wiley and Sons LTD

Schurink, E., (2009). Qualitative research design as tool for trustworthy research. *Journal of Public Administration: Special Issue 2*, *44*, 803-823.

Seale, C., & Silverman, D. (1997). Ensuring rigour in qualitative research. *The European Journal of Public Health*, *7*(4), 379-384.

Semmer, N., (2003). Job stress interventions and the organization of work. In J. Quick & L. Tetrick (Eds.). *A handbook of occupational health psychology* (pp. 325-353). Washington, DC: American Psychological Association.

Shenton, A. K., (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for information*, *22*(2), 63-75.

Sherman, A. C., Edwards, D., Simonton, S., & Metha, P. (2006). Caregiver stress and burnout in an oncology unit. *Palliative and supportive care*, 4, 65-81. Doi: 10.1017/S1478951506060081

Shirom., A (2010). Employee burnout and health: Current knowledge and future research paths. In J. Houdmont & S. Leka (Eds.). *Contemporary occupational health psychology: Global perspectives on research and practice.* (pp. 59- 77). United Kingdom: Wiley- Blackwell.

Spielberger., C. D, Vagg., P. R. and Wasala., C.F. (2003). Occupational stress: Job pressures and lack of support. In L. E. Quick & J. C. Tetrick (Eds.). *Handbook of occupational health psychology*. (pp. 185-201). Washington DC: American Psychological association.

Tetrick. J. C., & Quick. L. E., (2003). Prevention at work: public health in occupational settings. In L. E. Quick & J. C. Tetrick (Eds.). *Handbook of occupational health psychology.* (pp. 3-19). Washington DC: American Psychological Association

Tracy, S. J., (2010). Qualitative quality: Eight "big-tent" criteria for excellent qualitative research. *Qualitative inquiry*, *16*(10), 837-851. Doi: 10.1177/1077800410383121

Vakola, M., & Nikolaou, I., (2005). Attitudes towards organisational change: what is the role of employees' stress and commitment? *Employee Relations,* 27, 160-174. Doi: 10.1108/01425450510572685

Von Bertalanffy, L., (1950). An outline of general system theory. *British Journal for the Philosophy of science*.134-165

Weiner, B. J., (2009). A theory of organizational readiness for change. *Implement Science*, *4*(1), 67. Doi: 10.1186/1748-5908-4-67

Willig, C. (2008). *Introducing Qualitative research in psychology: Adventures in theory and method*. New York: Open University Press

Willig, C. (2001). *Introducing qualitative research in psychology: Adventures in theory and method*. Berkshire: Open University Press.

Wood, B. D., & Killion, J. B. (2006). Burnout among healthcare professionals. *Radiology management*, 29(6), 30-4.

Appendix A: Hospital Permission Letter

SCHOOL OF HUMAN & COMMUNITY DEVELOPMENT

FACULTY OF HUMANITIES

UNIVERSITY OF THE WITWATERSRAND

Private Bag 3, WITS, 2050

Tel: (011) 717 4500 Fax: (011) 717 4559

Hospital permission letter

Dear hospital representative

Hello, my name is Arthee Roopnarain and I am conducting research for the purposes of obtaining a degree (Masters in Research Psychology) at the University of the Witwatersrand. Under the supervision of Professor Brendon Barnes this research aims to identify recommendations for an intervention aimed at reducing burnout among radiation therapists in South Africa. This study will also aim to understand the likely motivations and constraints in taking part in the above mentioned intervention. I would like to invite staff members from the radiation therapy department within your hospital to participate in this study.

Should you agree to grant permission for your staff of radiation therapists to partake in this study, they will be required to partake in three visits. Visit one will consist of an interview pertaining to the prevalence of current coping strategies employed by your staff. Visit two will consist of a presentation of the intervention which will aim to reduce burnout experienced at the workplace. Recommendations will be explained and this session will be facilitated by the researcher. Session three will consist of an interview which will be conducted by the researcher. The interview will be tape recorded. All the visits should take approximately 1 hour or longer respectively to complete. These sessions will not take place during work hours. An appropriate place at the radiation therapy department will be utilized for all visits.

Participation of your staff of radiation therapists is completely voluntary, and they will not be advantaged or disadvantaged in any way by choosing to take part in this study. The staff may leave the interview if they feel uncomfortable and it will not be held against them. While questions are asked about their personal circumstances and work-related experiences, no identifying information, such as their names or I.D. numbers, will be asked for. Real names will not be used instead pseudonyms will be utilized and this will ensure anonymity when the research report is written up. No one will have access to the tapes and transcripts (written version of the interview) from this study besides my supervisor and myself and this will

ensure your confidentiality. Tapes and transcripts will be stored in a secure location at the University of Witwatersrand and destroyed once the study is complete.

An information sheet and two consent forms will be issued to all interested radiation therapists. A separate question in the consent form will ask for permission to quote some of the answers directly provided by the radiation therapists during the interview. Any information that might potentially identify your staff or their particular working environment will be removed. Responses will only be looked at in relation to all other responses and the staff of radiation therapists as well as other interested hospital staff will be able to obtain feedback about the findings of the study as a whole. To obtain feedback, you can either contact the researcher directly (please see contact details below) and a summary of the research will be provided. Lastly contact details for both the South African Depression and Anxiety group as well as the Emthonjeni Centre at the University of Witwatersrand will be provided should any of the radiation therapists require assistance with regard to dealing with any issues that may arise after the completion of the study.

Thank you for considering granting permission for the staff of radiation therapists at your hospital/ department to take part in this study. Your permission will be greatly appreciated.

Kind regards.

Arthee Roopnarain (Student- Masters Research Psychology)
School of Human and Community Development
Discipline of Psychology
Wits
Private bag 3
2050
Email address: artheeroopnarain@yahoo.com
Cell: 084-730-2829

Supervisor's details

Professor Brendon Barnes
School of Human and Community Development
Discipline of Psychology
Wits
Private bag 3
2050
Tel: +27 11 717 8333
Fax: +27 11 717 4559
Email address: brendon.barnes@wits.ac

Appendix B: Participant Information Sheet

SCHOOL OF HUMAN & COMMUNITY DEVELOPMENT

FACULTY OF HUMANITIES

UNIVERSITY OF THE WITWATERSRAND

Private Bag 3, WITS, 2050

Tel: (011) 717 4500 Fax: (011) 717 4559

Information Sheet

Dear participant

Hello, my name is Arthee Roopnarain and I am conducting research for the purposes of obtaining a degree (Masters in Research Psychology) at the University of the Witwatersrand. I would like to invite you to participate in a study that aims to reduce burnout among radiation therapists in South Africa. More specifically, I will ask you a few questions pertaining to your current coping strategies used to reduce burnout, will ask you to try a few behaviours two weeks and ask you a few more questions four weeks later. Each of these sessions will take no longer than one hour each.

Participation is completely voluntary, and you will not be advantaged or disadvantaged in any way by choosing to take part in this study. You can leave the interview if you feel uncomfortable and it will not be held against you. While questions are asked about your personal circumstances and work-related experiences, no identifying information, such as your name or I.D. number, will be asked. The interviews will be tape recorded because what you have to say is important to me. What you say to me might be included in a report. However, your responses will only be looked at in relation to all other responses and your real name will not be used instead I will use "fake" names in the report. No one will have access to the tapes and transcripts (written version of the interview) from this study besides my supervisor and myself. Tapes and transcripts will be stored in a secure location at the University of Witwatersrand and will be destroyed once the study is complete. There is a separate question in the consent form that asks for permission to quote some of your answers directly, provided any information that might potentially identify you or your particular working environment is removed. You will be able to obtain feedback about the findings of the study as a whole if you are interested. To obtain feedback, you can contact the researcher directly (please see contact details below) who will then provide you with a summary of the research. Should you require any assistance with regard to dealing with any issues that may

arise after the completion of this study please contact the South African Depression and Anxiety Group on 0800 567 567 (toll free) or the Emthonjeni Centre at the University of Witwatersrand on 011 717-4513, where trained counsellors can assist you.

Thank you for considering taking part in this study. Your participation will be greatly appreciated.

Kind regards.

Arthee Roopnarain (Student- Masters Research Psychology)
School of Human and Community Development
Discipline of Psychology
Wits
Private bag 3
2050
Email address: artheeroopnarain@yahoo.com
Cell: 084-730-2829

Supervisor's details

Professor Brendon Barnes
School of Human and Community Development
Discipline of Psychology
Wits
Private bag 3
2050
Tel: +27 11 717 8333
Fax: +27 11 717 4559
Email address: brendon.barnes@wits.ac.za

Appendix C: Participant Consent Form

SCHOOL OF HUMAN & COMMUNITY DEVELOPMENT

FACULTY OF HUMANITIES

UNIVERSITY OF THE WITWATERSRAND

Private Bag 3, WITS, 2050

Tel: (011) 717 4500 Fax: (011) 717 4559

Consent form

I have read and understood what this research is about, what is expected of me and that I agree to participate in this study.

In order to accurately portray the findings of the study, it may be useful to be able to quote certain answers or sections of your answers directly in your own words. Please indicate if you would be willing for your answers or sections of your answers to be quoted based on the conditions below:

- I am willing for my answers or sections of my answers to be quoted directly in the findings of the study.
- I understand that any information that might identify me or my working environment will not be included in these quotes.
- I understand that this would apply to all of the answers provided above in the interview.
- Based on this, I am willing for my answers or sections of my answers to be quoted directly.

I understand that:

- Taking part in this interview is my choice and my name will not be used.
- I may leave the sessions at any time and it will not be held against me in any way.
- I am aware that there are no benefits or risks inherent for taking part in this research.
- I chose to not answer any questions that I feel uncomfortable with.

Date: _____

Signature: _____

Contact Number: _____

Appendix D: Interview recording consent form – Participant

SCHOOL OF HUMAN & COMMUNITY DEVELOPMENT

FACULTY OF HUMANITIES

UNIVERSITY OF THE WITWATERSRAND

Private Bag 3, WITS, 2050

Tel: (011) 717 4500 Fax: (011) 717 4559

Interview recording consent form

I _____ consent to have two interviews with Arthee Roopnarain, for the purpose of a study on identifying recommendations for the feasibility and acceptability of a intervention aimed at reducing burnout in radiation therapists. These interviews will be tape recorded.

I understand that:

- The tapes and transcripts (the written version of the interview) will be placed in a safe and secure place at the University of the Witwatersrand and will be destroyed once the research is complete.
- The tapes and transcripts will only be seen, heard and processed by the researcher (Arthee Roopnarain) and her supervisor (Prof. Brendon Barnes).
- No real names or any other identifying information will be used in the transcripts or the research report. "Fake" names will be utilised during the writing up of the research report.
- My answers or sections of my answers will be quoted directly in the findings of the study.
- That this would apply to all of the answers provided above in the interview.

Date: _____

Signed: _____

Contact number:_____

Appendix E: Participant interview schedule- Initial visit

1. How old are you?
2. Do you work on a full time or part time basis?
3. How many years have you worked as a radiation therapist?
4. What work are you currently assigned to in your department?
5. Do you have a work allocation roster implemented at your department?
6. If you work on a treatment machine how many patients do you treat daily?
7. If you work at any other allocated area how many patients do you see daily?
8. What do you believe are some of the stressors that you experience in your workplace?
9. Do you experience burnout in your workplace?
10. Can you explain how you feel?
11. How do you cope with burnout?
12. What strategies do you use to cope with burnout?
13. Probe for specific recommendations in intervention (support groups, relaxation techniques, cultivating outside interests/ hobbies and spending quality time with family and friends)
14. What are your motivations for the above mentioned recommendations (if mentioned)?
15. What are the barriers/constraints for the above mentioned recommendations (if mentioned)?
16. How often would you say you use these strategies?
17. Do you think these strategies work? Why? Or why not?

Appendix F: Participant Schedule: Counselling Visit

Good day and welcome to today's program. I would firstly like to thank you all for making time to attend this program today and for participating in my study. This research aims to identify recommendations for an intervention aimed at reducing burnout among radiation therapists. Some recommendations will be highlighted today. I will be using a method called the Trials of Improved Practice or TIPs to do this. This method calls for researchers to review existing research on the experience of burnout among radiation therapists. After information from the first visits interview is analysed recommendations are able to be made which will form the basis of this intervention. The essence of TIPs includes focusing and reducing a large amount of recommendations into a smaller amount which then aims at changing behaviour within the given setting. These recommendations are then presented to you. However another distinct element of TIPs is the element of negotiation. I will negotiate these recommendations with you. You will be able to voice whether you can try the recommendation or not. We will also talk about what may be the constraints in trying the recommendation or the motivations inherent to the trying this recommendation. With respect to TIPs you are given a choice of recommendations and it is up to you which one or ones you may try out. In this sense you have the ability to choose what you think may work for you and we will discuss how you can try this recommendation individually and in a group.

The intervention will commence with a debriefing session on burnout. This will look at what burnout is and how it may manifest in healthcare workers. This will enable the radiation therapists to understand what the main concept of the intervention will be. Stress is a common experience especially in the work setting. As radiation therapists the experience of stress may be very common. Burnout is a type of prolonged response to chronic stressors within the job context. Burnout has been defined as a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment. Emotional exhaustion (EE) refers to feelings of being overextended and feeling drained and depleted of one's' emotional resources. Emotional exhaustion may result from work overload, work characteristics and personal conflict at work. Depersonalization refers to feelings of callous, cynical attitude and negative or excessive detached responses to other people or patients. Depersonalization usually develops in response to emotional exhaustion and represents the attitudinal aspect of burnout whereby the person attempts to put distance between themselves and the overwhelming demands of their job). Reduced personal accomplishment (PA) refers to a decrease in feelings of competency, productivity and efficiency at work. Feelings of inadequacy may result in feelings of failure (Maslach and Goldberg, 1998, Maslach et al, 2001).

Some of the possible symptoms or manifestations of burnout include the following:

Affective manifestation: depressed mood, quick mood changes, generally low spirits, being frustrated easily, irritable, oversensitive and hostility (Schaufeli and Bunnk, 2003).

Cognitive manifestation: feeling helpless and powerless. Work may feel like it has lost its meaning and you may feel trapped. Memory and attention may be poorer. A negative attitude

may be more apparent especially among patients. This may be noted as a lack of involvement, empathy, concern and understanding with respect to patients (Schaufeli and Bunnk, 2003).

Other manifestations of burnout which have been noted among oncology health care workers include: substance abuse, marital conflict, increased frequency of errors in clinical care, inappropriate temper outbursts, problems interacting with friends and colleagues, depression and anxiety disorders (Lyckholm, 2001).

Interventions aimed at reducing burnout are greatly needed. The first possible recommendation is that of a support group. It is recommended that you as staff from this oncology department met at regular intervals and formed a support group. A time and place feasible for all staff members should be chosen to ensure that all radiation therapists are available for the support group. You may decide how often want to meet as a group however pending on your workload and schedule it will be recommended to meet at least once or twice before the next visit. The main aim of a support group is to provide an environment which allows for the provision of a sympathetic and accepting forum in which to talk about work or work related issues can occur (Kushnir et al., 1997). The support group will also provide a supportive environment for increasing personal awareness, raising and talking about stressful issues at work, the promotion of problem solving and the expression of thoughts and feelings (Kushnir et al., 1997). The support group may enhance group cohesiveness and may also promote community building (Medland et al., 1997).

I will then negotiate with the group, in this case, about the possible recommendation of a support group. Firstly I will ask if they are willing to try forming a support group. Pending on their answer I will then probe about the possible barriers towards this recommendation. I will have to negotiate and make suggestions on when they could get together as a group and will have to listen to their answers. I will have to assess each barrier and try to negotiate a way to overcome it. Based on this I will have to negotiate an appropriate time and will have to negotiate what they can do within this group. I will explain what the benefits of a support group are (mentioned above) and will listen to the feedback given.)

The core component of stress management includes relaxation techniques. Everyone relaxes in different ways. Relaxation is needed as it promotes a decrease in heart rate, lowers the metabolism and decreases the rate of breathing, which helps to bring the body back to a healthier balance Bragard et al., (2005). Possible recommendations for relaxing may include finding a place in which one feels relaxed in which you are able to reflect on the day's occurrences and engaging in deep breathing exercises (Lyckholm, 2001).

(I will then have to follow the same negotiation technique used above, however this will be done on an individual basis. I will ask the participant if they would be willing to try this recommendation. I will talk then through how it will work (deep breathing or just finding a quite place to sit and reflect).Pending on their response I will ask about the barriers or constraints likely to occur in the implementation of this recommendation. I will have to listen to the barriers and try to offer solutions to them. I will have to negotiate when it would be possible to try this recommendation and listen to the responses from the participant. I will

make suggestions pending on the response e.g. maybe the participant has a child and will not have time to try relaxation, a possible suggestion I can make is that the child could spend some time with the spouse or a friend).

Cultivating interests and hobbies outside the scope of one's daily work is also a good way to main a healthy lifestyle as it is both refreshing and invigorating and is the next possible recommendation. This allows you to move away from their daily mode of listening and problem solving and to focus on something else other than work (their hobby or other interest.

The last possible recommendation is to spend quality time with family members and friends. This allows for the creation of a balance between personal and professional life (Lyckholm, 2001).

(I will have to firstly explain these recommendations and then follow the similar method as mentioned with the recommendation of relaxation. I will have to negotiate with each participant individually. Barriers will have to be acknowledged and I will have to offer suggestions to ameliorate them.).

These are only possible recommendations. It is up to you to choose which one or ones will be most acceptable to you. The aim of this program is to offer some recommendations and then negotiate with you about how you may try it. However in order to check if it may help in any way you are encouraged to try these recommendations. This will assist you and will help researchers decide on how to improve interventions.

I thank you for your time, feedback and patience and I encourage to what we have discussed today.

Appendix G: Participant interview schedule- Follow-up visit

Thank you for participating in my study. As mentioned previously, I am going to be asking you a few questions about the interventions which were recommended during my last visit (counselling visit) which was conducted on (DATE).

1. Did you try any of the recommendations?
2. If yes, why did you try these recommendations?
3. If no, why did you not try the recommendations?
4. What do you believe motivated you to try these recommendations (ask for each recommendation stated)?
5. What do you believe are the barriers/ constraints in trying these recommendations (ask for each recommendation stated)?
6. Were you able to perform these recommendations?
7. If yes, why did you perform these recommendations?
8. If no, why did you not perform the recommendations?
9. What do you believe motivated you to perform the recommendations (ask for each recommendation stated)?
10. Do you think that a reduction in stress or an improvement in health served as a possible motivator?
11. What do you believe are the barriers/ constraints in performing these recommendations (ask for each recommendation stated)?
12. Did you modify any of the chosen recommendations, How? Why?
13. What were your experiences of the intervention?
14. Would you continue with any of these recommendations in the future? Why or why not?
15. Would you advise other radiation therapists to partake in this intervention?
16. What would you recommend to researchers as possible recommendations for an intervention aimed at reducing burnout?
17. What were the unintended consequences, if any?
18. Was this intervention helpful? If yes, why. If no, why?
19. Do you have anything to add?

Thank you for your time and participation.

Appendix H: Ethics Form

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

HUMAN RESEARCH ETHICS COMMITTEE (SCHOOL OF HUMAN & COMMUNITY DEVELOPMENT

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: MRES/11/008 IH**
PROJECT TITLE:	The feasibility and acceptability of an intervention to reduce burnout in radiation therapists.
INVESTIGATORS	Arthee Roopnarain
DEPARTMENT	Psychology
DATE CONSIDERED	27/07/11
DECISION OF COMMITTEE*	Approved

This ethical clearance is valid for 2 years and may be renewed upon application

DATE: 01 August 2011

CHAIRPERSON
(Professor M. Lucas)

cc Supervisor: Prof. B Barnes
Psychology

DECLARATION OF INVESTIGATOR (S)

To be completed in duplicate and **one copy** returned to the Secretary, Room 100015, 10th floor, Senate House, University.

I/we fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure be contemplated from the research procedure, as approved, I/we undertake to submit a revised protocol to the Committee.

This ethical clearance will expire on 31 December 2013

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Appendix I: Transcription notation

The following signs of transcription notation were most frequently utilised:

1. A dot in parentheses **(.)** was indicative of a pause of 0.1 seconds or less;
2. Numbers in parentheses **(0.1)** was indicative of timed interval where the numbers represented the length of time in seconds (pauses of longer than 0.1 second);
3. Square brackets **[ ]** was indicative of overlap;
4. Underscoring ___ was indicative of stress being placed on the word;
5. Arrows ↑↓were indicative of an increase and decrease in pitch;
6. >< was indicative of speeding up;
7. < > was indicative of slowing down and double parentheses;
8. **(( ))** was indicative of the transcribers notes;

(Jefferson, 2004)