EVALUATING THE EFFECTIVENESS OF A SELF-CARE PROGRAMME FOR INTERVENTION IN BURNOUT AND COMPASSION FATIGUE AMONG NURSES WORKING IN CRITICAL CARE AREAS.

By

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DECLARATION

I declare that the thesis hereby submitted to the University of Limpopo, for the degree of Doctor of Philosophy in Psychology has not previously been submitted by me for a degree at this or any other university; that it is my work in design and in execution, and that all material contained herein has been duly acknowledged.

SIGNED: _____ _____

Initials and Surname: Date

DEDICATION

I dedicate this study to my children my late mother Mokgadi Francinah Mokoti for always believing in my capabilities and encouraged me to start this project.

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This study aimed at evaluating the effectiveness of a self-care programme for intervention in burnout and compassion fatigue among nurses working in critical care:

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ABSTRACT

This thesis is about evaluating the effectiveness of a self-care programme for intervention in burnout and compassion fatigue among nurses working in critical care areas. A convenient sampling method of all the nurses who work in the critical care areas as per the operational definition of terms for this study was used. A total of 154 nurses in a critical care area participated in this pre-post study, of which (n=83) were CTOP Nurses and (n=71) were Forensic Nurses. The nurses completed a biographical questionnaire, the Professional Quality of Life Scale (ProQOL R-IV), the Empathy Assessment Index Scale (EAI). Nurses were divided into groups of 6 to 10 people for focus group discussions on their work experiences.

The results of the current study indicated moderate to high levels of burnout and compassion fatigue occurring with high compassion satisfaction among the nurses. However, the mean burnout scores for CTOP nurses and Forensic nurses and details indicated lack of statistically significant difference post-intervention ($p>0.05$). The study utilized the Context Process Outcome (CPO) model as its framework. The proximal outcomes centred around safe holding, development of awareness and self-care. Intermediate outcomes consisted of drop in burnout and compassion fatigue and the distal outcomes showed increase in empathy and revived motivation to continue work in critical areas as well as a drop in distress and increase in compassion satisfaction.

The project was ground-breaking work of research with nurses in the critical areas with regards to health promotion with promise in healthier ways of caring for the carers and their empowerment and intervention outlook on the challenges around working environment stressors and interventions. Such work could in future benefit health care professionals by predicting possible decrease in their productivity by measuring other non-invasive constructs like empathy which has shown probable predictive power on development of burnout and compassion fatigue as well as improvement of satisfaction. Future research is recommended for inclusion of other health professions in such work and not only nurses, as well as doing evaluation that allows intermittent re-alignment whenever indicated in the process of intervention.

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CHAPTER 1

ORIENTATION OF THE STUDY

1.1 INTRODUCTION

Potential health consequences for health care workers, especially nurses who are directly involved in patient care is underemphasized. Nurses are exposed to numerous stressors ranging from work overload, helpless and very ill patients sometimes role clarity, and even lack of adequate infrastructure and equipment. According to El-Bar, Levy, Wald, and Biderman, (2013), such stressors may lead to loss of interest in going to work with subsequent reports of absenteeism, turnover, medical errors and aggressive behaviour among staff.

Tragic experiences of patients and families are one of the often-experienced situations for nurses. However, there is not enough research in the area of preventive interventions to minimize the negative impact of continuous emotional and psychological sharing of patients' traumatic events. Boyle (2011) adopted compassion fatigue as a concept of care workers being witness of hearing patients' trauma on a daily basis.

There are few programmes in existence to help carers (especially, nurses) to manage the vicarious trauma resulting from negative emotional and psychological consequences following sadness, grief, and loss of patients in their care and the impact that has on their families. By virtue of being "first responders", nurses are at risk of being emotionally and psychologically affected, as they continue with the provision of ongoing support and treatment in situations of highly traumatized patients and families (Sanso',Galiana, Oliver, Pascual, Sinclair & Benito, (2015). Nurses' role in caring for their patients and families might expose them to secondary trauma (Coetzee & Klopper, 2010; Hooper, Craig, Janvrin, Wetzel, & Reimels, (2010). With a perception that nursing is a calling, not many expect that their interaction with patients and families may result in emotional and psychological pain (Boyle, 2011; Walton & Alvarez, 2010). The core foundation to critical nursing practice is compassion or the emotional feeling that takes place when one is affected by the stress and pain of another. The nursing areas regarded as critical nursing

care include areas where nurses work with traumatized patients. Included in this list are nurses involved in the termination of pregnancy, oncology, forensic nursing services, HIV and Aids, which will be part of the population to cover in this study. The interest in the complexity of the process of emotional reactions of nurses in helping patients and their families has grown alongside the field of traumatology. Multiple stressors in relation to heavy workload and long working hours and patients' needs to deal with severe pains and traumatic injuries or even impending death due to terminal illnesses, may give rise to nurses experiencing emotional, psychological and physical symptoms of trauma (Lombardo & Eyre, 2011).

Awareness on occupational stress has increased worldwide over the past two decades. According to Sabin-Farrel and Turnip (2003), occupational health projects are high correlates for staff wellbeing as well as productivity and work performance. According to Solomon (2014) there is noted increase in Employee Wellness Services in South Africa in various organizations and that indicates awareness by managers of the impact of work stress and the consequences thereof on their staff.

Recent reports on reform in the health sector have unintentionally led to human resource challenges that changed the working conditions of the heath care workers. The cumulative impact of the health sector reform, which includes lack of resources, poor infrastructure and excessive job demands are likely to predispose health care professionals in the government sector to psychological stress (Lombardo & Eyre, 2011).

Burnout has to do with psychological distress resulting in poor job performance. Burnout can be further defined as 'a syndrome characterized by being emotionally tired, thus resulting in reduction of personal accomplishments (Stamm, 2010). Burnout may affect the health care worker's physical and mental capacity resulting in negative self-view and attitude towards work. As a result, eagerness and motivation of working diminishes, thereby compromising excellence in nursing service delivery (Stamm, 2010).

1.2 Definition of key concepts

1.2.1 Critical nursing care areas

Critical nursing care areas embody a large sort of environments and specialized care like intensive care, medical, surgical, trauma, heart-related, cardiothoracic wards and trauma centres within the emergency departments. Nursing care in these areas is defined by long periods of emotional and social stressors that nurses encounter whilst deployed in those areas of their job (Villanova, 2013). The nursing critical areas in this study will include trauma intensive care dealing with care of patients following Choice of Termination of Pregnancy (CTOP), forensic nurses dealing with sexual assault patients as well as midwives and nurses working with HIV/AIDS patients.

1.2.2 Burnout

Maslach, Wilmar and Leiter (2001) outline burnout as ‘a sustained response to the chronic work stress comprising three components: feeling tired emotionally, depersonalization and feeling inadequate in one’s job. The phenomenon takes through interpersonal and emotional engagement within the context of work. In this study, burnout will be defined as such in the context of nurses working in critical areas.

1.2.3 Compassion fatigue

Compassionate fatigue is defined as a mixture of physical, emotional, and religious fatigue associated with the care of patients experiencing significant mental and physical distress (Anewalt, 2009; Figley, 2005). Currently, there are several definitions of secondary injuries in the literature, but registered nurse Joinson (1992) first explained the concept in work with emergency department staff. She branded compassionate fatigue as another form of burnout due to a compassionate role. Compassion fatigue has been identified in heath cancer-care providers in different domains of caring. This fatigue might affect carers in any caring domain. The results might be the pain of their patients and families at a deeper and personal level.

In addition, compassion fatigue is defined by a gradual decrease in an individual's compassion over time (Lombardo & Eyre, 2011). It is commonly evident among professionals such as nurses, psychologists, social workers, medical personnel and first responders of victims of trauma. These individuals are likely to be at risk of showing several symptoms similar to the ones exhibited by those who have experienced direct trauma. Such a situation can have detrimental effects on individuals' professionalism and temperament and may result in poor performance.

Compassion fatigue has also been known as "secondary victimization" (Figley, 2002), "secondary traumatic stress" (Figley, 2002, 2005; Stamm, 2009; 2010), "vicarious traumatization" (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995), and "secondary survivor" (Remer & Elliott, 1988a; 1988b). Other related conditions are "rape-related family crisis" (Erickson, 1989; White & Rollins, 1981), and "proximity" effects on feminine partners of war veterans (Verbosky & Ryan, 1988). Compassion fatigue is also known as a form of burnout in some literature. However, in contrast to compassion fatigue, "burnout" results from being tired in a profession and workplace in distinction to being exposed to the stressors and trauma of clients. In this study, compassion fatigue is defined in similar terms and contexts.

1.2.4 Empathy

Empathy is the ability to grasp what people are feeling and thinking for effective follow up and positive therapeutic outcomes. It is a multi-dimensional method involving the thinking and feeling domains of making sense and naming the thoughts, feelings and emotional states of others (Bateson, 2011). A crucial skill in any caring profession is the ability to actively listen to patients.

According to Wagaman, Geiger, Shockley and Segal (2015), empathy comprises four components: emotive response, self-other awareness, perspective taking and emotion regulation. Optimal empathy involves all the above-mentioned domains.

Empathy is the first step to connect with emotive and psychological states of others; and depending on the situation, disposition, personality, emotion regulation ability, empathic response can be remodelled into either compassion or empathic distress. The result of

reacting with empathic distress, ends up in feeling flooded with own disappointment and sadness and inability to still be useful. The present study will define empathy and further add empathy distress to explain the impact of compassion fatigue on individuals working in critical care areas.

1.2.5 Self-care

According to Catlin-Rakoski (2012), self-care refers to behavioural actions taken by an individual to reduce the stress felt by patients being attended to in a health care setting. The behavioural actions embody learning and practicing skills that are necessary to attend to one's needs including personal, familial, emotional, and spiritual, whilst at identical time having a responsibility to attend to the needs of patients. Self-care will be defined in the same way for this study. The concepts: self-care programme, workshop, and debriefing will be used interchangeably in this study.

1.3 STATEMENT OF THE PROBLEM

The provision of critical health care has profound consequences on the emotional, psychological, and physical wellness of the caregivers. Recent research indicates that the health care sector is increasingly becoming aware of the negative emotional and psychological impact on healthcare providers due to witnessing the suffering and pain of their patients (Sheppard, 2015). The process of understanding the impact that caring for patients has on those who care is often limited even though they are in most cases partners in the context of patient care.

Group-based intervention programmes focus on reducing burnout by adjusting the health care worker's key performance areas in line with the actual work environment. An evaluation of the outcomes from these programmes gives a different picture as it brings minimal to change the environmental or work-related stressors and fails to address the underlying causes of burnout. Subsequently, this technique does little to reduce burnout (Zerach & Levin, 2015). The present study will thus focus on a different method for intervention which will address the context of the work environment for the nurse whilst highlighting the impact of their work on their well-being with regard to burnout and compassion fatigue,

The other limitation of such intervention programmes is that they are likely to generalize explanations for work environment issues without consideration of the fact that work stressors that may lead to burnout could differ from one working environment as compared to the other. In addition, the other critique of these interventions is on their procedures.

According to Wagaman, Geiger, Shockley, and Segal, (2015) most research on burnout and compassion fatigue attribute environmental factors as the causal factors, leaving a gap on factors related to the individual. Meanwhile the core skill of caring is empathy. Even though emotional sharing with patients may be attributed to burnout and compassion fatigue, the buffering impact has not been fully studied and explored to address the danger relating to the caring profession. The level of empathy a health care worker demonstrates may influence their ability to manage burnout and develop compassion fatigue.

Recent research on how burnout and compassion fatigue might affect organizations and individuals, calls for further research to investigate how much burnout and compassion fatigue is there, especially in specific areas with the highest levels of stress and come up with appropriate interventions (Hlongwane, 2015; Johnson, 2015; Sirsawy, Steinberg, & Raubenheimer, (2016).

Herron (2010) recommended longitudinal research on factors that add to the development of symptoms. Longitudinal studies have a component of continued provision of support, impact monitoring, and evaluation that assist in the redesigning of the process for more positive impact.

The current study envisages on embarking on a longitudinal intervention and evaluation process of the effectiveness of an integrated self-care programme for nurses. The study will also assist nurses to be aware of their level of burnout and risk of compassion fatigue because of the nature of their work and also look into whether empathy has a role to play in the control of burnout and development of compassion fatigue among nurses in these critical areas.

1.4 RESEARCH QUESTIONS

To achieve the aims of the study, the researcher wishes to answer the following research questions: -

- What is the prevalence of burnout and compassion fatigue among nurses in critical areas?
- What are demographic factors associated with nurses' development of burnout and compassion fatigue?
- Is there a difference in vulnerability to burnout and compassion fatigue with regards to different placements in nursing critical care areas?
- What are nurses' views of the intervention regarding burnout and compassion fatigue?
- Would the self-care intervention programme on the burnout and compassion fatigue have an effect on the levels of nurses' empathy towards their patients?
- What would be the effectiveness of the self-care intervention programme for burnout and compassion fatigue among nurses working in critical areas?
- Would there be new elements emerging from this population to enhance the existing intervention programmes?

1.5 PURPOSE OF THE STUDY

1.5.1 Aims of the study

The aim of this study was to assess the risk of burnout and compassion fatigue among nurses working in critical care and to evaluate the effectiveness of a self-care intervention programme.

1.5.2 Objectives of the study

The objectives of this study were:

- To assess the risk of burnout and compassion fatigue among nurses in critical care areas.

- To identify demographic risk factors associated with the nurses' development of burnout and compassion fatigue.
- To compare the vulnerability to burnout and compassion fatigue with regards to different placements in nursing critical care areas.
- To explore the views of nurses regarding the intervention on burnout and compassion fatigue.
- To assess the effect of burnout and compassion fatigue on the levels of nurses' empathy towards their patients.
- To evaluate the effectiveness of the self-care intervention programme for burnout and compassion fatigue among nurses working in critical care areas.
- To assess whether new elements that emerged from this population can enhance the existing intervention programmes.

1.5.3 Hypotheses

Research Hypotheses

The following were the hypotheses of the current study: -

- There is a high level of burnout and compassion fatigue among nurses working in critical care areas and that differs by demographics and placement areas for the nurses.
- The impact of the self-care programme will be different for nurses in different placement areas.
- There are unique factors, which will emerge from the study about the experiences and the impact of the self-care intervention program.
- The emerging unique factors from the experiences and the impact of self-care program will be different between nurses at different placements.
- There is a significant change in the nurses' empathy following experiences of burnout and compassion fatigue.
- Empathy is a significant predictor of lower levels of burnout, compassion fatigue and higher levels of compassion satisfaction.

Statistical hypotheses

For the quantitative phase the statistical hypotheses were used. This is a within subject intervention using pre and post-test measures of ProQol IV that has subscales of burnout,

compassion fatigue and compassion satisfaction and the Empathy scale. The hypothesis stated that if the self-care programme intervention that is applied is successful then the mean burnout and compassion fatigue taken at baseline will decrease ie change from high to low and compassion satisfaction and Empathy will increase by changing from low to high.

$H_0 : \mu_{CF1, BO1} = \mu_{CF2,BO2}$
$H_1 : \mu_{CF1, BO1} \leq \mu_{CF2, BO2}$ $\alpha = 0.05$

$H_0 : \mu_{CS1, EMP1} = \mu_{CS2, EMP2}$
$H_1 : \mu_{CS1, EMP1} \geq \mu_{CS2, EMP2}$ $\alpha = 0.05$

(BO= burnout; CF= Compassion fatigue; CS= Compassion Satisfaction and EMP= Empathy) The independent variable is the intervention by the self-care programme and the dependent variables are burnout, compassion fatigue and compassion satisfaction as well as the level of empathy.

1.6 SIGNIFICANCE OF THE STUDY

The researcher hopes that this study will generate longitudinal data to help in the understanding of the pain associated with caring for those experiencing psychological trauma whilst working in the critical care areas in the health sector. By drawing on the work and experiences of nurses, this study should offer insight into the existing gaps on the aspects needed for the development of effective care for the carer programmes in Limpopo, South Africa and beyond. Such exploration will yield results that should inspire cooperation toward building a comprehensive theory and research base to propagate work in the development of programmes for preventing and managing compassion fatigue. This may help to provide a resource manual for health care professionals working with trauma.

1.7 OUTLINE OF THE STUDY

Chapter 1 introduces the background of the study assessing the risk of burnout and compassion fatigue among nurses working in critical areas and to evaluate the effectiveness of a self-care intervention programme. It further outlined the statement of the problem, aims, objectives and hypotheses of the study as well as the study.

Chapter 2 deals with the relevant literature reviewed in relation to the study. Concepts such as the burnout, compassion fatigue as well as self-care will be explored thereby bringing up current research findings with regards to the concepts. Arguments on various risk factors of burnout and compassion fatigue among nurses will also be discussed. Included will also be the South African literature in relation to mental health of nurses in critical areas.

Chapter 3 outlines the theoretical perspectives relevant in this study as well as the theoretical framework guiding the study. Included, is the operational definition of concepts.

Chapter 4 deals with the methodological aspects used in the study. The rationale for the method chosen is provided, as well as the process of selecting the nurses for the study and the data collecting instruments used are discussed. Furthermore, the procedure followed, and the statistical methods employed are elaborated.

Chapter 5 deals with the presentation and interpretation of quantitative data, whilst Chapter 6 focuses on the presentation of the qualitative data.

Chapter 7 focuses on the discussion of the results in relation to the aims and objectives to include risk of burnout and compassion fatigue among the nurses in critical care areas and how such impact affects their levels of empathy and as measured before and after the intervention process as well as describing the results within CPO theoretical model evaluation of intervention programs used in this study and discussion of the validation process of the evaluation process for the intervention used in the study.

Chapter 8 focuses on the conclusions reached and how these can be placed within the theoretical framework for the study. The limitations and recommendations for future research are also addressed in this chapter.

1.8 CONCLUSION

This chapter introduced the background of the study assessing the risk of burnout and compassion fatigue among nurses working in critical areas and to evaluate the effectiveness of a self-care intervention programme. It further outlined the statement of the problem, aims, objectives and hypotheses of the study as well as the study. The following chapter will look at the literature review relevant to the study.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This section deals with the relevant literature reviewed in relation to the study. Concepts such as the burnout, compassion fatigue as well as self-care will be explored thereby bringing up current research findings with regards to the concepts. Arguments on various risk factors of burnout and compassion fatigue among nurses will also be discussed. Included will also be the South African literature in relation to mental health of nurses in critical areas.

2.2 Workplace stress

A specific form of occupational stress has become apparent among health care providers over the past two decades. Figley (2005), used the phrase “the cost of caring” to refer to this form of occupational stress. Figley describe this form of occupational stress as resulting from the aspects of the type of work the health care workers are expected to do. Figley called this compassion fatigue. According to Figley (2002), the idea of compassion fatigue has been around, considering that in 1992 it was utilized in a nursing magazine to explain how nurses have been worn down via way of means of the everyday sanatorium emergencies. In this magazine authors noted how and why practitioners lose their compassion as a result of their work with traumatized patients. Compassion fatigue is thus defined as enduring negative psychological consequence of caregivers’ exposure to traumatic experiences of the patients in care. In their work, health care professionals are witness to the emotional pain of their clients, their stories of trauma and abuse, and traumatic incidents emergencies and client’s suicide.

According to Holland (2008), there is research available about factors contributing to occupational stress experienced by health care workers but relatively little is known about how they sustain themselves from the high burn-out levels they experience as well as their risk of developing compassion fatigue.

Research has demonstrated that there is a number of factors (personal, social, psychological and occupational) impacting on the health, construction of self and understanding of the world of health care workers (Figley, 2005). This raise questions such as trying to find out whether health care workers' jobs are fulfilling, whether the pain they are experiencing as a result of their work is legitimate, where the pain is emanating from and whether they are contributing anything to their health care system.

According to Van der Walt (2013), conflicts between supervisors and colleagues have also been seen as a cause of burnout. Kluger, Townend, and Laidlaw, (2003) found that improving interpersonal relationships decreased burnout levels in Australian anaesthetists. Lack of job resources, most notably social support, has been noted in several studies as being linked to increased levels of burnout. A lack of feedback and autonomy relates to lack of resources. It has been found that when employees have little participation in decision-making, burnout levels are higher.

Burnout and stress have physical, psychological, and behavioural effects. The fight-or flight response is activated each time a person is stressed. The effect of long term increases in cortisol and disturbances in other hormonal pathways (hypothalamic pituitary-adrenal axis and renin angiotensin-aldosterone system) have been linked to most of the clinical symptoms seen in burnout. Increased risk of cardiovascular disease (hypertension and atherosclerosis), sleep disorders, immune compromise, gastrointestinal tract disturbances, fatigue and accelerated ageing, all correlate with increased levels of stress and burnout. Klimecki and Singer (2011) indicate that consequences of burnout are legion, including, but not restricted to, reduced productivity, absenteeism, poor turnover, and reduced patient safety. This leads to a knock-on effect within the institution to cut costs in order to counterbalance reduced productivity. The end result is a perpetual cycle, with the institution adding constraints, which, in turn, causes increased levels of stress and burnout in the medical professional. The increased rate of suicide, twice as high as that of the general public, and the elevated incidence of chemical dependence in doctors working in anaesthesia, is a major cause of concern (Klimecki & Singer, 2011).

The Professional Wellbeing Work Party (PWWP) of the World Federation of Societies of Anaesthesiologists (WFSA) found that 90% of its members considered burnout to be a significant problem, but only 14% had developed any kind of coping strategy with which to

manage it. In their literature review, Hyman, Michaels, Berry, Schildcrout, Mercaldo, and Weinger, (2011) concluded that given the prevalence of burnout, more can be achieved in terms of research on finding mitigating strategies to address the problem.

Maslach, Schaufeli, and Leiter, (2001) noted that stress results from a misfit between an individual and the job. Six areas were identified, namely the workload, control, reward, community, fairness, and values. Some of these areas are not under the physician's direct control, e.g. workload. This makes an important argument for the involvement of management in alleviating stress and burnout in the workplace, as a reduction in caseloads and after-hour calls can positively affect the situation.

In his study, burnout: when there is more fuel for fire, Van der Walt (2013) showed that changing working conditions, managing interpersonal conflict, improving work organisation (e.g. the presence of skilled assistance in theatre) have all reduced burnout scores in anaesthetists. Most studies have focused on educational interventions to enhance individuals' capacity to cope and thus improve burnout. Isaksson, Graneheim, Richter, Eisemann and Åström, (2008) carried out a cohort study on 185 doctors, followed by a self-reported assessment one year later, and found that short-term counselling could contribute to a reduction in emotional exhaustion. Similarly, Peterson et al. (2008) conducted a randomised controlled trial, with peer-support groups on 151 healthcare workers using a problem-based method, and found peer-support groups to be a useful and inexpensive way of decreasing stress and burnout in the workplace.

Part-time general practitioners were shown to have significantly fewer signs of burnout compared to full-time practitioners, so it was identified that taking a break from work also contributed to the reduction of burnout. A review article by Jackson in 1999 discussed the benefits of "self-care" which comprises physical activity, nutrition and meditation, which enhance well-being and resilience as a way of promoting longevity and stress relief. A population based survey on 474 physicians working in paediatric critical care, showed that routine exercise was associated with lower burnout scores. As mentioned above, the job environment or organisation must be seen as a modifiable factor. It has been found that organisational factors play a greater role than individual factors in causing burnout.

Research carried out on individual intervention than changing the organisation is thought to be cheaper and easier. People have far less control over stressors in the workplace compared to other aspects of their lives, so individual strategies alone cannot achieve their goals. Effective change occurs when both individual and organisational factors are addressed. (Demerouti, Nachreiner, & Schaufeli, 2001).

Naijar, Davis, Beck-Coon and Doebeling, (2009), acknowledge the anonymity from research in the difficulty differentiating compassion fatigue from similar conditions such as burn-out, posttraumatic stress disorder, vicarious trauma, secondary traumatization. However, Holland (2008) further postulates that most studies on managing compassion fatigue have been hampered by its ambiguous definition.

Moreover, Holland (2008) postulated that research in the past ten years has shifted from merely considering the victims of trauma to include an examination of the trauma experienced by those who provide assistance to the victims. Burn-out, secondary traumatization, post traumatic disorder and vicarious trauma are some of the negative psychological impact symptoms identified to be associated with the pain of helping (Holland, 2008).

Over the past ten years international and local studies have identified emotional, cognitive, and behavioural influences that may affect health care workers managing sensitive topics such as terminal illnesses, trauma and violence (Goldblatt, 2009). These encounters may evoke professionals' need to re-examine their personal life experiences and world views and identity related topics. For example, a lay counsellor or a nurse may feel incompetent to deal with sexual assault and may be reluctant to assist victims. Although sexual assault is considered one of the worldwide problems, the impact of intervention encounters with sexual assault survivors has been modestly studied and need further exploration (Goldblatt, 2009).

In addition, Elwood, Mott, Lohr, and Galovski, (2011), Salston and Figley (2003) recommended that the need for care providers to engage in adequate self-care and for healthcare agencies to limit caseloads, increase trauma specific supervision, increase clinician leave time, and provide opportunities for clinicians to receive mental health services should be emphasized.

2.3 Brief overview of stressors in nursing

Jimenez, Navia-Osorio, and Diaz, (2010) reported the types of stress in nursing students. They have identified stressors that are primarily related to clinical practice and often cause psychological symptoms. Using the Perceived Stress Scale, the researchers identified "Seeing the pain and suffering of patients and relatives (item 23), Being unable to provide appropriate responses to doctors', teachers', and patients' questions (item 19), [and] Not knowing how to help patients with bio-psychosocial problems (item 7)" as the most stressful aspect of clinical practice (Jimenez et al., 2009, p.446). There were also academic and external stressors, but they were perceived to be less painful than those encountered in clinical practice. The authors suggested "informing students about possible stressors associated with their profession, and introducing interventions to support development of professionalism, social skills, and coping capacity for clinical practice" (Jimenez et al., 2010, p. 442).

For practicing nurses, the occupational stressors reported in the literature included the protection of patient rights, informed consent for autonomy and treatment, staff pattern, advance care planning, and replacement decision, greater patient acuity, unpredictable and rewarding work area, power; increased paperwork, reduced management support words, role-based factors such as lack of power, role ambiguity, and role conflict (Ulrich, Krozek, Early, Ashlock, Africa, & Carman, (2010); Moustaka & Constantinidis, 2010). Career development and performance threats, including threats of dismissal, underestimation, and unclear prospects for promotion, have also been reported as disastrous (Moustaka & Constantinidis, 2010). According to Ulrich et al. (2010) young and inexperienced nurses were found to be more vulnerable to work-related stress.

2.4 Nursing roles, professional values and burnout susceptibility

Critical care nursing has been a subject of analysis interest within the developed countries. The research has targeted on a mixture of personal and work-related factors as attributes to burnout. A variety of studies have shown how both individual and environmental factors may account for burnout in nurses who work in critical care (Aiken, Cimiotti, Sloane, Smith, Flynn and Neff, (2011). Poncet, Toullic, Papazian, Kentish-Barnes, Timsit, Pochard & Azoulay, 2007; O'Neil, 2015; Hanson, 2015; Sirsawy et al, 2016).

According to these researchers, the personal factors like social support depleted coping skills, not being assertive, lack of stamina, life demands, and health issues are some of the factors accounting for burnout in nurses. In keeping with Stamm (2010), reduction of compassion fatigue (CF) and burnout (BO) may be a resultant of the standard of professional's work relations and satisfaction. Factors accounting for work-related aspects enclosed unmanageable and impossible workload, perennial exposure over long periods to death and dying, inadequate resources, and staffing, emotional demands from patients and families, constant conflict with colleagues and management. Several studies have recommended methods to scale back burnout among nurses and midwives which include support from the organization, greater flexibility in working times and support from colleagues, particularly after traumatic incidents (West et al 2017).

Kalliath and Morris (2002), Labib (2015), Van Mol et al., (2015) also found a negative correlation between burnout and organizational structures as well as the processes that determine work satisfaction. They hold that many factors that have an effect on compassion satisfaction among healthcare workers include workload, incentives, job security, organizational structure and relationship with supervisor. They additionally noted that job discontentment is the leading cause of healthcare workers leaving the profession. The correlational statistics between compassion satisfaction (CS) and burnout and between compassion satisfaction and compassion fatigue confirms that a rise of BO or CF might overwhelm the professionals' sense of effectiveness and forestall them from experiencing CS (Hinderer et al., 2014).

2.5 The impact of work environment on nurses

The nature of nurses' job needs them to be frequently exposed to empathically demanding situations. This makes them to be at danger for emotional exhaustion at the least levels of their work (Bush 2009, Baum, 2016). Compassion fatigue is common in many specialties of the nursing profession like hospice nurses, oncology and trauma nurses (Poncet et al., (2007). Previous studies 0n Compassion fatigue and burnout: Prevalence among nurses have reported that nurses and midwives operating in obstetrics and gynaecology, physicians working in the clinics, staff in the community-based mental health services, trauma treatment therapists and emergency nurses and hospital and residential care nurses have symptoms of burnout (BO) and compassion fatigue (CF).

The everyday work lifetime of nurses is characterized by the empathic engagement with patients and their families. Bush (2009) stated that “each time you heal someone you expose a chunk of yourself, at some point, you need healing” (p. 109). The fatigue that comes from the continual giving of oneself while not correctly healing, might result in leaving the caring profession prematurely (Hlongwane, 2015; Chung, 2015; Sheppard, 2015).

2.6 Personal cost of caring

Although there is a significant body of research on the effects on carers working in critical care in the developed world, much less is known about the impact on carers in the rest of the world. In particular, relatively little is known about the impact of caring for individuals and families in countries with high prevalence of trauma (physical and psychosocial) and other associated illnesses. The body of research in the developed world is ambiguous. The general assumption is that anyone working in a critical care centre is at risk of burnout or will experience burnout. This is not the case (Fernando & Consedine (2014).

A number of studies with a range of health carers in critical care, including nurses, social workers, and physicians, have demonstrated a relatively low level of burnout. On the other hand, a greater number of studies have shown high levels of burnout among health carers in critical care. Another point to consider is whether health carers from one type of critical care unit experience more burnout than those caring for patients with other serious diseases, such as cancer (Coetzee, & Laschinger, 2018). This is pertinent to the palliative care environment. Again, the findings are not unanimous.

According to several studies conducted in the United States, healthcare professionals believed that caring for AIDS patients was more stressful than caring for patients with other serious illnesses. However, in some studies conducted in other parts of the world, such as Australia, Germany, Italy, and the United Kingdom, AIDS health care workers have burnout more than health care workers working in areas such as oncology and geriatrics. In contrast to these findings, Kleiber, Enzmann, and Gusy, B, (1995) comparing health workers in Aids and non-Aids fields found no effect of occupational group (medical v/s psychosocial) on burnout, however those in Aids health care were less burnt out than workers in cancer care

or geriatrics. Catalan, Burgess, Pergami, Hulme, Gazzard, and Phillips, (1996) put some stress on the majority of AIDS workers, as shown by high scores on at least one subscale of the Maslach Burnout Inventory (MBI). I discovered what I had experienced. In their sample, Aids workers were found to be five times more likely than oncology workers to score high on MBI with doctors scoring higher on depersonalization than nurses. More recently Hayter (1999) studied burnout in HIV care nurses and found that 66% had moderate or high burnout on Emotional Exhaustion or Personal Accomplishment of the MBI. Sherman (2000) carried out a qualitative study among nurses working with Aids patients. Sherman found that insight into the development of the relationship between nurses and their patients with HIV/AIDS and lessons in supporting them was enriching those caregiving relationships.

Furthermore, many studies for instance, Kiosses et al. (2016) and Fernando & Consedine (2014) on burnout, compassion fatigue and self-care of carers have recommended that caring for self-course remains available to all helping professions curriculum as an elective module with the goal find one or more self-care activities that are meaningful to each practitioner in this quest they hopefully learn to appreciate the uniqueness of both the activities and of each the pain of helping (Stanny, 2012). In addition to personal gain, self-care can help care-givers model self-care behaviours that are desirable for others. According to Kompier and Cooper (1999), research is needed to determine the impact of interventions on stress, burnout, and work engagement in South Africa.

South Africa, like any other developing country is faced with a chronic shortage of health care workers and a growing need for skilled staff (Martin, 2009). This results in excessive pressure placed on the already exhausted existing staff whose capacity to cope with exposure to clients' trauma in a healthy way is compromised. Thus, Bath and Higson-Smith (2009), postulated that the personal pain of helping is a key issue facing the provider offering critical service to individuals suffering as a result of various life trauma experiences. Similarly, employers are faced with a challenge of looking after employees who care for trauma victims on a daily basis and in various difficult conditions.

2.7 Empathy in clinical practice

Clinical empathy is an integral part of quality care and is associated with improved patient satisfaction, adherence to treatment, and reduced malpractice complaints. It has been suggested that in contrast to models of ‘‘detached concern,’’ health care workers who attempt to understand what their patient is feeling and communicate their concern achieve a number of valuable outcomes for their patients and for themselves (Halpern, 2003).

Empathy in health care is challenging though, because health care workers are dealing with the most emotionally distressing situations–illness, dying, suffering in every form–and such situations would normally make an empathic person anxious, perhaps too anxious to be helpful (Halpern, 2012). This painful reality may take its toll on these individuals and can lead to compassion fatigue, burn out, professional distress and result in a low sense of accomplishment and severe emotional exhaustion (Gleichgerrcht & Decety, 2013).

A study conducted by Dyrbye, Massie, Eacker, Harper, Power, Durning, and Shanafelt, (2010) reported a high prevalence of stress in medical students and a diminished altruistic attitude. Importantly, students suffering from personal stress were more prone to fraudulent clinical behaviour. This study is a clear example of the types of important questions that may be raised regarding interpersonal relationships, empathy, and compassionate behavioural relationships. More importantly, it suggests that empathy is not free.

Empirical studies examining the components of clinical empathy are essential to understand why some studies have shown reduced empathy between medical schools and residents (Hojat, Vergare, Maxwell, Brainard, Herrine, Isenberg, and Gonnella, (2009) Neumanl. 2011). Another important reason to investigate the underlying factors that contribute to the clinical empathy and possibly associated emotional dysfunction of health professionals is to develop educational interventions for students (Stepien & Baernstein, 2006; Benbassat & Baumal, 2004).

Gleinchgerrcht and Decety (2013) investigated the way age, years of experience as a medical practitioner, and individual dispositions, including empathy, personal distress, alexithymia, and altruistic behaviour, moderate compassion satisfaction and compassion

fatigue in a large number of practicing physicians. These opposite processes result from helping others and are intrinsic properties of physicians' professional quality of life.

Despite the well-recognized critical importance of empathy in clinical and care-giving settings for both patients and health care practitioners, a number of studies suggest that practitioners may experience difficulties with inter-subjective transactions with their patients and that empathy declines during their engagement with patients (Halpern, 2012; Hojat, Mangione, Nasca. Rattner, Erdman, Gonnella, & Magee 2004). The contributing factors for such empathy reduction are likely to be complex and multifaceted. They require empirical studies with health care practitioners to identify these factors which individuals are most vulnerable to empathy reduction and associated maladaptive outcomes such as compassion fatigue and burnout.

2.8 Methods of intervention

Programs have been developed to train health care workers in a variety of techniques including interpersonal and social skills, assertiveness training and time management in dealing with burnout (Wierderhold, Cipresso, Pizzioli, Wierderhold & Riva, 2018). There have been two primary approaches to intervention to reduce burnout and compassion fatigue among health care workers; namely: trying to change the health care worker and trying to change the working environment. The first approach has been prominent in both research and practice. This could be perhaps due to a belief that burnout is caused by personal issues or assumption that it is easier to change the individual than change the organization (Maslach & Leiter, 2007 and Makikangas & Kinnune, 2016) hese programs focus on the development of coping skills for the health worker that help them to deal with the stress leading to burnout.

Group based intervention programs also focus on reducing burnout by adjusting the health care worker's goals and expectations to match the actual work environment. These do little to change the environmental/work related stressors and do not address the underlying causes of burnout (West, Wantz, Shalongo, Campbell, Berger, Cole, & Cellitti, 2017).

According to Solomon (2014), interventions are being implemented to manage compassionate fatigue, including providing caregivers with personalized coping strategies and empowering health care managers and policy makers increase. Some results question the effectiveness of some of these interventions. For example, in paediatric emergency nurses, supervisory or reporting time did not appear to affect caregiver stress levels (Meadors & Lamson, 2008) (Pickett, Brennan, Greenberg, Licht, & Worrell, (1994). Therefore, it is necessary to investigate the areas of influence of these interventions.

Solomon (2014) in his research about the evaluation of the helpfulness of coping strategies for compassion fatigue, found that all strategies put self-care and self- reflection or introspection on top of the list of preferable coping strategies, in answering the question "what the nurses' perceptions of the helpfulness of the strategies are used among them in coping with compassion fatigue. Debriefing and developing supportive professional relationships were also evaluated as very helpful. Solomon (2014) argued that the information in his research can serve a good starting point to develop nurses coping strategies with compassion fatigue.

Use of variable strategies seems more desirable to ensure sustainable outcomes. Interventions like psychoeducation and Mindfulness-based Stress Reduction (MBSR) programme, as seen in some of the selected studies by Solomon, combine a number of coping strategies to form a compact programme. The use of life coaches by Rivers et al. (2011) even though not necessarily know much about nurses' work environment and experiences, do help the nurses in other aspects of life where more work–personal life balance proved to show improvements in the nurses' resilience.

Maytum, Heiman, and Garwick, 2004) also discussed the nurses' indication that a work–personal life balance is essential in managing compassion fatigue. In discussing their findings, Maytum et. al., (2004) attributed the similarity in the pattern of coping strategies to the fact that all their nurses cared for children with chronic conditions who required the care of nurses in different roles and from various settings. The finding suggests that nurses' experiences of compassion fatigue are similar across the spectrum of nursing specialities, leading to similar coping responses and strategies.

Previous studies have reported nurses themselves indicating that past experiences have helped them cope with subsequent episodes of compassion fatigue (Maytum et al., 2004, Yoder 2010). In their study of paediatric acute care nurses, Cook, Mott, Lawrence, Jablonski, Grady, Norton, and Connor, (2012) found out that the nurses' experience level was critical to their process of coping (p. 11). Hinds, Srivastava, Randall, and Green, ((1994) found that the coping process of newly graduated inexperienced nurses with stress differs from that of nurses who have had one year or more work experience.

The other limitations of such intervention programs is that they tend to seek out universal solutions for work environment issues without taking into account the significant variety of stressors that may lead to burnout and the uniqueness of stressors that appear in one working environment as compared to the other.

Therefore, a universal solution to burnout that identifies the specific cause of burnout in a particular material and allows material stakeholders to design interventions based on the occurrence of these material specific burnouts requires a framework that is not provided. Therefore, Halsnesleben, Osburn and Mumford (2010), argue that action research provides such a methodology and shows how it can be applied in the workplace to combat burnout and compassion fatigue.

It is from the above background that the researcher is embarking on the research project aimed at evaluating an integrated self-care programme to assist health care workers to be aware of their level of burn-out and risk of compassion fatigue as a result of the nature of their work.

2.8.1 Self-care as a method of intervention

Self-care is imperative to personal health, sustenance to continue to care for others, and professional growth. Most studies review stressors common to nurses and the importance of practicing self-care to combat stress and promote health in practice. According to Blum (2014) the evolution of self-care initiative for health care workers starts by discussing the needs assessment, the health impact, description and strategies, self-care activities, and monitoring.

Health and mental health practitioners frequently work with individuals and families who have been exposed to trauma in their lives, in some cases multiple traumas (e.g., cancer patients, survivors of child abuse, survivors of domestic violence, torture survivors who may also have experienced community violence and war trauma). However, significant trauma exposure is not limited to health and mental health professionals. In this study, the emphasis is on the experience of health and mental health professionals, although much of what follows may be relevant to other professionals as well.

Health and mental health therapists and the people they serve recognize their reactions when listening to traumatic clients and working with them, and those reactions and experiences are the treatment process and patient recovery. You will benefit from understanding how it affects and promotes or interferes with your customers. These reactions include counter-transference and subrogation traumatic reactions. Compensatory or secondary trauma involves changes in the rescuer's inner experience resulting from empathic involvement in the client's traumatic material.

The health or mental health professional may develop some symptoms that mirror the post-traumatic stress disorder (PTSD) or depression symptoms experienced by clients who were directly traumatized. Over time, professionals may be at risk of developing compassion fatigue (burnout or vicarious traumatic stress), such as when the sense of ineffectiveness is dominant, and the clinician's sense of efficacy is challenged. Burnout is a condition of feeling exhausted or worn out. Compassion fatigue is often seen as one of the costs of caring for those in emotional distress; this concept has been well developed by Figley (2005) and developed further (Stamm 2009, and Figley, 2008).

According to Maslach and Leiter, (2016), rather than being a onetime event, burnout is a form of compassion fatigue that develops as a result of gradual processes that build over time. It might be asked why busy health and mental health professionals who work with trauma survivors should spend their hard-to-find time understanding vicarious trauma, resilience, and self-care, especially if they are not able to use or supported in using work time to do so. At a basic level, it is because we matter and the quality of our lives matter, too. Health and mental health professionals are often oriented toward prioritizing the well-being of their clients or patients over themselves. They may feel guilty if they give priority to

themselves and their own needs. It is sobering, however, to examine what the alternative might be. When the healthcare professional is burnt out, that may have an impact on clients, colleagues/agency, family, friends, and on their own health and well-being. Professionals who do not examine or attend to these issues and take care of themselves effectively not only harm themselves (including possibly developing health and mental health problems) but are at risk of engaging in incompetent or unethical professional behaviour-perhaps not consciously, but they may be at risk.

In order to enhance their sense of well-being and sustain a high quality of work overtime, health and mental health professionals can benefit from being aware of risk factors that may contribute to developing compassion fatigue in the form of becoming burnt out or experiencing vicarious trauma reactions. They often lack the insight, knowledge, or energy to develop and sustain effective self-care strategies. They may also work in institutions or settings that do not emphasize, support, or promote healthy work environments or the well-being of staff (Maslasch & 2016).

2.9 Group Interventions at different levels of care

Research is necessary to determine the effects of interventions on stress, burnout and work engagement in South Africa. According to Kompier and Cooper (1999) there are three levels of intervention strategies at different levels of care which can be described as follows:

2.9.1 Intervention at primary level of care

Intervention at this level deals with modifying or eliminating workplace-specific stressors to make them more suitable for the individual's environment. The effectiveness and potential cost-effectiveness of primary-level interventions have not been rigorously assessed (Kompier & Cooper, 1999). There are many pre-emptive organization-based strategies to meet the high demand for work. This can include workplace redesign, flexible working hours, and goal setting. On the other hand, increased work resources (participatory management, increased social support, team building, etc.) ultimately lead to increased workplace involvement, but with little direct impact on burnout (Kompier & Cooper, 1999). Therefore, from a preventive point of view, it seems preferable to reduce employment rather than

create employment. Both strategies are considered in current research because they are located in the context of the care environment.

2.9.2 Intervention at secondary level of care

Secondary level interventions can focus on the individual, raise awareness, expand employee physical and psychological resources, minimize the harmful effects of stress, and manage stress more effectively. Stress management programs that use a cognitive-behavioral approach are effective in reducing stress responses, including burnout (Schaufeli & Enzmann, 1998; Schaufeli, Salanova, González-Romá, & Bakker, 2002).

2.9.3 Intervention at tertiary level of care

Tertiary level interventions are targeted at individuals, but their role is restorative rather than preventive. Kompier and Cooper (1999) have well-documented evidence that counselling is effective in improving the mental health of employees and is highly cost-effective in the form of reduced sick leave.

South Africa, like any other developing country is faced with a chronic shortage of health care workers and a growing need for skilled staff (Martin, 2009). This results in excessive pressure placed on the already exhausted existing staff whose capacity to cope with exposure to clients' trauma in a healthy way is compromised. Thus, Bath and Higson-Smith (2009), postulated that the personal pain of helping is a key issue facing the provider offering critical service to individuals suffering as a result of various life trauma experiences. Similarly, employers are faced with a challenge of looking after employees who care for trauma victims on a daily basis and in various difficult conditions. It is from the above-mentioned background that the researcher is embarking on the research project aimed at evaluating an integrated self-care programme to assist health care workers to be aware of their level of burn-out and risk of compassion fatigue as a result of the nature of their work. The programme integrates all the levels of care described above.

3. Conclusion

This chapter focused on the literature review around burnout, compassion fatigue and the related elements for intervention strategies as well as associated psychological constructs that may be at play to predict the development of such distress and thus find ways to control the predictor to deal with the impact of the predicted. The next chapter covers theoretical perspectives in the study construct and theoretical framework guiding the study.

CHAPTER 3

THEORETICAL FRAMEWORK

3.1 INTRODUCTION

This chapter will outline the theoretical perspectives relevant in this study as well as the theoretical framework guiding the study. Included will be the theoretical frameworks relevant to this study, such as, the perceived stress effect and the job demands-resources model (JDR), the empathic reaction model, compassion fatigue process Figley (2005) the compassion fatigue model (CFM) will be discussed. At the end the Context, Process and Outcome (CPO) model (Coetzee & Laschinger, 2018), which is the framework guiding the study will also be discussed.

3.2 THEORETICAL PERPECTIVES

3.2.1Stress effect and the job demands-resources model

The theoretical perspectives relevant in this study include the perceived stress effect and the job demands-resources model of (Demerouti, Bakker, Nachreiner, & Schaufeli, (2001). Considering the important role of work-home interference/home-work interference (WHI/HWI), its mediating role was additionally included to the analysis model. Stress may be a comparatively sophisticated and confusing psychological construct. It is conceptualized as a force exerted on an area. The force can damage the area depending on the load exerted. From the above perspective, stress is indicative of danger and preparation for defence. However, stress may be a supply ability motivating one to achieve. Contrary, stress may result in demoralization and reduce performance on difficult tasks.

3.2.2 Job demands-resources model

The Job-Demands-Resources model, or JDR model, is an occupational stress model in which stress is the response to an imbalance between the demands placed on an individual and the resources available to meet those demands. JDR has been introduced as an alternative to other employee well-being models, such as demand management models and labour-compensation imbalance models. Demerouti, et. al,(2001) claim that these models were "restricted to a specific limited set of predictors that may not be relevant to all jobs" (p.309). Therefore, the JDR includes a wide range of working conditions in the analysis of organizations and employees. Furthermore, instead of focusing solely on negative outcome variables (e.g., burnout, ill health, and repetitive strain) the JDR model includes both negative and positive indicators and outcomes of employee wellbeing.

3.2.3 Basic assumptions of the JD-R model

According to the JD-R model job demands include the physical, psychological, social, or organizational aspects of the job, which require sustained physical and/or psychological effort or skills. Therefore, they are associated with certain physiological and/or psychological costs. The model also makes a distinction between workplace resources and personal resources. Job resources particularly influence motivation or work engagement when job demands are high. This assumption is based on the premises of the conservation of resources (COR) theory. According to this theory, people are motivated to obtain, retain and protect their resources, because they are valuable. Hobfoll, Halbesleben, and Westman,(2018).

According to Hobfoll, Halbesleben, and Westman, (2018), the central assumption of the JD-R model is that job strain develops – irrespective of the type of job or occupation – when (certain) job demands are high and when (certain) job resources are limited. In contrast, work engagement is most likely when job resources are high (also in the face of high job demands).

3.3 The empathic reaction

Empathic reaction occurs when one feels for the other. It involves vicariously sharing the same feeling with the affected person by having concern for their hurt or trauma and a motivation to alleviate their suffering. Compassion fatigue thus becomes empathic distress underlying negative consequences of care-givers exposed to others' trauma experiences and suffering. Empathizing with another in their vulnerability due to some trauma, leads to strong feelings of distress and aversive emotions in the observer. This makes empathy an important phase of emotional responses that gives rise to compassion fatigue. The two components of empathic reactions include the positive and could go the other way when the empathizer is distressed by empathizing. The two forms of empathic reactions by Klimecki and Singer (2011) show positive feelings and good health on one hand and negative feelings with personal distress on the other.

Klimecki and Singer (2011) refer to compassion fatigue as empathic distress fatigue. They hold that caregivers go where it hurts as part of their expression of compassion, and often find themselves to have entered into places of pain, fear, confusion and anger. Such immersion leads to affective feeling of caring for those hurting with possible subsequent development of depressive symptoms. Empathy for the patient lies at the very root of compassion fatigue with a paradoxical implication of empathy becoming the main source of compassion fatigue. The distressed will experience negative empathy reactions. In this study low empathy will be expected to correlate with high compassion fatigue and burnout whilst effective intervention of dropping burnout and compassion fatigue will be expected to be mediated by restored elevated positive empathy and compassion satisfaction.

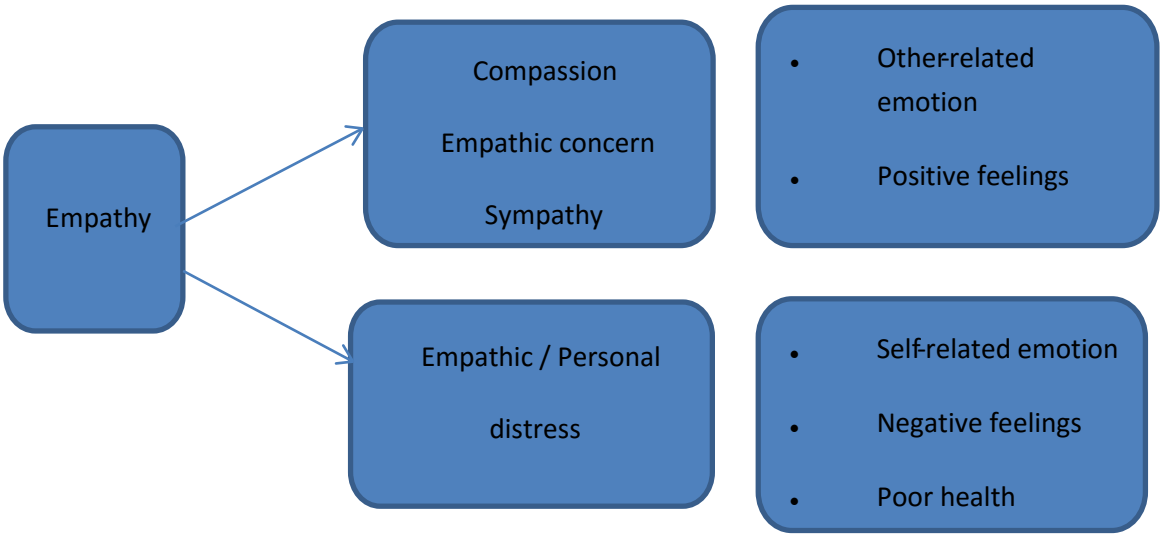


FIGURE 1: A schematic model representing two different forms that an empathic reaction can take (Klimecki & Singer, 2011).

3.4 Compassion fatigue process

The other theoretical frameworks guiding the study are the empathic reaction model, compassion fatigue process Figley (2005) and the compassion fatigue model (CFM) (Coetzee & Laschinger, 2018). The compassion fatigue model highlights that feelings for others is the cornerstone and therefore the rational motive of caring, and when it is added as an ingredient to helping, it helps to strengthen carer-patient relationship and effective patient care. The compassion fatigue concept by Figley (2005) outlines 10 basic forms through which the compassion fatigue takes place.

Nurses in their profession time and again engage with dying patients, observing some of them die with subsequent experiences of unrecognized grief as it is expected that they are on duty and not expected to have emotional effect at the place of work (Kostka, Borodzicz & Krzeminska, (2021). They also experience guilt concerning the losses they see and even have to lay to rest in the wards. For an adequate therapeutic relationship between the traumatized patient and the health care provider to develop, the emotional energy and the empathy are assumed to be involved. Thus, factors impacting on the event of stress reactions into compassion fatigue are necessary to appear within the etiological model to assist those predisposed to develop compassion fatigue. The etiological model gives us details on how to manage and prevent compassion fatigue (Figley 2005).

The key parts that result in compassion fatigue embody at the initial stage, exposure to suffering and concern that make a professional develop empathic response. This is followed by detachment and minimal sense of satisfaction resulting in lingering compassion stress and prolonged exposure to suffering and trauma recollection in addition to other life demands onto the strain leading to compassion fatigue. Compassion fatigue is believed to arise from failed survival strategy of a rescuer caretaking response that happens once one cannot recue or save the individual from harm leading to guilt and distress.

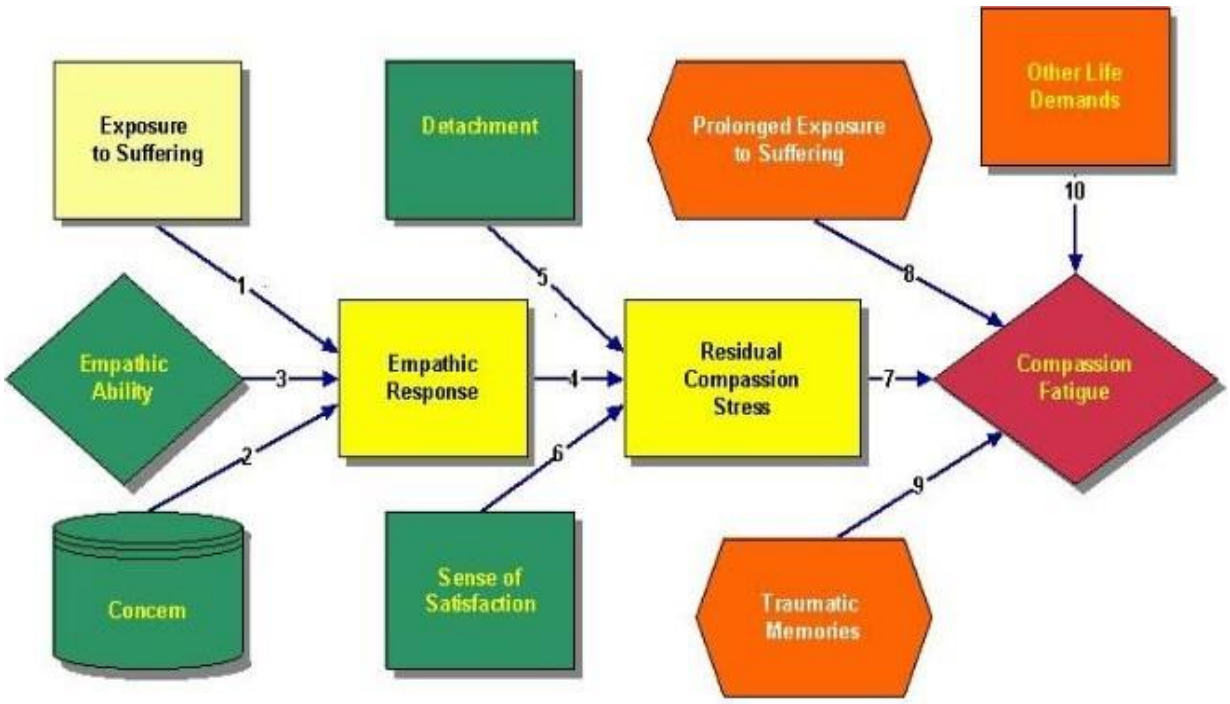


FIGURE 2: The compassion fatigue process (Figley, 2005)

3.5 The Compassion Fatigue Model (CFM)

The compassion fatigue model (CFM) is based on the assumptions that it is not empathy that puts nurses at risk of developing compassion fatigue, but rather a lack of resources, inadequate positive feedback, and the nurse's response to personal distress. It further alludes to the fact that if by acting on these three aspects, the risk of developing compassion fatigue can be addressed, which could improve the retention of compassionate and committed nurse workforce (Figley, 2005).

The CFM builds on the integration of six compassion fatigue models, namely: - Figley (2005, 2002) ‘s compassion stress and compassion fatigue model, the professional quality of life by Stamm (2010), the conceptual framework of compassion fatigue by Cootzee and Klopper (2010), Klimecki and Singer (2011) ‘s model, the transactional model of physician compassion by Fernando and Cosedine (2014) and the professional and compassion model by (Geoffrion, Lanctôt, Marchand, Boyer, & Guay, 2015).

According to Figley (2005, 2002), empathy and emotional energy are required as a basis to connect with clients and respond to client’s pain. The process is explained by exposure to stress (client needing help), cognitive appraisal of the client’s stressful situation, applying survival strategies (rescuing, protecting and providing for the client). The survival strategies could either be adaptive or maladaptive. The psychological adaptive strategies include care, empathy and devotion while the social aspect includes responsibility, nurturing and preservation. The psychological maladaptive strategies on the other hand include burden, depletion and self- concern while the social aspect includes resentment, neglect and rejection. The conceptual framework of compassion fatigue on the other hand describes the development of compassion fatigue as being progressive and cumulative.

This model has identified physical, clinical, patient, and family factors within the environmental and institutional factors that explain a caregiver’s ability to provide compassion.

With the professional and compassion model, Geoffrion, Morselli, and Guay, (2015), identify work related stressors as primary traumatic stress, vicarious traumatic stress, and accountability stress, and includes professional identity as a subjective interpretive framework that interprets and gives meaning to work-related external stressors and modulates compassion fatigue.

3.5.1 Conservation of resources theory (COR)

According to the COR people value resources, they work to require resources they do not have, they retain those resources that they possess, they protect resources that are threatened, and they foster resources by ensuring that their resources can be put to their best use. The COR theory include two major principles and several secondary corollaries.

The principles are that “resource loss id disproportionately more salient than is resource gain” and that “people must invest resources in order to protect against resource loss, recover from losses, and gain resources.

The COR principles and corollaries will be applied in the Compassion Fatigue Model (CFM) to show how the balance of resources influence the aetiology of either compassion fatigue or compassion satisfaction. The object of focus (other or self) and the processing mode (experiential or propositional) of each focus will also be applied to the CFM to show how empathy and stress appraisal influence the aetiology of either compassion fatigue or compassion satisfaction.

3.5.2 Integrative compassion fatigue model (CFM)

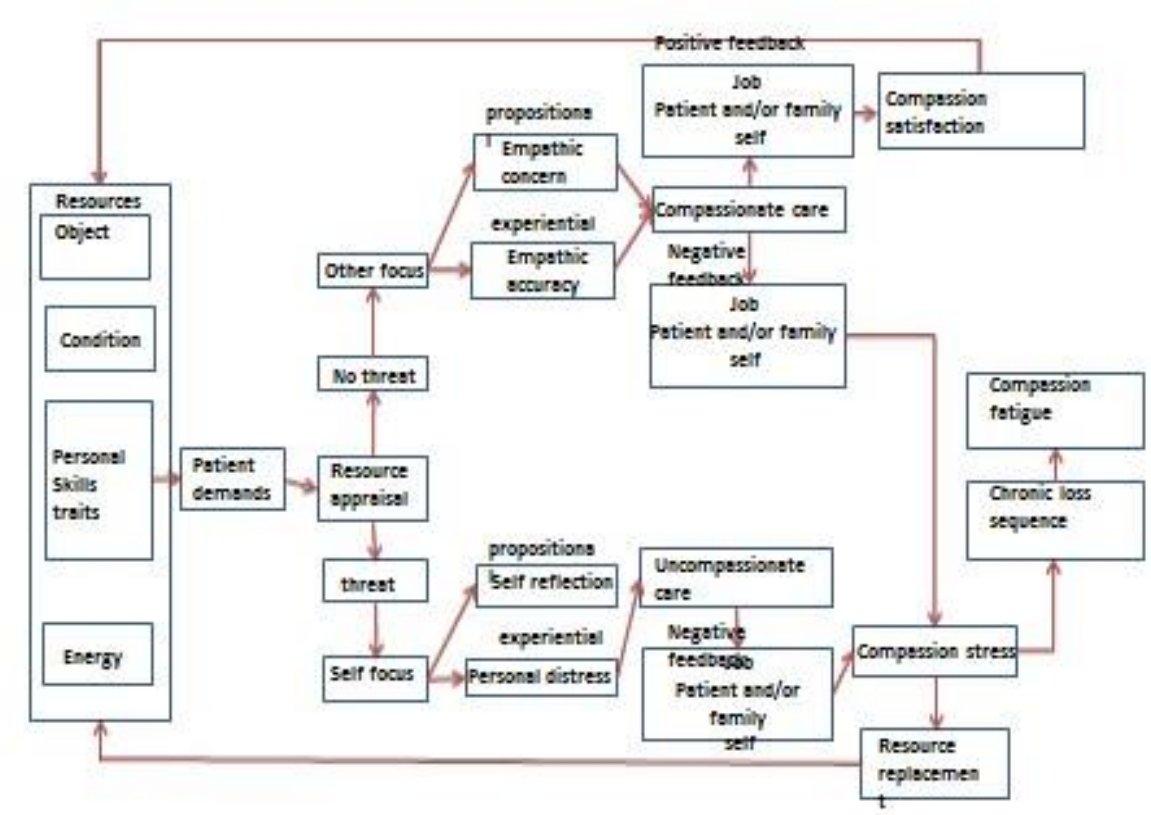


FIGURE 3: Compassion Fatigue Model (Coetzee & Laschinger, 2017)

3.6 THEORETICAL FRAMEWORK

3.6.1 Context, Process, and Outcome model (CPO)

The theoretical framework guiding this study was the Context, Process, and Outcome model (CPO) for organizational health interventions (OHIs) by Fridrich, Jenny and Bauer, (2015). The rationale for choosing the CPO model was due to the fact that the model falls within the list of models usually utilised for the evaluation of complex interventions which encompass design and development of health service interventions (Bradley, Wiles. Kinmont, Mant & Gantley,1999; Fridrich, Jenny & Bauer, 2015; Lehman, Brauchli & Bauer, 2019). Complex interventions allow utilization of triangulated use of intervention methods to validate the outcomes. These types of interventions usually lack clear theoretical basis as they are more pragmatic and thus lack generalizability (Bradley et.al 1999). Thus, this study utilised CPO to contextualise it theoretically. The CPO allowed the researcher to bring-in components of evaluation encompassing the context, process and impact of implementation on the outcome (final product) uses the triangulation method.

The study looked into the role that the context played as a cornerstone for potential problems of the participants. This was achieved through the baseline data collection of the background information about participants' places of work and how that impacts on them. This process was followed by workshop activities that were continuously adjusted to work towards envisaged goals. According to Lehman, Brauchli and Bauer (2019) comprehensive analysis of the intervention process and its impact on the outcomes is required to understand when, why and under what circumstances these intervention works, thus integrating Lehman, Brauchli and Bauer (2019) 'goal pursuit' aspect of OHS in the CPO during the planning or design of the workshops (intervention program). The goal pursuit aspect stresses the motivational goal setting and volitional goal striving for envisaged outcomes through continuous assessment and integration of context in the implementation.

The CPO model assumes that changes in outcomes happen continuously as a result of the change process induced by the continuous implementation process. CPO model depicts evaluation of proximate, intermediate, and distal outcomes as a separate box of the CPO model. Thus, outcome evaluation should be considered not only as important element

where results of the change process are fed back into the organizational system at the end of the intervention; but also a continuous observation and assessment of change results accompanying the entire implementation and change process (Fridrich, Jenny & Bauer, 2015). Continuous measurement of proximal outcomes will indicate whether there is success or no success in the envisaged goals.

The CPO evaluation model proposes three intervention phases: - the preparation phase, the action cycle phase and the appropriation phase. It encompasses the sub-phase analysis, action planning, implementation and monitoring (Fig 4) (Nielsen & Randall, 2013).

For this study, the preparation phase included gathering organizational background information followed by impact assessment of possible burnout and compassion fatigue. The impact assessment also has an active intervention element which forms part of the second phase (action planning). Such impact assessment does not only serve to generate information but also have active intervention elements which might trigger small changes, such as increased awareness, readiness for change or sensibility for burnout/compassion fatigue issues. The third phase is named appropriation phase and comprises all activities needed to ensure the continuation, advancement, and diffusion of the change process triggered by the previous two phases (see Appendix G).

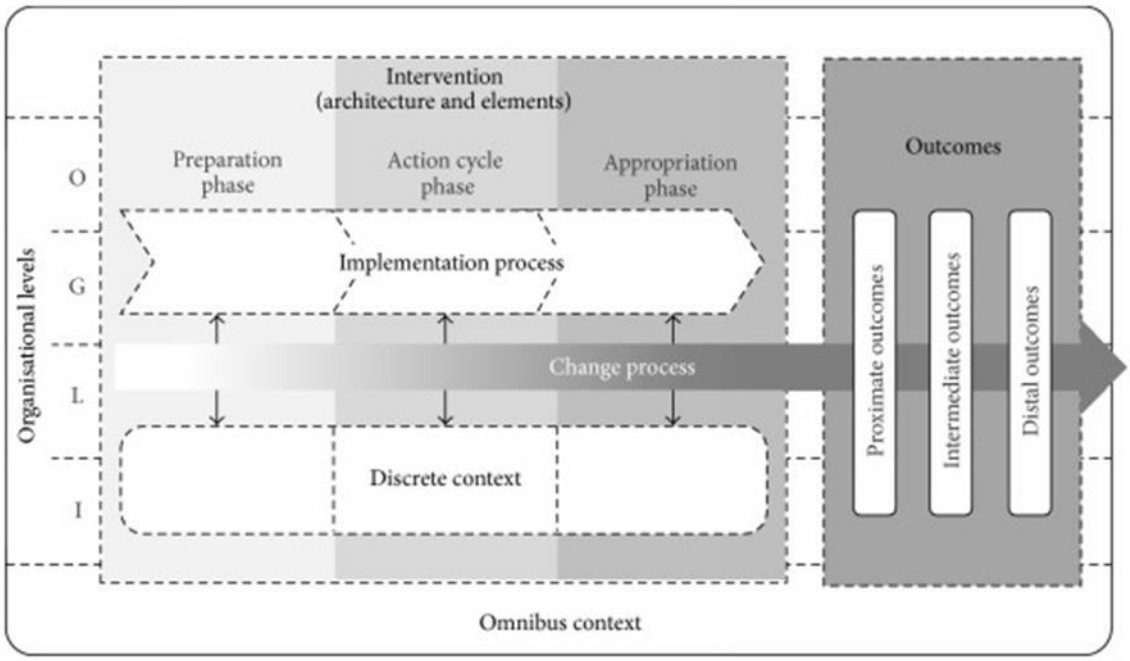


Figure 4: The context, process, and outcome (CPO) evaluation model.

The implementation phase included use of ProQol (pre- test), EAI, debriefing workshops and presentations. This was done with the aim to determine the number of participants, how to recruit and reach the participants, number of workshops planned, number of sessions or days of workshops and activities, participation in intervention, assessments, defining goals, establishing rapport, raising of shared problem awareness, empowerment, monitoring and controlling, anchoring of change and multilevel collaboration (see Appendix G).

The CPO evaluation model defines change process as all intended and unintended dynamics triggered by the implementation process leading in the organization and its members. (Fridrich, Jenny & Bauer, 2015).

The change process in this study was carried out through psycho-education presentations and raising awareness of the impact of the nature of the participants' work (see Appendix G).

The CPO model utilizes the following three outcome categories: - proximate outcomes, intermediate outcomes, and distal outcomes. Proximate outcomes often also labelled as

immediate, initial or short-term outcomes or first level outcomes, for example, refer to individual skills and collective capacities, change process as well as quick-wins in the form of minor but instant structural changes (Fridrich, Jenny & Bauer, (2015).

Observations and post-test assessment as well as focus group discussions formed part of assessment of the proximate outcomes of the intervention. The outcomes were deduced from structural and strategic modifications such as adapting the workshop program, ground rules and checking the participants' well-being. The information was also coded from information about change in attitudes of managers and participants, insight into the pain of helping and sharing during the focus groups

Team climate, healthy work resources and practices, collective general resistance resources, adequate general and mental health and resilience of participants formed part of the intermediate outcomes assessment. Included were healthy employees with efficacy beliefs, trust, positive emotions, and healthy work engagements, commitments, customer satisfaction as well as individual and collective sense of coherence (see Appendix G)

3.7 Conclusion

This chapter outlined the theoretical perspectives which the researcher looked at as a way of assisting in the selection of the theoretical framework guiding the study. The chapter also dealt with the empathy and compassion fatigue processes as relating to the study and chosen theoretical framework for the study.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 INTRODUCTION

This chapter deals with the methodological aspects used in the study. The rationale for the method chosen is provided, as well as the process of selecting the nurses for the study and the data collecting instruments used are discussed. Furthermore, the procedure followed, and the statistical methods employed are elaborated.

4.2 Research Design

The study used both qualitative and quantitative methods within the mixed concurrent triangulation design. Such a design entails that both qualitative and quantitative methods were engaged concurrently through triangulation to work towards the outcome reached in the study. The study utilised both methods concurrently without domination by either method as there was a need for continued use of data from one phase to the other using either method to further the process into the next phase. Such a process provided data validation across the phases where the two methods were interchanged.

The rationale for use of the two methods is that the qualitative data provided in-depth information on the participants' experiences of their work environment and the quantitative data provided the baseline data of their levels of burnout and compassion fatigue measures and post intervention data on the constructs. The triangulation of the methods was necessary to validate the measures from the quantitative phase with the expressed experiences of the participants from the qualitative phase.

The paradigm used in the study

Following the philosophy of the utilisation of a research paradigm critical in the process of conducting research, to define the relevant nature of knowledge

(epistemology) and the nature of reality (ontology); the study followed constructivist/interpretivist paradigm which utilised mixed methods of qualitative and quantitative designs.

The constructivist or interpretivists approaches to research have the intention of understanding 'the world of human experience' Cohen & Manion, 1994). They tend to rely upon the participants' views of a situation being studied (Creswell, 2003) and recognises the impact on the research of their own background and experiences.

They do not generally begin with a theory (like positivists) rather they generate or inductively develop a theory or pattern of meanings throughout the research process. They rely on qualitative data collection and analysis of both quantitative and qualitative methods (mixed methods). Quantitative data may be utilised in a way which supports or expands the qualitative data.

4.2.1 The quantitative phase

The single-subject experimental design was used in the quantitative phase of this study to generate pre-test/baseline and post-test data. The process of single-subject design involved the stages of data collection for assessment; establishment of intervention goals and specific outcomes; provision of intervention; and evaluating progress. This process had direct parallels to the structure of the single-subject design, which depended on identifying target problems, taking pre-intervention measures, providing intervention, taking additional measures and making decisions about the efficacy of the intervention.

The single-subject design envisaged in this study was the A-B-A type of design. This type of design builds on the basic single-subject design A-B that has a baseline phase with repeated measurements and intervention phase continuing the same time. The A-B-A builds on the A-B design by integrating a post-treatment follow-up that would typically include repeated measures. According to Brink (1993), the single-subject design has three components; namely: repeated measurement, baseline phase (A), and the treatment phase (B). The repeated measurement ensures that several threats of internal validity are controlled. The baseline phase (A) is the period in which the intervention to be evaluated is

not offered to the subject. During this phase, the intervention was implemented. The data from this phase was used to add important value to the qualitatively collected data to enhance validity of the outcomes from engagement of both methods.

A within subject intervention using pre and post-test measures of ProQol IV that has subscales of burnout, compassion fatigue and compassion satisfaction and the Empathy scale was used. The hypothesis stated that if the self-care programme intervention that is applied is successful, then, the mean burnout and compassion fatigue taken at baseline will decrease ie change from high to low and compassion satisfaction and Empathy will increase ie change from low to high.

$H_0 : \mu_{CF1, BO1} = \mu_{CF2,BO2}$
$H_1 : \mu_{CF1, BO1} \leq \mu_{CF2, BO2}$ $\alpha = 0.05$

$H_0 : \mu_{CS1, EMP1} = \mu_{CS2, EMP2}$
$H_1 : \mu_{CS1, EMP1} \geq \mu_{CS2, EMP2}$ $\alpha = 0.05$

(BO= burnout; CF= Compassion fatigue; CS= Compassion Satisfaction and EMP= Empathy)
The independent variable is the intervention by the self-care programme and the dependent variables are burnout, compassion fatigue and compassion satisfaction as well as the level of empathy.

4.2.2 The qualitative phase

Mouton and Marais (1996) maintain that qualitative research is sensitive to the human situation and thus involves an empathic dialogue with the nurses studied thereby providing both the contextual information as well as the rich insight into human behaviour. The qualitative phase on engaging participants in a dialogue, applied the phenomenological paradigm wherein the participants were made to give descriptions of their subjective experiences which are not considered as static but dynamically open ended developing processes and interpretations about their work environment. The method further involved workshops and focus group discussions and all these data collections methods were aimed at

obtaining valuable data necessary for triangulation of the qualitative and quantitative data.

4.3 Sampling

The population of the study comprised of the nurses in Limpopo Province employed by the Department of Health. This included nurses working in the Strategic Health Programme/Health Care dealing with traumatic incidences for CTOP, HIV/AIDS patients, sexually assaulted patients under the directorates of Maternal Health, Child and Women's Health, Youth and Adolescent Nutrition (MCWHN) and HIV/AIDS and STI (HAST). A convenient sampling method of all the nurses who work in the critical care areas as per the operational definition of terms for this study was used. There is an estimated total of about 2000 nurses in Limpopo Province, working in the critical care areas. The total number for a debriefing for this study was broken down as follows: In the area of termination of pregnancies (N = 105) and nurses working with Sexually Transmitted Infections, HIV and Aids and Sexual Assault Survivors (N = 95).

The sample size was determined as follows according to the sample size formula by (Naing Winn, & Rusli, 2006).

$$n = \frac{Z^2 P(1-P)}{e^2}$$

The total number of nurses in the province rotating in the areas affected is 2000. However, one hundred and ninety-one nurses attend debriefing sessions. The proportion of nurses in critical areas is 191/2000= 0.0955(9.6%).

Sample size: n= (1.96)2 (0.0955) (1-0.0955)/0.0025 = 132. The number of nurses per area is 132/3= 44 nurses per critical area. A sample size of 132 nurses was envisaged in the study with 44 nurses per critical area as outlined above. However, only 39 forensic nurses and 52 CTOP nurses attended the initial debriefing sessions. Similarly, 50 forensic nurses and 47 CTOP nurses attended the follow-up debriefing sessions. This means the sample size for the pre stage of the study was 89 nurses (forensic and CTOP) and 97 nurses (forensic and CTOP) for the post stage of the study.

4.4 Data Collection

Data was collected using a questionnaire with three sections viz. demographic data, the scale for burnout and compassion fatigue Professional Quality of Life Scale (PROQoL-RIV) Stamm (2009) for pre-test and post-test for the quantitative section and the Empathy Assessment Index (EAI) (Gerdes, Leitz, & Segal, (2011). Qualitative data was collected through observation during a workshop whereas focus group discussions were conducted as part of the intervention phase. Four focus group discussions were held per group.

Data on the working environment was collected before the workshops by interviewing the Heads of Directorate for the nurses related to work environment conditions and their views regarding the performance of their subordinates and whether there are any unique observable stressors. There was also a discussion on plans for the year around the number of debriefing sessions. For the nurses, data was collected in four phases using baseline (pre) assessment; debriefing workshop and application of an integrated intervention programme, post administration of scales; and focus group discussions.

4.4.1 Data collection instruments

For the quantitative phase, the following scales were used**:**

4.4.1.1 Biographical information (Appendix D)

The nurses were asked information on their work environment including age, gender, years of experience, qualifications and workload.

4.4.1.2 Professional Quality of Life Scale (ProQOL R-IV) (Appendix E)

The nurses completed the Professional Quality of Life Scale (ProQOL R-IV) Stamm (2009) and a socio-demographic questionnaire. The ProQOL R-IV comprises of 30 items scale that measure the job compassion fatigue, burnout, and compassion satisfaction. The questionnaire has a 5-point Likert scale ranging from 1 (Never) to 5 (Very Often). Stamm

(2009) reported the reliability of scores from the ProQOL as follows: 0.88 for Compassion Satisfaction, 0.75 for Burnout, and 0.81 for Compassion Fatigue. In the study, Cronbach alphas of scores from the ProQOL R-IV were as follows 0.79 for Compassion Satisfaction, 0.66 for Burnout, and 0.68 for Compassion Fatigue. The use of ProQol R-IV was based on the extensive utilisation of the instrument in South Africa for the measurement of burnout, compassion fatigue and compassion satisfaction in research for health professionals e.g. nurses in maternity, EMS and participants in health sector during COVID -19. This does show that the instrument has been tested for its validity by being tested on several South African groupings as shown in the thesis. (Jensen, Lund & Abrahams 2022; Maila, 2019 and Mashego, Nesengani, Ntuli & Wyatt, 2016).

4.4.1.3 Empathy Assessment Index Scale (EAI) (Appendix F)

The nurses also completed the EAI scale to assess their empathy levels. The EAI is a 22-item measure of both emotional and cognitive empathy using the operational definition in social cognitive neuroscience and developmental psychology (Gerdes, Leitz, & Segal, 2011). The scale measures five components of empathy, namely affective response, affective mentalising, self-other awareness, perspective-taking and emotion regulation. Each of these components is measured using four to five items each with a 6-point Likert-type scale ranging from never to always. Gerdes, Leitz, and Segal (2011) reported an internal consistency ranging from 0.68 to 0.83 and the test-retest reliability of 0.74 to 0.85 using factor analysis.

4.4.1.4 Qualitative phase:

Guiding questions for a semi-structured interview for managers (Appendix I)

Semi-structured interviews were conducted with Heads of different directorates about the working environment of the nurses.

Guiding questions for the focus groups: (Appendix H)

The nurses were divided into groups of 6 to 10 people for focus groups discussions on their work experiences. The groups were homogeneous in terms of the nurses' placements and

job description. The questions for discussions focused on the experiences of nurses working in the critical areas and their experiences before and after the intervention. An audio recorder and field notes were used to capture their responses.

Self- Care programme for intervention (Appendix G)

A schedule of workshop activities on self-care for the intervention programme was drawn.

4.5 Procedure

Appointments were made with the provincial directorates managing the nurses in the critical area units. This included the directorates of Maternal health, Child and Women's Health, Youth and Adolescent Nutrition (MCWHN) and HIV/AIDS and STI (HAST). Letters of invitation to the Head of directorates to participate in the study were sent out promptly. The letters included a section where managers were asked to give information about the background of the area of work of the nurses. Identified nurses from the different sections were invited to the self-care programme for intervention.

The invited nurses were nurses who have been working in the areas indicated for at least six months and have consented to participate in the self-care programme for intervention. The researcher, in starting with the process of the research explained the purpose of the research and the ethical considerations. Pre-test (baseline) was conducted on the first day of the workshop before any interaction was done to get the baseline performance on the different scales. The nurses were then exposed to the self-care programme for intervention as detailed in Appendix G.

The workshops were conducted in three phases of two separate blocks of three days each. Phases one and two were mainly about fact-finding and identifying aspects to focus upon for intervention (A); followed by engagement in self-care activities and plenary discussions (B), and information on the experiences of the nurses before the workshop and after being involved in the workshop activities (debriefing). At the end of phase two, the outcomes were documented. This include the three days' experiences, the observations made and nurses' understanding of the process so far, the experience of the impact of the activities as well as

what they thought could be done to enhance that impact. This information was consolidated as outcomes from phase one. The consolidated document served as a self-discovered programme which each participant took home to implement and practice.

The third phase took place in six months after the first two phases. The nurses began phase three with the post-test on the scale (A). The discussion and comparison of pre-test and post-test results was done with the nurses. Deduced changes in the potential risk for burnout and compassion fatigue following the implementation of the programme were discussed with the nurses. The nurses were debriefed to conclude the project (B). A manual for assisting nurses in dealing with their pain of care provision was developed.

4.6 Data analysis

4.6.1 Quantitative data analysis

For quantitative data, the Statistical Package for Social Sciences (SPSS version 22.0) was used for descriptive and inferential data. This included tests such as the ChiSquare, T-tests, ANOVA and multivariate regression analysis to compare various groups of nurses in terms of their risk of developing burnout and compassion fatigue using the pre and post evaluations data. This was applicable in determining the relationship between the development of burnout and compassion fatigue and the working areas as well as the demographic data.

4.6.2 Qualitative data analysis

Data was analysed qualitatively from the focus group discussions, interviews with the Heads of Directorates and the observation sessions. Qualitative data was coded into themes to describe nurses' experiences of their work, the observations and discussions of the nurses' understanding of the process, their experience of the impact of the activities as well as what they think could be done to enhance that impact. Pre and post evaluations results were compared following the planned integrated self-care programme to evaluate the effectiveness and possible moderating impact of the programme. The results helped in

yielding information on whether the intervention of the current study could serve as a mechanism for the reduction of possible psychopathology for health care workers.

The data was analysed through the interpretive phenomenological method. The primary aim of the interpretive phenomenological analysis is to give evidence of nurses 'making sense' of the phenomenon under investigation and at the same time document the researchers' perception (Pietkiewicz & Smith, 2014). Pietkiewicz and Smith (2014) identified a set of flexible guidelines to analyse data which will be adopted in this study:

- **Multiple reading and making notes:** Pietkiewicz and Smith (2014) describe this as an initial stage that involves reading the transcript several times to help the researcher immerse himself in the data and to elicit new insights. The researchers went through the whole and parts of the interview responses from the focus groups and see how they fit into the research questions. This involved taking note of the contradictions, taken-for-granted statements, vivid expressions, figures of speech and metaphors, repetitions, and gaps that emerge from the data. The researcher also looked into emerging patterns as well as the nature of responses concerning sentence construction including active or passive voice and choice of language. This was followed by combing the data to enable the researcher to immerse himself into the data.
- **Transforming notes into emerging themes:** This stage was aimed at transforming notes into emerging themes, the researcher made use of the notes made in the initial stage rather than the transcript (Pietkiewicz & Smith, 2014). During this stage elicited insights or meanings that were about the phenomena being studied were identified as emerging themes. The researcher identified emerging themes, coded the themes by using words or parts of words to flag ideas found in the transcript, and identify sub-themes and explore them in greater depth.
- **Seeking relationships and clustering themes:** This stage of analysis involved identifying the connection between emerging themes and grouping the themes according to conceptual similarities (Pietkiewicz & Smith, 2014). This stage enabled the researcher to identify the holistic context that informs the nurses' 'narrative of their experiences. The researcher extracted meaning from the data by developing categories to make sense of the data, looking into what pieces of information contradict the emerging ideas, or are missing or underdeveloped. This entailed noting what other

opinions to consider, as well as how the researcher's own biases influence the data collection and analysis process.

- **Writing up an interpretive phenomenological analysis:** The thorough analysis as described above led to the writing up of a narrative account of the study. This involved taking the themes identified, describing and giving examples with extracts from interviews, followed by analytic comments from the researcher (Pietkiewicz & Smith, 2014). This stage involved transforming the nurses' expression into expressions appropriate to the scientific discourse supporting the research (Larkin & Thompson, 2011).

4.7 Quality Criteria

4.7.1 Quantitative phase

In the quantitative phase, the scales with psychometric properties as indicated in the instrument section were used to show the reliability and validity of the instrument.

4.7.2 Qualitative phase

For the qualitative phase, the criteria used to ensure reliability and validity of the data included credibility; transferability; dependability; confirmability and triangulation of data sources by De Vos (2004) to ensure that the results of the study have scientific merit. These included data from the focus groups, observation during workshops and the interview sessions.

4.7.2.1 Credibility

Credibility ensures that the results of the research are believable from the perspective of the research nurses (De Vos, 2004). In this research, credibility was achieved by triangulating information from the questionnaires and interviews during focus group discussions. During the interviews and focus groups, the researcher ensured to build an atmosphere of free participation with confidentiality assured. The nurses signed the consent forms indicating that their participation is voluntary. This ensured that they were free to participate and

discussed challenges that they were facing and thereby making the intervention done on trusted disclosure and discussions.

4.7.2.2 Transferability

Transferability is about how safe it is to use the study findings in generalizing the same aspect understudy in different locations and settings (De Vos, 2004). The researcher fully described the context in which the study was carried out. The biographical questionnaires, as well as the interviews with the directorates and unit managers, were documented to inform other researchers and users of the findings.

4.7.2.3 Dependability

Dependability refers to the consistency and repeatability of the study findings (De Vos, 2004). The study findings of this research are measured by the standard in which the research is conducted, analysed and presented. Each process is reported in detail to enable the researcher to repeat the inquiry and to achieve similar results. The researcher can also account for any biases that may affect the results of the study. These include personal researcher bias, sampling bias and changes in the study setting.

4.7.2.4 Conformability of the study

Conformability refers to the degree to which the study findings could be confirmed, authenticated or validated by others (De Vos, 2004). The researcher recorded the procedures for checking the data collected. On completion of the study, the researcher conducted a data audit that examines the information collection and analysis procedures, and that makes judgments about the potential for bias or distortions. All this ensured that the outcomes of the study are genuine and can be validated by other researchers.

4.8. Ethical considerations

4.8.1 Permission

Permission to conduct this research was obtained from the following structures: Ethics committee of the University of Limpopo, Department of Health and Department of Health Research Committee to access the directorates relevant in the study and the hospitals in the province from which the nurses will be selected for the project. Consent to participate was sought from the nurses before commencement with the process of data collection. Ethical issues in terms participation were outlined to all nurses and observed by the researcher.

4.8.2 Informed consent

The informed consent form was provided to the nurses, detailing the purpose of the study, its aims and objectives as well as the significance of the study, which was explained to the nurses about their benefit for participating and how they will be protected from harm during the project. This also included consent for recording during focus groups. The nurses signed the form for consent before participating in the study.

4.8.3 Voluntary participation

The nurses were made aware of the voluntary participation to allow them to choose whether they wanted to participate in the study or not. They were also made aware of the freedom to choose to stop participating at any time during the study, should they wish to.

4.8.4 Anonymity and confidentiality

The information collected was treated with strict confidentiality. All the questionnaires were coded to ensure the anonymity of the nurses. The coding was done for purposes of comparison of nurses' performance and feedback at different stages of the study, and this was done in a way that the information cannot be used to identify the nurses. A record of the coding was kept by the researcher under lock for the duration of data collection and was discarded after the final collating of the research materials.

4.8.5 Restoration of respondents

Nurses who showed evidence of psychological distress which came out of participating in the study due to the nature of the study; were provided with necessary intervention in the form of debriefing. Further referrals were made to the psychologists in the province to assist with further management of those who showed intense levels of distress that could not be contained in the sessions provided. All necessary steps were taken to prevent any psychological harm, which might have result from the study.

4.9 Conclusion

This chapter presented a detailed research design and methodologies that were employed in the current study. The chapter covered the study design, methodology covering the sampling, data collection procedure, planned process for data analysis and ethical considerations. The following chapter (chapter 5) presents the findings of the study.

CHAPTER 5

FINDINGS FROM QUANTITATIVE PHASE OF STUDY

5.1 Introduction

In the previous chapter, the methodology used for the study is outlined. In this chapter, the results of the quantitative study are presented and interpreted. The main objectives of the quantitative study were:

- To assess the risk of burnout and compassion fatigue among nurses in critical care placements.
- To identify demographic factors associated with the nurses' development of burnout and compassion fatigue
- To compare the vulnerability to burnout and compassion fatigue with regards to different placements in nursing critical care areas.
- To assess the effect of burnout and compassion fatigue on the levels of nurses' empathy towards their patients
- And to evaluate the effectiveness of the self-care intervention programme for burnout and compassion fatigue among nurses working in critical areas.

The hypothesis tested included the impact of applying self-care intervention on burnout, compassion fatigue and compassion satisfaction as well as empathy. This was done also checking the role of demographics and different critical care area placements.

5.2 Demographic Characteristics of the nurses

A total of 154 nurses in a critical care area participated in this pre-post study, of which (n=83) were CTOP Nurses and (n=71) were Forensic Nurses. The majority (88%, n=135) were females and only (12%, n=12%) were males. The mean age of the nurses was 46.0±10.8 years range from 23 to 64 years. Almost half (48%, n=74) of the nurses were Married/Engaged/Cohabit, (35%, n=54) were unmarried and (17%, n=26) were

Widowed/Divorced. The detailed participant demographic characteristics are presented in Table 5.1 below.

Table 5.1: Demographic Characteristics of the nurses

	All (n=154)		p-value	CTOP Nurses (n=83)		p-value	Forensic Nurses (n=71)		p-value
	Pre-Test (n=71)	Post-Test (n=83)		Pre-Test (n=43)	Post-Test (n=40)		Pre-Test (n=28)	Post-Test (n=43)	
Gender									
Male	6(9)	13(16)	0.175	1(2)	1(3)	0.959	5(18)	12(28)	0.332
Female	65(62)	70(84)		42(98)	39(97)		23(82)	31(72)	
Age									
20-29	8(11)	10(12)	0.938	3(7	5(13)	0.466	5(18)	5(12)	0.219
30-39	11(16)	12(15)		6(14	8(20)		5(18)	4(9)	
40-49	18(23)	19(23)		13(30	7(18)		5(18)	12(28)	
50+	32(45)	41(49)		21(49	19(48)		11(39)	22(51)	
Unspecified	2(3)	1(1)		-	1(3)		2(7)	0(0)	
Marital status									
Single	27(38)	26(31)	0.676	20(47)	13(32)	0.412	8(29)	13(30)	0.980
Married/Engaged/Cohabit	33(47)	42(51)		17(40)	19(48)		15(54)	23(53)	
Widowed/Divorced	11(15)	15(18)		6(13))	8(20)		5(18)	7(16)	

5.3 Prevalence of Burnout and Compassion Fatigue & Compassion Satisfaction

Table 5.2 below, captures the details to show the overall mean burnout score, mean burnout scores for CTOP nurses and Forensic nurses and details that indicate lack of statistical significant difference post-intervention ($p>0.05$) implying that the hypothesis should not be rejected. Similarly, the overall mean compassion fatigue score, mean compassion fatigue score for CTOP nurses and Forensic nurses also did not show a statistically significant difference post-intervention ($p>0.05$) which also indicated non rejection of the hypothesis. .

The overall mean compassion satisfaction slightly increased post-intervention, however, the results was

not statistically significant (p>0.05) implying rejection of the null hypothesis. Interestingly, the mean compassion satisfaction score for CTOP nurses significantly increased post-intervention (22.1±6.1 versus 25.8±9.9; p<0.05) leading to the rejection of the null hypothesis, but for Forensic nurses, the mean compassion satisfaction score did not differ significantly post-intervention (p>0.05) meaning that the null hypothesis could not be rejected.

Table 5.2: Level of Burnout, Compassion Fatigue, Compassion Satisfaction and Empathy

	All (n=154)		p-values	**CTOP Nurses (n=83)**		p-values	**Forensic Nurses (n=71)**		p-values
	Pre-Test (n=)	Post-Test (n=)		Pre-Test (n=43)	Post-Test (n=40)		Pre-test (n=28)	Post-Test (n=43)	
Burnout									
Mean±SD	27.4±7.2	28.4±7.2	0.295	23.5±4.5	23.8±4.3	0.784	32.9±4.9	32.7±6.6	0.867
Low (22 or less)	18(25)	18(22)	0.527	17(40)	15(38)	0.849	1(4)	3(7)	0.522
Moderate (23 to 41)	52(73)	61(74)		26(60)	25(62)		26(92)	36(84)	
High (42 or more)	1(1)	4(5)		-	-		1(4)	4(9)	
Compassion Fatigue									
Mean±SD	40.7±6.7	40.3±6.4	0.731	40.8± 6.9	41± 6.5	0.912	40.5±6.5	39.7±6.4	0.622
Low (22 or less)	1(1)	1(1)	0.382	0(0)	1(2)	0.573	1(4)	0(0)	0.106
Moderate (23 to 41)	28(40)	42(51)		18(42)	17(43)		10(36)	25(58)	
High (42 or more)	42(59)	40(48)		25(58)	22(55)		17(61)	18(42)	
Compassion Satisfaction									
Mean±SD	23.6±6.6	25.7±8.8	0.089	22.1±6.1	25.8±9.9	0.046	25.7±6.9	25.7±7.7	0.982
Low (22 or less)	28(39)	32(39)	0.692	19(44)	16(40)	0.187	9(32)	16(37)	0.435
Moderate (23 to 41)	42(59)	48(58)		24(56)	21(53)		18(64)	27(63)	
High (42 or more)	1(2)	3(3)		0(0)	3(7)		1(4)	0(0)	

5.4. Demographic factors associated with Burnout and Compassion fatigue

Table 5.3 below present the demographic factors associated with Burnout and Compassion fatigue. There was no statistical significant association between gender, age, marital status, years of working experience and burnout ($p>0.05$) which means the null hypothesis that demographics and burnout can be associated was rejected.

However, female, those in the age group 40 years and older, forensic nurses, single and Married/Engaged/Cohabit, with 5 or more years of working experience were more likely recorded high burnout. A significant high proportion of forensic nurses experienced moderate to high burnout than CTO nurses (93% versus 61%, $p<0.05$).

There was no statistically significant association between gender, age, category of employees, marital status, years of work experience and compassion fatigue ($p>0.05$) pointing to the rejection of the null hypothesis that certain specific demographics were associated with the experience of compassion fatigue.

However, those in the age group 30-39 years, CTOP nurses, single and married/engaged/cohabit and with less than 5 years working experience were likely to experience compassion fatigue leading to non-rejection of the null hypothesis that these specific demographics do differ from the others in their experience of compassion fatigue.

Table 5.3: Factors associated with Burnout and Compassion Fatigue

	Burnout				Compassion fatigue			
	Low	Moderate	High	p-value	Low	Moderate	High	p-value
Gender								
Male	3(16)	16(84)	0(0)	0.453	0(0)	9(47)	10(53)	0.860
Female	33(24)	97(72)	5(4)		2(2)	61(45)	72(53)	
Age								
20-29	5(28)	13(72)	0(0)	0.206	1(6)	6(33)	11(61)	0.367
30-39	6(26)	17(74)	0(0)		0(0)	7(30)	16(70)	
40-49	9(24)	27(73)	1(3)		0(0)	21(57)	16(43)	
50+	16(22)	54(74)	3(4)		1(1)	34(47)	38(52)	
Unspecified	0(0)	2(67)	1(33)		0(0)	2(67)	1(33)	
Category of Employees								
CTOP Nurses	32(39)	51(61)	0(0)	<0.001	1(1)	35(42)	47(57)	0.662
Forensic Nurses	4(6)	62(87)	5(7)		1(2)	35(49)	35(49)	
Marital status								
Single	16(30)	35(65)	3(5)	0.384	1(2)	22(41)	31(57)	0.668
Married/Engaged/Cohabit	14(19)	58(78)	2(3)		1(1)	33(45)	40(54)	
Widowed	6(23)	20(77)	0(0)		0(0)	15(58)	11(42)	
Years of work experience								
<5	3(19)	13(81)	0(0)	0.930	0(0)	6(38)	10(63)	0.891
5-10	7(23)	23(74)	1(3)		0(0)	14(45)	17(55)	
10+	21(24)	63(72)	3(4)		1(1)	41(47)	45(52)	

5.5. Effect of burnout and compassion fatigue on the levels of nurses' empathy

Compassion satisfaction showed overall increase in the CTOP category with pre-test of (Mean=22.1) and post-test of (Mean=25.8); and for Forensic there was no difference in the pre and post-tests (Mean=25.7) in both cases. This is in line with West, Wantz, Campbell,

Berger, Cole, Seroskie and Cellitti (2017), in their study of the evaluation of compassion fatigue and resilience in nurses, as well as Kritz (2019) who found an increase in compassion satisfaction by 7.32%, decrease in burn-out by 20.83% and increased self-care habits in her study of evaluating the effects of an educational intervention on compassion fatigue in veteran affairs hospice staff.

The overall mean empathy score for the nurses significantly increased in line with the alternative hypothesis after intervention (77.6±12.8 versus 95.5±14.6, $p<0.05$) (See Table 5.4). Similarly, in line with the alternative hypothesis, analysis of categories of nurses also showed a significant increase in the mean empathy score post-intervention: CTOP Nurses (79.7±16.2 versus 97.2±17.2, $p<0.05$) and Forensic Nurses (71.7±13.7 versus 93.9±11.7; $p<0.05$). Noted are the significant increases in the different sub-items of the Empathy scale of: Affective response, Affective metalizing, Self-Other awareness, Perspective taking ($p<001$) (See Table 5.4) which are very key alertness indicators for people in the emotional-laden helping professions. Emotion regulation sub item for empathy show a different trend from other sub items for CTOP with a decrease after intervention (Mean= 14.2 to 13.6) and an increase for the Forensic group (Mean=12.7 to 13.3) with both not having statistical significance.

Table 5.4: Effect of burnout and compassion fatigue on empathy

	All (n=153)		p-value	**CTOP Nurses (n=82)**		p-value	**Forensic Nurses (n=71)**		p-value
	Pre-Test (n=71)	Post-Test (n=82)		Pre-Test (n=42)	Post-Test (n=40)		Pre-test (n=29)	Post-Test (n=42)	
Empathy Scale	77.6±12.8	95.5±14.6	<0.001	79.7±16.2	97.2±17.2	<0.001	71.7±13.7	93.9±11.7	<0.001
Affective Response	17.8±3.0	23.8±4.2	<0.001	18.5±2.8	24.3±4.3	<0.001	16.9±3.2	23.3±4.2	<0.001
Affective Metalizing	14.3±2.8	18.3±4.0	<0.001	15.1±2.4	18.9±4.1	<0.001	13.2±3.0	17.7±3.9	<0.001
Self-Other Awareness	14.0±2.9	17.6±3.9	<0.001	14.7±2.6	18.1±4.7	<0.001	13.0±3.1	17.1±3.1	<0.001

Perspective Taking	17.5±3.8	22.6±4.5	<0.001	18.7±3.2	22.7±4.9	<0.001	15.7±3.9	22.6±4.1	<0.001
Emotion Regulation	13.8±2.9	13.2±3.0	0.192	14.6±2.7	13.2±3.2	0.032	12.7±2.7	13.3±2.8	0.427

5.6 Discussion of the quantitative findings

The study demonstrated high burnout in all the categories of nurses in the study. There was high to moderate burnout in the CTOP group with (Mean=23.5) in the pre-test and the increase in the post test of (mean 23.8) in line with the alternative hypothesis. For the forensic nurses there was also low to high report of burnout (Mean=32.9) with a post-test decline of (mean= 32.7) leading to acceptance of alternative hypothesis. The prevalence of burnout in both groups showed increase and decrease for pre-test and post-test as stated above but the change in the levels of burnout for each category was not statistically significant (P>0,05). This means that burnout does occur in these categories of nurses and also tends to resist intervention as seen by the slight decrease to no decrease after intervention in the post test.

Similarly, there was prevalence of compassion fatigue noted in the two categories of nurses used in the study where CTOP showed increase in compassion fatigue from (mean= 40.8) to (mean=41) and in forensic a decrease from (Mean=40.5) to (Mean=39.7) pointing to the acceptance of the alternative hypothesis.

The demographic differences were noted where age group of 40 years and older, forensic nurses, single and Married/Engaged/Cohabit, with 5 or more years of working experience more likely recorded high burnout. An increase in compassion satisfaction although not statistically significant was noted for both groups overall and for CTOP and no change for Forensic. Compassion fatigue was likely among age group 30-39 years, CTOP nurses, single and married/engaged/cohabit and with less than 5 years working experience. Burnout was likely for 40-year-olds and older, forensic nurses, single and Married/Engaged/Cohabit and nurses, with 5 or more years of working experience.

The results show an increase in compassion satisfaction and empathy (including its sub items) following intervention in line with the alternative hypothesis. There is, however, indication of possible resistance to burnout and compassion fatigue among CTOP as compared to the Forensic nurses. The results further, indicated that there is prevalence of burnout among nurses working in these categories viz CTOP and Forensic sections as well as compassion fatigue and compassion satisfaction. The intervention conducted showed impact on the reduction of burnout slightly for Forensic nurses in line with the alternative hypothesis. There were, however, no significant differences for all categories following the intervention although some slight change was noted within Forensic nurses.

The prevalence of compassion fatigue was also noted in all categories and seen to increase after intervention for CTOP and a slight decrease in Forensics although both with no statistical significance. The two categories also indicated prevalence of decreased empathy at the outset before intervention and an increase post intervention for both CTOP and Forensic categories. The increase in empathy for both categories was statistically significant. The increase in compassion satisfaction and empathy as noted in the study are indicators that intervention could have brought some relief to the nurses.

The resistance noted for increase in fatigue and burnout for CTOP, as compared to Forensic could be due to the nature of the work the groups get involved with and probably the extend of the impact such work has on the professionals.

The countertransference issues are in both categories more probable but seem to be more personal for CTOP as compared to the Forensic especially if one considers that the nurses were more female and the CTOP affects the females probably more personally.

5.7 Conclusion

In conclusion on these results, the intervention showed an impact on the nurses to have an increase in empathy that was statistically significant for both groups; a decrease in burnout for the Forensic and no decrease in burnout for CTOP group; whilst showing a decrease in compassion fatigue for Forensic although not significant and no decrease for CTOP.

CHAPTER 6

FINDINGS FROM THE QUALITATIVE PHASE

6.1. Introduction

In the previous chapter, the presentation and interpretation of quantitative data was done. This chapter focuses on the presentation of the qualitative data. The findings are based on total of 154 (83 CTOP and 71 Forensic) nurses who participated in the focus groups of this study.

The questions asked were centred on work challenges, experiences at, work, origin of the discomfort at work, contribution to the health system, coping strategies, ways of sustenance and methods used to cope and recharge. The following were the questions which were used during the focus groups discussions, whose responses were used to deduce the themes: -

1. What are the challenges you are faced with in your work place?
2. Do you have painful moments resulting from your work?
3. Where does the pain emanate from?
4. How do I contribute to the health system?
5. Who do I benefit?
6. How do I recharge/cope?

Question 1 - What are the challenges you are faced with in your work place?

Participants on being asked the question “what are the challenges you are faced at your work place”, they responded in a way that captured the following themes:

Theme 1: Issues around the working environment. These included;

a) Staff shortage

In further exploring why the working environment was a challenge the staff shortage emerged. The following quote attest to the theme:
One respondent said: -

“*most of the time you find that you are alone in the unit and have to attend to a lot of patients, this becomes too much for you”*

b) Lack of resources and support

Furthermore, the most nurses reported lack of resources and support from their managers as a challenge relating to their working environment. This included resources such as office space and consumables.
One respondent supported as follows:

“sometimes we run out of stock of stock such as contraceptives and managers would not be supportive when you tell them about those challenges”

c) Patient overload

Most nurses felt that as they most of the time work alone, they find themselves being overwhelmed by a number of patents they have to attend to. One responded stated that: -

"Large patient numbers and limited suitable private spaces at designated facilities made it extremely difficult to provide adequate counselling and care."

Question 2 - Do you have painful moments resulting from your work?

Participants on being asked the question "do you have painful moments resulting from your work", they responded in a way that captured the following themes.

a) Devastation due to trauma of the working environment.

A lot of the nurses in this study experienced their jobs as traumatic.
The following is one of the responses to support this theme: - "

"I find it more traumatic to deal with a termination performed around 17-20 weeks, than termination at 14 weeks because with the latter, one is dealing with an embryonic sac rather than a formed foetus. This is devastating for me"

b) Ambivalence between expression compassion and application of legislative requirements.

Other nurses reported being frustration as part of how their jobs impact on them.
One nurse said: -

"It is better to do it during the first and second trimester. Some colleagues are also uncomfortable about second trimester abortion. Gestational age is the key indicator of acceptability"

c) Torn between helping and isolation (fear of stigma)

Some of the respondents felt stigmatized by others for the services they provide.
This was supported by one nurse who said

"As service providers we feel providing abortion services felt stigmatised. We feel stressed, and sometimes feel like leaving the services. It is at times difficult to tolerate comments or the attitudes of some of our colleagues".

Another one said

"They make it difficult for you. They spread the word in the community...and also isolate you. Where you're supposed to be peers and working hand in hand with other nurses and you can become extremely unhappy. You'd often find midwives not providing abortions because they fear the victimisation, being stigmatised, being isolated from their peers, and also within the community itself".

d) Stigma interference in the execution of specialised nursing duties

Nurses from CTOP units reported that they are disturbed by the type of service they offer which is the termination of pregnancies. This seems to be coming from the stigma they experienced from colleagues, friends, and the community at large whose values are against what the nature of their work. This was supported by one response of saying,

"As nurses working in the CTOP unit, we are labelled as Bin-Laden, Lucifer, and Pharroah (sic) "Support is what we need to counter stigma."

Other nurses, especially those in the CTOP group felt at crossroads with regards to their religion and their jobs. One nurse said: -

"I am a Catholic but "had made peace" with my decision to provide CTOP despite the fact that I have been ostracized by my religious community."

Question 3 - Where does the pain emanate from?

When participants were asked the question "where does the pain emanate from", they responded in a way that captured the following themes: -

a) Injustice for those involved

Nurses reported feelings of disappointment especially in instances where the rape did not get justice and perpetrators not pushed for their deeds. This therefore, leads to a sense of disappointment in the justice system. One nurses said one response of saying,

"unfortunately even if they can say this is the man who raped her there is nothing I can do. Because often those men do not go to jail for what they did".

Nurses also reported having a sense of disappointment which is often related to false reports of allegations of rape to punish the partner.

One of the participant alluded to the above by saying

"My pain also comes from those cases where you find that some women are just wanting to punish their partners. These women also give other women a bad name"

b) Relieving victims' experiences and trauma

Most nurses attributed the pain they experience from their work to the stories and experiences of their patients. The following are some of the statements made by the respondents: -

"It is very painful to be assisting children who have been raped by adults. It makes one to imagine the trauma caused to the poor child"

Another one said: -

"the pain comes from my patients 'experiences such as rape, incest, abuse and teenage pregnancy name shaming and calling by colleagues and community"

Another participant said: -

"that is a trauma is a trauma she is really traumatised, it affects us it does affect us psychologically me it affects me you know it affect me it affects me very much, psychologically I am so much affected"

In addition, most respondents reported being traumatized by hearing the stories of their patients. One of the respondents said,

"My trauma/pain also comes from those cases where you find that some women who abort the baby just to punish their partners. These women also give other women a bad name"

The other one added by saying

"The pain comes from hearing the stories that our clients tell us."

One responded also said

"*The pain also comes from forever thinking about the pain that the victims have suffered from the rape. I end up even thinking about that even when I am at home"*

Question 4 - How do I contribute to the health system

In answering the above question most nurses felt they contribute a lot in assisting their patients, the health system in general and decreasing the maternal-infant mortality as well as being specialists.

` When they were asked the question "how do I contribute to the health system", they responded in a way that captured the following themes; -

a) Involvement in patient advocacy

One nurse said: -

"We are the spokespersons for those without the voice and helpless victims, our patients come for our services with valid reasons. I also help with the medico-legal bag log"

b) Offering of specialised service

The participants have a sense of pride and importance as they feel that their work contribute significantly to the entire health care system. One of the participants stated: -

"It is fulfilling to be a specialist who will assist in our patients gettingjustice" and "I am a specialist in my own right"

The nurses mentioned that their services are incorporated into women productive health system. They feel that this is a huge contribution to the health of women in general. One responded said,

"We contribute in reproductive health services, and also provide our patients with health service like PEP to assist in preventing future health complications."

Question 5 - How do I recharge/cope??

When they were asked the question how do I recharge/cope, they responded in a way that captured the following themes: -

a) Being passionate about their jobs

One of the nurses indicated that involvement in CTOP services is a career path. She further eluded by saying,

"For me it is part of my career path, my involvement in CTOP was a vocation requiring passion and commitment. I think that people must choose to be in that situation, because some people are very anti-abortion and you can't force somebody that is totally anti-abortion, to go and work with somebody who is having an abortion"

a) Available support structure

Most of the participants reported that what makes them cope is different kinds of support structures. The following were some of the responses to support the above: -

"Talking to colleagues and friends I have joined the gym to deal with my work stress"

"I go to church and pray for this country"

The other ones reported the following:

"Family and friends support helps me to cope with the stress of my work"

"Sharing with colleagues from other institutions using the WhatsApp group we have created helps me cope"

a) Regular debriefings

Most of the nurses reported debriefing by psychologists as one of the ways they use to cope with the stress of their jobs. They also reported using the skills they have learnt during the workshops as helpful. Some of the responses included the following: -

"I had learned ways of taking care myself by reading, relaxing and exercising during the debriefing sessions"

“Follow ups by psychologist at our institutions help us to recharge and be able to do our jobs well”

“The presentations on traumatization and self-care and self-efficacy were much of an eye opener in assisting one on how to cope with work stress.

6.3 Summary of qualitative findings

Both the groups of nurses who participated in the current study indicated challenges around their work environment, factors relating to the discomfort at work, how they contribute the health system, their strategies of coping, ways of sustenance as well as methods used to cope and recharge. They reported similar challenges relating to both human and trade of tools resources. It also appears that they feel unsupported by their mangers with regards to their work related challenges. Irrespective of the trauma and challenges reported the nurses indicated contributing to the health care service through the services they provide to their patients. Nurses were also able to identify gaps in their ways of dealing with burnout and compassion fatigue resulting from the nature of their work.

6.4 Conclusion

This chapter focused on the qualitative findings emanating from the focus group discussions conducted. The following chapter will be dealing with the discussion of the findings in the study.

CHAPTER 7

DISCUSSION OF THE FINDINGS

7.1 Introduction

This chapter will focus on the discussion of the results in relation to the aims and objectives to include risk of burnout and compassion fatigue among the nurses in critical care and how such impact affects their levels of empathy and as measured before and after the intervention process as well as describing the results within CPO theoretical model evaluation of intervention programs used in this study and discussion of the validation process of the evaluation process for the intervention used in the study.

7.1.1 The risk of burnout and compassion fatigue among critical care nurses

The study found that there was risk of burnout among the nurses in the forensic group and less reported for the nurses in the CTOP group. Occupational trauma similar to the situational trauma experiences that leads to the nurses experience of burnout could be described in line with Medeiros- Costa, Maciel, do Rego, de Lima, da Silva and Freitas (2017) view of occupational trauma described as a syndrome with three dimensions namely - emotional exhaustion (EE), depersonalization (DS), and lack of personal achievement (PA); where EE shows itself in individual stress manifesting in deterioration of one's physical resources, whilst DS is related to a situation where negative attitude and cynicism are directed towards patients. Such manifestations could clearly be characterized by loss of compassion towards others, as well as negative evaluation of self-regarding work performance and future in the profession.

The lack of report on burnout among some of these nurses even though it was expected in terms of their reports on the nature of their work and their reports that fits into depersonalization, perceived lack of personal achievement as expressed in their verbalized descriptions of their stressful work areas, could be due to the defensiveness that may have developed over time as part of their defence mechanism as well as wanting to be seen as per expectation of the communities to be above all kinds of problems as problem solvers . Moreover, according to Arrogante and

Aparicio-Zaldivar (2017) and Arrogance and Zaldivar (2017) nurses in critical areas are unlikely to experience burnout as a result of possible resilience which has been found to minimize and buffer the impact of negative outcomes of workplace stress on their mental health. This could be a possible explanation to the lack of burnout reported by the nurses in this study.

7.1.2 Environmental context as risk factor for burnout and compassion fatigue

A high to moderate levels of burnout and compassion fatigue was reported among CTOP group with low levels for the group of forensic nurses. Studies have shown that certain work contexts make some individuals become more prone to trauma than the others. Health facilities have diverse sectors in which nurses work. Schaufeli, Maslach, and Marek, (2017), argue against contextualisation of the impact of trauma and points that it is not supported and not proven. In this study clearly the work contexts for the two groups differ and probably the reported differences on the traumatisation could be due to the working contexts. CTOP group could be more prone to traumatization due to the forced closeness to the patients for the relevant procedures they engage which differ from forensic daily interactions.

7.1.3 Demographics for critical care workers and reported compassion fatigue

In the current study, the nurses in the age group between thirty and thirty-nine years irrespective of marital status with less than five years working experience recorded high levels of compassion fatigue; although less statistical significance was recorded for this group with regards to compassion fatigue for those demographics.

Experience of burnout for the groups showed no overall association that was statistically significant for gender, age, marital status and years of experience, however, the females, in the age group of forty years and older irrespective of their marital status with five or more years of experience in forensic work recorded high levels of burnout more than among CTOP nurses.

Studies have explored levels of traumatization in relation to socio-demographic and occupational variables, psycho-social risks, and other construct in order to understand its origin. Those studies were conducted with the aim of correlating, investigating

moderating role, and investigating relationship sustainability of the above factors on burnout and compassion fatigue. The reviewed studies found a statistical significance association between traumatization and factors such as age, gender, years of experience, marital status, and religion (Bellanti, Lo Buglio, Capuano, Dobrakowski, Kasperczyk, Ventriglio & Vendemaiale, 2021). It appears that the demographics are not predictors of the burnout and compassion fatigue for nurses, irrespective of their work placements in the current study. This is similar to the lack of demographic differences as a risk factor for burnout among critical care nursing as found by Arrogante and Aparicio-Zaldivar (2017), in their study of burnout and health among critical care professionals.

7.1.4 The impact of workplace stress factors on professionals in critical care areas

In the current study both groups, CTOP and forensic, described qualitatively, their work-related trauma to be attributable to their work environmental factors. They reported factors such as workload, lack of resources (human and tools of trade), exposure to pain and suffering of patients and lack of support from management as contributing factors to their level of risk for traumatization. This is in line with Coetzee and Laschinger (2018) who reported that occupational factors positively associated with traumatization of health care professionals include high workload, limited resources, job stress, time pressure and lack of support from management. Critical nursing area is characterized by a continuous contact with pain and suffering of patients and family members. The abovementioned occupational factors increase the risk of health care workers' traumatization.

7.1.5 Association of empathy to successful service delivery in critical care areas

The results of this study indicate the high negative impact of the work environment on both groups of nurses under investigation. This could be due the nature of their work which requires high empathy levels as part of assisting the type of patients they work with. The empathy levels of the nurses in this current study were assessed prior and after the planned intervention. The comparison of the empathy levels prior and after the intervention of the nurses in this study indicated decreased levels at baseline which showed an increase over time during and after the intervention.

It is the nature of health care professionals to be empathetic and overly involved in caring for their patients that predisposes them to increased risk of secondary traumatization. Evidence is mixed when measuring levels of empathy among health care professionals over time. Some studies showed that empathy declined in health care professionals during the delivery of their services while others found an increase in empathy levels over time. Furthermore, Crumpei and Dafinoiu (2011), found that professionals who have a great capacity to feel and express empathy tend to be more vulnerable to traumatization resulting from care of the traumatized patients. Empathy levels of health care professional are expected to increase following intervention such as training in mindfulness, exercise and awareness on how the job impact on the nurses (Wilson, Prescot & Becket, 2012). In the current study, not all groups showed increase in empathy which is probably explainable by possible utilization of defensive coping style as reported by Creswell and Chalder (2001), in their study of defensive coping style in chronic fatigue syndrome among health care workers.

7.1.6 Intervention on the negative impact of work in critical care areas

The nurses in this study, as per different groupings reported changes and lack thereof in the levels of burnout, compassion fatigue and satisfaction as well as empathy levels during the follow-up debriefing workshop following the implementation of the planned intervention programme. They also reported great improvement in engaging in self-care activities in dealing with possible burnout and compassion fatigue resulting from their work-environment. This formed part of the distal outcomes of the intervention. Most intervention studies reviewed focused on behavioral changes and relaxation techniques with the disadvantage of only being able to enable nurses to cope with stress only for the moment (West, Wantz, Shalongo, Campbell,Berger, Cole, Seroskie & Cellitti, 2017). However, according to Hunsaker, Chen, Maughan and Heaston (2015), improving recognition and awareness of traumatization, coupled with intervention has proved to decrease the risk of burnout and compassion fatigue among health care professionals. The current study found such awareness to be the cornerstone for positive outcomes of increased empathy and satisfaction.

7.2 Validity of the process evaluation for the intervention

This section described the process that was used to develop and conduct an evaluation of the intervention programme process used in this study as a form of validating the outcomes. According to Blantari, Asiamah, Appiah, and Mock, (2005), Monitoring and evaluation of any programme or intervention is vital to determine whether it works, to help refine programme delivery, and to provide evidence for continuing support of the programme. Evaluation will not only provide feedback on the effectiveness of a programme but will also help to determine whether the programme was appropriate for the target population, whether there were any problems with its implementation and support, and whether there were any on-going concerns that need to be resolved as the programme was implemented.

For a process to be valid, it requires that an intervention programme must be well planned, showing all the needed phases and how they feed one another. The credibility and integrity of the facilitators and instruments used should also be demonstrated. As part of the validation process in this study, clinical psychologists were used as facilitators of focus groups. They were knowledgeable about the group process, are specialized to observe and make diagnoses and inferences from the responses given during group discussions. Psychometric scales with valid psychometric properties were used in data collection. The method of triangulation was also used in data collection as a way of validating the quantitatively collected data using the qualitative data.

7.3 INTERVENTION OUTCOMES FROM THE STUDY

7.3.1 Quantitative outcomes

The outcomes of the intervention for the quantitative part of this study were measured through the comparison of test results of the scales using pre and post-test. This included the results of the ProQoL and Empathy scales. The scores following the intervention showed an impact on the nurses to have an increase in empathy that was statistically significant for both groups; a decrease in burnout for the Forensic and no

decrease in burnout for CTOP group; whilst showing a decrease in compassion fatigue for Forensic although not significant and no decrease for CTOP.

7.3.2 Qualitative outcomes

The qualitative outcomes of the intervention were assessed by discussions using focus group prior the beginning of the post intervention workshop as well as the end of the workshop as a way of wrapping up by checking their verbal expressions of how they experienced the intervention process done through the workshop. The nurses expressed that their experience of the debriefing workshops as having been useful in assisting them to deal with the negative impact arising from the nature of their work. This was done through presentations made to foster awareness of their responses to the situations. The presentations made included traumatization, the pain of helping as well as self-care. Some of the self-care activities which they were engaged in included relaxation exercises, practice of mindfulness, identifying own strengths, weaknesses, and boundaries, physical activities and meditation. They were then able to be aware of the terminology used to describe their situation and even measure some of the constructs that assisted them to have a deeper understanding of their condition. The nurses were also able to see how external factors that impact on them cannot be controlled by them, thus, not at fault. They were also able to identify the gaps they might have had with regards to self-care and how they were being able to implement the suggested self-care activities in their lives. The respondents also expressed that they had also started experiencing their managers being supportive with regards to their work challenges and also having used the debriefing as a way of networking for support with other colleagues in other institutions.

7.3.3 THE SUMMARY OF THE FINDINGS

The results of outcomes of the intervention of the two groups of nurses in this study indicate equal impact on both groups. This was measured by their levels of burnout, compassion fatigue and empathy levels pre and post intervention. The overall mean empathy score for the nurses significantly increased after intervention (77.6±12.8 versus 95.5±14.6, $p<0.05$) (See Table 5.4).

Similarly, analysis of categories of nurses also showed a significant increase in the mean empathy score post-intervention: CTOP Nurses (79.7±16.2 versus 97.2±17.2, $p<0.05$) and Forensic Nurses (71.7±13.7 versus 93.9±11.7; $p<0.05$). There are also significant increases in the different sub-items of the Empathy scale for the items on Affective response, Affective metalizing, Self-Other awareness, Perspective taking ($p<001$) (See Table 5.4) and these are very key alertness indicators for people in the emotional helping professions requiring emotions. Emotion regulation sub item for empathy showed a different trend from other sub items for the CTOP where a decrease was noted after intervention (Mean= 14.2 to 13.6) and an increase for the Forensic group (Mean=12.7 to 13.3) although both did not have statistical significance.

The results show an increase in compassion satisfaction and empathy (including its sub items) following intervention. There is however, indication of possible resistance to burnout and compassion fatigue among CTOP as compared to the Forensic nurses.

The results indicated that there is prevalence of burnout among nurses working in these categories viz CTOP and Forensic sections as well as compassion fatigue and compassion satisfaction. The intervention conducted showed impact on the reduction of burnout slightly for Forensic nurses. There were however, no significant differences for all categories following the intervention although some slight change was noted within Forensic nurses.

Compassion satisfaction showed overall increase in the CTOP category with pre-test of (Mean=22.1) and post-test of (Mean=25.8); and for Forensic there was no difference in the pre and post-tests (Mean=25.7).

7.4 Integration and discussion of the findings

The integration and discussion of the quantitative and qualitative findings done in line with the following hypotheses of the study are hereunder: -

7.4.1 There is a high level of burnout and compassion fatigue among nurses working in critical areas and that differs by demographics and placement areas for the nurses.

The qualitative descriptions indicated experience of trauma due the work environment and that showed some decline following the intervention. The Quantitative findings highlighted the prevalence of burnout in one group and less in the other group as well as compassion fatigue but also showed indications of compassion satisfaction. There were also reports of decline in empathy at the baseline but with time through the intervention process some increase was noted in one group, showing the significance of the relevance of context in determining the depth of trauma manifestations. Contextual significance of the impact of trauma was highlighted in both methodologies in that it was described in the initial part of the workshop at baseline and being caused by the work environment and in the quantitative the baseline assessment using the empathy scale picked up the low empathy and the improvement in awareness made the experience impact on the nurses in a way that increased their response to the environment in a more empathetic way. Both methodologies brought out similarities which is a validation of the process and the outcome.

The process also being done by credible facilitators with clear description of planning and doing baseline, intervention and post-test, further validated the process and the outcomes.

7.4.2 The impact of the self-care programme will be different for nurses in different placements areas.

The results of outcomes of the intervention of the two groups of nurses in this study indicate equal impact on both groups. This was measured by their levels of burnout, compassion fatigue and empathy levels pre and post intervention. The overall mean empathy score for the nurses significantly increased after intervention (77.6±12.8 versus 95.5±14.6, $p<0.05$) (See Table 5.4).

Similarly, analysis of categories of nurses also showed a significant increase in the mean empathy score post-intervention: CTOP Nurses (79.7±16.2 versus 97.2±17.2, $p<0.05$) and Forensic Nurses (71.7±13.7 versus 93.9±11.7; $p<0.05$). Noted are the significant increases in the different sub-items of the Empathy scale of: Affective response, Affective metalizing, Self-Other awareness, Perspective taking ($p<001$) (See Table 5.4) which are very key alertness indicators for people in the emotional-laden helping professions. Emotion regulation sub item for empathy show a different

trend from other sub items for CTOP with a decrease after intervention (Mean= 14.2 to 13.6) and an increase for the Forensic group (Mean=12.7 to 13.3) with both not having statistical significance.

The results show an increase in compassion satisfaction and empathy (including its sub items) following intervention. There is however, indication of possible resistance to burnout and compassion fatigue among CTOP as compared to the Forensic nurses. The results further indicated that there is prevalence of burnout among nurses working in these categories viz CTOP and Forensic sections as well as compassion fatigue and compassion satisfaction. The intervention conducted showed impact on the reduction of burnout slightly for Forensic nurses. There were however no significant differences for all categories following the intervention although some slight change was noted within Forensic nurses.

Compassion satisfaction showed overall increase in the CTOP category with pre-test of (Mean=22.1) and post-test of (Mean=25.8); and for Forensic there was no difference in the pre and post-tests (Mean=25.7) in both cases.

7.4.3 There are unique factors, which will emerge from the study about the experiences and the impact of the self-care intervention program.
There was resistance noted for increase in fatigue and burnout for CTOP, as compared to Forensic nurses. This could be due to the nature of the work the groups get involved with and probably the extent of the impact such work has on the professionals.

The countertransference issues are in both categories more probable but seem to be more personal for CTOP as compared to the Forensic especially if one considers that the nurses were more female and the CTOP affects the females probably more personally.

7.4.4 The emerging unique factors from the experiences and the impact of self-care program will be different between nurses at different placements.

7.4.5 There is a significant change in the nurses' empathy following experiences of burnout and compassion fatigue.

In both methodologies it was indicated that the context is key in the development of trauma and thus impact differently on the nurses working in the different contexts. Such difference in the context will also have possible inclination to affect those in the different situations differently with regards to the experience of the trauma and how they manage to cope and move on. This was demonstrated by the post-test results of an increase in empathy for one group as well as the experience of burnout, compassion fatigue and satisfaction. This is in line with hypothesis 3,4 and 5 above as well as the hypothesis below that:

7.4.6 Empathy is a significant predictor of lower levels of burnout, compassion fatigue and higher levels of compassion satisfaction

Indications are that with high burnout and compassion fatigue, empathy seems to be at a lower level and with increase in the self-care awareness and move towards active eradication of the trauma experience through utilisation of activities taught to the nurses during the intervention empathy starts to increase and that is followed by compassion satisfaction. Both methodologies attested to the sequence of events in that way and thus validating the outcome.

7.5 Qualitative findings summary

Both the groups of nurses who participated in the current study indicated challenges around their work environment, factors relating to the discomfort at work, how they contribute the health system, their strategies of coping, ways of sustenance as well as methods used to cope and recharge. They reported similar challenges relating to both human and trade of tools resources. Themes around the working environment included, staff shortage, lack of resources and support, and patient overload. With regards to the discomfort from their work themes included devastation due to trauma of the work environment, ambivalence between expression of compassion and application of legislative requirements, being torn between helping and isolation as

well as stigma interference in the execution of specialised nursing duties. Their pain emanated from injustice for those involved, as well as relieving victims' experience and trauma. The nurses expressed that their involvement in patients' advocacy and offering specialised services serves as their contribution to the health system. They also reported being passionate about their work, available support structure and regular debriefings as helping them to cope with their work environment.

Both groups had those issues which could not come out in the quantitative phase of the study but were evident in the qualitative phase. This shows the importance of triangulation in the study. Using both the quantitative and qualitative method brought out possible defensiveness, denial and self-medication coping strategies which could account for the differences in compassion fatigue and compassion satisfaction. The above was mainly noted with the CTOP group.

7.5 CONCLUSION

7.5.1. The significance of compassion satisfaction and levels of burnout and compassion fatigue

The results of the current study indicate moderate to high levels of burnout and compassion fatigue occurring with high compassion satisfaction among the nurses. However, the mean burnout scores for CTOP nurses and Forensic nurses and details that indicate lack of statistically significant difference post-intervention ($p>0.05$). Similarly, the overall mean compassion fatigue score, for CTOP nurses and Forensic nurses also did not show a statistically significant difference post-intervention ($p>0.05$). The results are in line with those found by Mashego, Nesengani and Ntuli (2016), in their study of burnout, compassion fatigue and compassion satisfaction among nurses in the context of maternal and perinatal deaths. The conclusions of the abovementioned study support those of the current study as they both found that moderate levels of high burnout and compassion fatigue can co-occur with relatively high compassion satisfaction among nurses in critical-care health.

7.5.2 Impact of intervention on empathy levels

The overall mean empathy score for the nurses significantly increased after intervention (77.6±12.8 versus 95.5±14.6, $p<0.05$) (See Table 5.4). Similarly, analysis of categories of nurses also showed a significant increase in the mean empathy score post-intervention: CTOP Nurses (79.7±16.2 versus 97.2±17.2, $p<0.05$) and Forensic Nurses (71.7±13.7 versus 93.9±11.7; $p<0.05$). Noted are the significant increases in the different sub-items of the Empathy scale of: Affective response, Affective metalizing, Self-Other awareness, Perspective taking ($p<001$) (See Table 5.4) which are very key alertness indicators for people in the emotional-laden helping professions. Emotion regulation sub item for empathy show a different trend from other sub items for CTOP with a decrease after intervention (Mean= 14.2 to 13.6) and an increase for the Forensic group (Mean=12.7 to 13.3) with both not having statistical significance.

The results of the intervention showed an impact on the nurses to have an increase in empathy that was statistically significant for both groups. Moreover, the large group feedback at the end of the post intervention workshops indicated the following changes:

7.5.3 Unique factors and impact of intervention

There was resistance noted for increase in fatigue and burnout for CTOP, as compared to Forensic nurses. This could be due to the nature of the work the groups get involved with and probably the extent of the impact such work has on the professionals.

The countertransference issues are in both categories more probable but seem to be more personal for CTOP as compared to the Forensic especially if one considers that the nurses were more female and the CTOP affects the females probably more personally.

CHAPTER 8

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

8.1 Introduction

This chapter will focus on the conclusions reached and how these can be placed within the theoretical framework for the study. The limitations and recommendations for future research are also addressed in this chapter.

8.2 Conclusion

The current study was aimed at evaluating the effectiveness of a self-care programme for intervention in burnout and compassion fatigue among nurses working in critical care units. This included nurses working with termination of pregnancy and forensic nurses in Limpopo Province. On a larger scope, the current study was conducted on a longitudinal intervention and evaluation process of the effectiveness of an integrated self-care programme for nurses. The study also assisted nurses to be aware of their level of burnout and risk of compassion fatigue because of the nature of their work and also looked into whether empathy has a role to play in the control of burnout and development of compassion fatigue among nurses in these critical areas. The objectives of this study were:

- To assess the risk of burnout and compassion fatigue among nurses in critical care units.
- To identify demographic risk factors associated with the nurses' development of burnout and compassion fatigue.
- To compare the vulnerability to burnout and compassion fatigue with regards to different placements in nursing critical care units.
- To explore the views of nurses regarding the intervention on burnout and compassion fatigue.

- To assess the effect of burnout and compassion fatigue on the levels of nurses' empathy towards their patients.
- To evaluate the effectiveness of the self-care intervention programme for burnout and compassion fatigue among nurses working in critical units.
- To assess whether new elements that emerged from this population can enhance the existing intervention programmes.

The results on the intervention showed an impact on the nurses to have an increase in empathy that was statistically significant for both groups; a decrease in burnout for the Forensic and no decrease in burnout for CTOP group; whilst showing a decrease in compassion fatigue for Forensic although not significant and no decrease for CTOP.

Nurses who participated in the current study were found to be experiencing sings of burnout and compassion fatigue. They also reported various working environment stressors which contribute to the discomfort in their work place. Gaps of dealing with the discomfort were also identified

8.2.1 Conclusions on the study within the CPO theoretical framework

8.2.1.1 The evaluation process

The study utilized the Context Process Outcome (CPO) model as its framework (Fridrich, Jenny & Bauer, 2015). The CPO evaluation model defines change process as all intended and unintended dynamics triggered by the implementation process leading in the organization and its members (Fridrich, Jenny & Bauer, 2015).

The CPO model utilizes the following three outcome categories: - proximate outcomes, intermediate outcomes, and distal outcomes. Proximate outcomes often also labelled as immediate, initial or short-term outcomes or first level outcomes, for example, refer to individual skills and collective capacities, change process as well as quick-wins in the form of minor but instant structural changes (Fridrich, Jenny & Bauer, 2015).

The model falls within the list of models usually utilised for the evaluation of complex interventions which encompass design and development of health service interventions. In this study the CPO was used to evaluate the effectiveness of a self-care programme in burnout and compassion fatigue among CTOP and Forensic nurses. The outcomes of the effectiveness of the programme for the current study were seen on three levels; - namely: - Level 1: Proximate, Level 2 : Intermediate and Level 3 : intermediate to distal.

Level 1 – Proximal outcomes

The context in this study was lack of resources in the workplace. It appears that the nurses experienced discomfort at work which was distressing for them.

With the intervention process which comprised of baseline assessment, workshops and debriefing, it resulted in proximal outcomes of recognition of own burnout, compassion fatigue and gaps in the levels of self-care, understanding of lack of resources (as driven by external factors without personal control). Engaging in self-care program and activities and utilisation of innovative measures to acquire resources lead to more distal outcomes on revived motivation for continued work in critical areas with high empathy.

Level 2: Intermediate outcomes

The intermediate outcomes of the intervention programme included realisation of being in a safe space and willingness to talk and becoming open to suggestions. The nurses developed an awareness of own pressures and were able to put labels to the distress levels. They also became open to suggestions for self-care.

Through the engagement in the workshops and self-care activities the other intermediate outcomes in this study included a drop in levels of burnout and compassion fatigue

Level 3: Distal outcomes

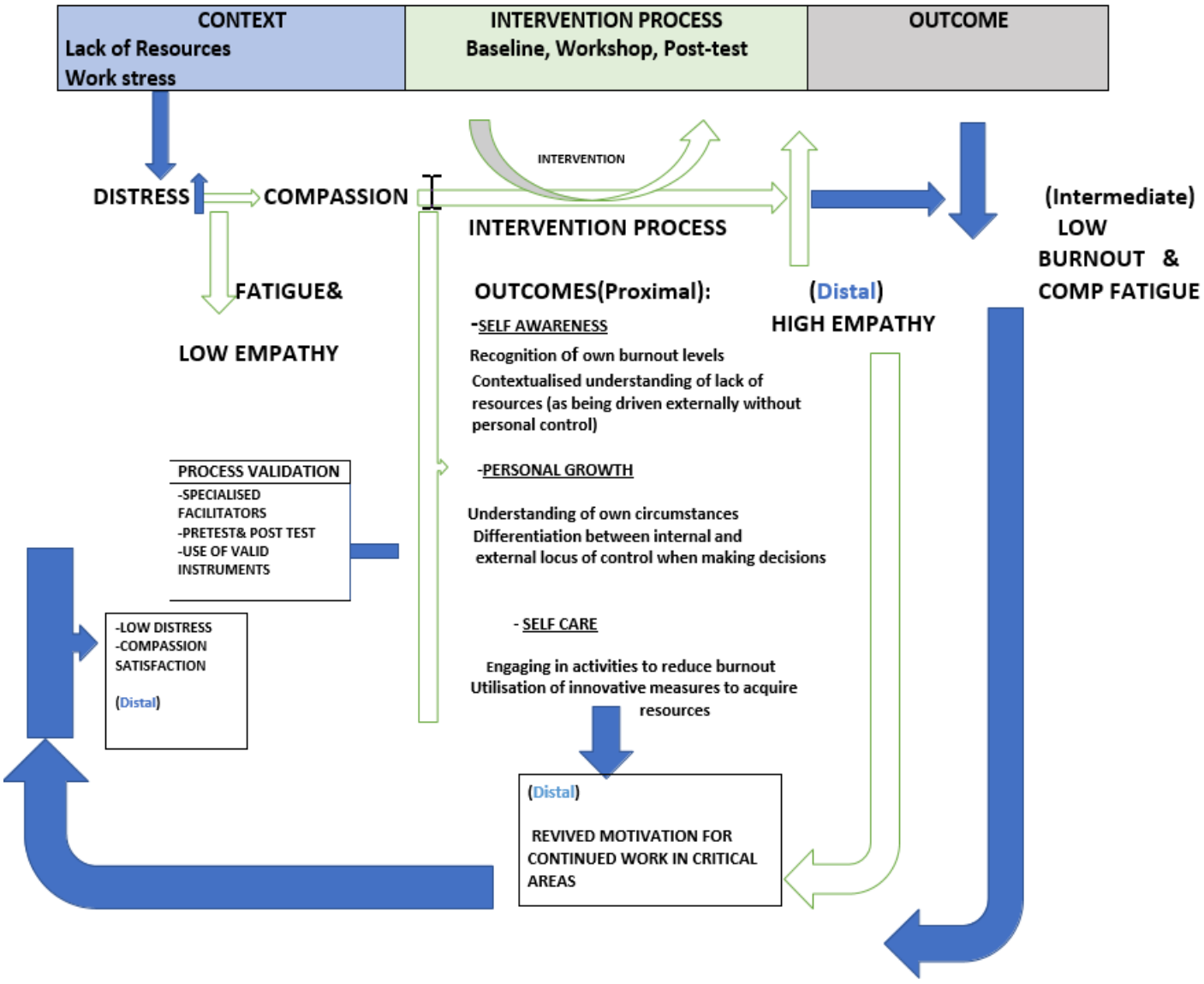
The distal outcomes in this study included an increase in empathy levels, increase in compassion satisfaction, decrease in distress and discomfort and revived motivation for continued work in critical areas.

- **Validation Process of the evaluation**

To validate the process evaluation and outcomes, the scales used have validity and standardized psychometric properties. The abovementioned process was conducted through administration of questionnaires and the scales by the researcher with the help of other psychologists who formed part of the facilitators for the focus group sessions as part of the qualitative part of this study. The rationale for using the psychologists as facilitators was due to their competence in administering the questionnaires and running the groups. The facilitators have experience and knowledge in trauma work, self-care training, debriefing, and diagnostic and intervention skills. The facilitators, together with the researcher used their skills to diagnose the impact of the implemented intervention.

Hereunder is the schematic representation of the intervention process using the CPO to contextualize the findings:

Schematic representation of the intervention process using the CPO



8.3 Limitations of the study and recommendations for future research

It is important to highlight that the findings of this research should be understood within the context of the following limitations:

- Sample size **-** The sample size initially proposed was not achievable due challenges of accessing all the nurses targeted for the study. This was due to the COVID-19 lockdown restrictions and minimisation of mobility and number restrictions for group gatherings.
- Attrition challenges **-**There was loss of participants experienced in the study wherein each session had new nurses coming to the workshop as the research targeted nurses that were sent for debriefing by the department of health. This led to having some new participants and a loss of others from one group meeting to another. Study suffered delay and continued restarting of the process on separate groups leading to having staggered groups who had to be at different levels of the intervention process. The post-test was done separately during a special session conducted away from the original space for some participants as they had already gone through the process and only left with the post-test and discussion on how they experienced the intervention. Future recommendation would be to run such a study with participants that are not bound to the departmental process but recruited on individual basis and as such commit to attend as independently.
- Instruments used use individual own feelings and that can bring out various dynamics in the process from time to time. This being triangulated with qualitative data brought out aspects that indicated that emotions were more likely at play with subsequent changes noted that could have been due to the context created at the time of questioning. Future research could consider the use of technologically driven readers of physiological changes associated with the experience of the constructs measured in the present study.
- Only two groups were used in the current study. Future research may consider using more diverse group that will include more nurses from other critical areas to check how the impact registered in this study comes out in various categories.

- Only nurses were used in the current study. Comparison of health care workers might be interesting to focus on in future research to check for possible differences of the programme impact by category of health care providers.
- Homogeneity of working environment **-** Some of the nurses who participated in this study were working in more than one workstation. This might have influenced their response to some of the questions asked. For instance, some nurses would be placed in maternity ward, casualty and even in the CTOP section. Their experiences might be different from those placed in the CTOP sections only.
    - The programme was planned to show outcomes at the end of each phase with no adjustments made to fit into implementation phase to address the gaps as the process was unfolding. It is also suggested that instead of the programme to be evaluated at the end it should be an on-going process and where necessary deviations be allowed to satisfy intended results. Evaluation at short interval need to be considered in future research as built up for longer intervals

The future research could be developed to improve on the intervention process with more focus on the gaps highlighted.

The CPO evaluation model defines change process as all intended and unintended dynamics triggered by the implementation process leading in the organization and its members (Fridrich, Jenny & Bauer, 2015). Future research might explore other evaluation models which might bring in other aspect which might be left out by the CPO model.

Future research may also consider training for empathic response to check on its impact on the control of burnout and compassion fatigue.

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10. APPENDICES

APPENDIX A: LETTER FOR PERMISSION TO LIMPOPO DEPARTMENT OF HEALTH TO CONDUCT A STUDY

BOX 2951
Flora Park
POLOKWANE
0699

HEAD OF DEPARTMENT
LIMPOPO DEPARTMENT OF HEALTH
POLOKWANE

RE: REQUEST TO CONDUCT A STUDY INVOLVING FOUR DIRECTORATES WITHIN THE STRATEGIC HEALTH PROGRAMME

Dear Sir/Madam

I hereby request to conduct a study for a doctoral degree in Psychology. The study is titled: 'Evaluating the effectiveness of a self-care programme for intervention in burnout and compassion fatigue among nurses working in critical areas'

The study envisaged involves four directorates within Strategic Health Programme dealing with nurses working with traumatic incidences for CTOP, HIV/AIDS patients, forensic nurses dealing with sexually assaulted patients under the directorates of maternal health, child and women's health, youth and adolescent nutrition (MCWHN) and HIV/AIDS and STI (HAST).
The project is aimed at addressing the following questions: -

- What are the state of burnout and the compassion fatigue risk of health care workers in these critical areas?
- Which group of health care workers is most vulnerable to burnout and risk of compassion fatigue?
- Once developed (burnout and compassion fatigue), how can it be treated?
- Can an integrated programme like the one used in this study make a difference in addressing the pain of helping as experienced by health care workers in the critical areas?

- How can care for the carers 'programme be improved in terms of the impact and cost-effectiveness.

It is hoped that this study will have contributions to the health care workers that will 1) generate longitudinal data to be able to understand the pain associated with caring for those experiencing psychological trauma. 2) By drawing on the work and experiences of health care workers, this study will offer insight into the development of more effective care for the career programmes Limpopo, South Africa and beyond; 3) encourage collaboration toward building a sound theory and research base that will lead to effective programs for preventing and managing compassion fatigue; and 4) Provide resource manual for health care professionals working with trauma.

The proposal for the study will be sent to TREC for approval and ethical clearance as it is for the university studies for a PhD. Such approval is hereby also sought from the Limpopo Provincial Research Ethics Committee for access to utilize information on the running of the four directorates within Strategic health programme to be accessed from the managers of the directorates, and to utilize the nurses employed by the department in the Strategic Health Programme directorates as nurses in the study. Nurses' information will be kept confidential, as the identifying information will only be known to the researcher. All reasonable steps will be taken to protect the data during the research process.

Please find the study proposal attached. If you need any further information or have any concerns, please do not hesitate to contact the researcher on the details below.

Yours faithfully,

Mokoti NJ - researcher

1916nare@gmail.com

Cell: 079 390 4242

APPENDIX B: INFORMATION FOR NURSES

PROJECT TITLE: Evaluating the effectiveness of a self-care programme for intervention in burnout and compassion fatigue among nurses working in critical areas

PROJECT LEADER: **MOKOTI NARE JONAS**

- You are invited to participate in the following research project: Evaluating the effectiveness of a self-care programme for intervention in burnout and compassion fatigue among nurses working in critical areas
- Participation in the project is completely voluntary and you are free to withdraw from the project (without providing any reasons) at any time.
- It is possible that you might not personally experience any advantages during the project, although the knowledge that may be accumulated through the project might prove advantageous to others.
- You are encouraged to ask any questions that you might have in connection with this project at any stage. The project leader and her/his staff will gladly answer your question. They will also discuss the project in detail with you. The project is aimed at addressing the following questions:-
- What are the state of burnout and the compassion fatigue risk of health care workers?
- Which group of health care workers is most vulnerable to burnout and risk of compassion fatigue?
- Once developed (burnout and compassion fatigue), how can it be treated?
- Can an integrated programme like the one used in this study make a difference in addressing the pain of helping as experienced by health care workers?
- How can care for the carers 'programme be improved in terms of the impact and cost-effectiveness.
- It is hoped that this study will have the following contributions to the health care workers.
- Generate longitudinal data to be able to understand the pain associated with caring for those experiencing psychological trauma.

- By drawing on the work and experiences of health care workers, this study will offer insight into the development of more effective care for the career programmes Limpopo, South Africa and beyond.
- Encourage collaboration toward building a sound theory and research base that will lead to effective programs for preventing and managing compassion fatigue.

Should you at any stage feel unhappy, uncomfortable or is concerned about the research, please contact Dr Anastasia Ngobe at the University of Limpopo, Private Bag X1106, Sovenga, 0727, tel: 015 268 3935.

APPENDIX C: CONSENT FORM

PROJECT TITLE: Evaluating the effectiveness of a self-care programme for intervention in burnout and compassion fatigue among nurses working in critical areas

PROJECT LEADER: **MOKOTI NARE JONAS**

I, _____ hereby voluntarily consent to participate in the following project: Evaluating the effectiveness of a self-care programme for intervention in burnout and compassion fatigue among nurses working in critical areas

I realize that:

- The study deals with Burnout and Compassion Fatigue among Nurses working in Critical Areas: Evaluating the Effectiveness of a Self-Care Programme for Intervention

- The procedure or treatment envisaged may hold some risk for me that cannot be foreseen at this stage.

- The Ethics Committee has approved that individuals may be approached to participate in the study.

- The research project, i. e. the extent, aims and methods of the research, has been explained to me.

- The project sets out the risks that can be reasonably expected as well as possible discomfort for persons participating in the research, an explanation of the anticipated advantages for myself or others that are reasonably expected from the research and alternative procedures that may be to my advantage.

- I will be informed of any new information that may become available during the research that may influence my willingness to continue my participation.

- Access to the records that pertain to my participation in the study will be restricted to persons directly involved in the research.

- Any questions that I may have regarding the research or related matters, will be answered by the researcher/s.

- If I have any questions about, or problems regarding the study, or experience any undesirable effects, I may contact a member of the research team or Dr Anastasia Ngobe.

- Participation in this research is voluntary and I can withdraw my participation at any stage.

- If any psychological problems are identified at any stage during the research, or when I am vetted for participation, such condition will be discussed with me in confidence by a qualified person and/or I will be referred to my doctor.
- I indemnify the University of Limpopo and all persons involved with the above project from any liability that may arise from my participation in the above project or that may be related to it, for whatever reasons, including negligence on the part of the mentioned persons.

....

SIGNATURE OF PARTICIPANT

SIGNATURE OF THE RESEARCHER

Signed at_____ this ____ day of _____ 20__

APPENDIX D: BIOGRAPHICAL INFORMATION

GENDER Male ☐ Female ☐

HIGHEST EDUCATIONAL LEVEL COMPLETED

_____

AGE (in years) ☐

MARITAL STATUS

Single	
Married	
Divorced	
Widow/er	
Engaged	
Living with partner	

RELIGIOUS AFFILIATION

Christianity	
African Traditional	
Both Christianity and African Traditional	
None	
Others: Specify	

PROFESSIONAL DISCIPLINE (RANK)

_____

PROFESSIONAL EXPERIENCE (IN YEARS)

_____

LENGTH OF TIME IN THE JOB (IN YEARS

_____

ABOUT HOW MANY HOURS OF "QUALITY TIME" DO YOU SPEND PER DAY? (e.g. talking, recreation, etc.)

With immediately family	
With extended friends	
With friends alone	
Alone all the time	

NUMBER OF PEOPLE LIVING IN HOUSEHOLD (not including yourself)

Adults	
Children	
Elderly	
Alone all the time	

TOTAL ANNUAL HOUSEHOLD INCOME: TICK ✓

R15 000 or les	
R60 001 – R75 000	
75 001 – R90 000	
R90 001 – R105 000	
R105 001 – R120 000	
R120 001 – R150 000	
Over R150 001	

TICK YOUR AREA /UNIT OF WORK

ICU	
Maternity unit	
Oncology Unit	
Renal Unit	
HIV/AIDS Unit	
TOP	
Any other (specify):	

AMOUNT OF BREAKS TAKEN PER YEAR (in days): **TICK✓**

0 – 1	
2 – 5	
6 – 10	
11 – 15	
16 – 20	
21 and above	

RESTING TIME IN A DAY(in hours): TICK ✓

0 – 1	
2 – 5	
6 – 10	
11 – 15	
16 – 20	
21 and above	

CASELOAD PER WEEK: TICK ✓

0 – 1	
2 – 5	
6 – 10	
11 – 15	
16 – 20	
21 and above	

APPENDIX E: PROFESSIONAL QUALITY OF LIFE (ProQOL R-IV)

Helping others puts you in direct contact with other people's lives. As you probably have experienced, your compassion for those you help has both positive and negative aspects. We would like to ask you questions about your experiences, both positive and negative, as a helper. Consider each of the following questions about you and your current situation. Tick in the box that honestly shows how often the statement has been true for you **in the last 30 days**

	NEVER	RARELY	A FEW TIMES	SOME-WHAT OFTEN	OFTEN	VERY OFTEN
I am happy						
I am preoccupied with more than one person						
I get satisfaction from being able to help						
I feel connected to others						
I jump or I am startled by unexpected sounds						
I have more energy after working						
I find it difficult to separate my private life from my life as a helper						
I am losing sleep over a person I help a traumatic experience						
I think that I might have been 'infected' by the traumatic stress of those I help						

I feel trapped by my work as a helper						
Because of my helping, I have felt 'on edge' (nervous) about various things						
I like my work as a helper						
I feel depressed as a result of my work as a helper						
I feel as though I am experiencing the trauma of someone I have helped						
I have beliefs that sustain me						
I am pleased with how I can keep up with helping techniques & protocols						
I am the person I always wanted to be						
My work makes me feel satisfied						
Because of my work as a helper, I feel exhausted						
I have happy thoughts & feelings about those I help & how I could help them						
I feel overwhelmed by the amount of work or size of my caseload I have to deal with						

I believe I can make a difference through my work						
I avoid certain activities or situations because they remind me of the frightening experiences of the people I help						
I plan to be a helper for a long time						
As a result of my helping, I have sudden, unwanted frightening thoughts						
I feel 'bogged down'(too much drawn into my work) by the system						
I have thoughts that I am a 'success' as a helper						
I can't remember important parts of my work with trauma victims						
I am an unduly sensitive person						
I am happy that I chose to do this work						

Stamm, B. H. (2002).

APPENDIX F: EMPATHY ASSESSMENT INDEX SCALE (EAI)

Please respond to the following questions by selecting the choice that most closely reflects your feelings or beliefs:

	NEVER	RARELY	SOMETIMES	FREQUENTLY	ALMOST ALWAYS	ALWAYS
When I see someone receive a gift that makes them happy, I feel happy myself						
Emotional stability describes me						
I am good at understanding other people's emotions						
I can consider my point of view and another person's point of view at the same time						
When I am angry, I need a lot of time to get over it						
I can imagine what the character is feeling in a good movie						
When I see someone being publicly embarrassed, I cringe a little						
I can tell the difference between someone else's feelings and my own						
When I see a person experiencing a strong emotion, I can accurately						

assess what that person is feeling						
Friends view me as a moody person						
When I see someone accidentally hit his or her thumb with a hammer, I feel a flash of pain myself						
When I see a person experiencing a strong emotion, I can describe what the person is feeling to someone else.						
I can imagine what it's like to be in someone else's shoes						
I can tell the difference between my friend's feelings and my own						
I consider other people's points of view in discussions						
When I am with someone who gets sad news, I feel sad for a moment too						
When I am upset or unhappy, I get over it quickly						
I can explain to others how I am feeling						
I can agree to disagree						

with other people						
I am aware of what other people think of me						
Hearing laughter makes me smile						
I am aware of other people’s emotions						

Gerdes, Leitz, and Segal, 2011).

APPENDIX G: SELF-CARE PROGRAMME FOR INTERVENTION
The programme will be done in the form of workshops

PHASE (CPO Phase)	**ACTIVITY**	**FACILITATOR**
Prior to the workshop:- **Omnibus context of the study**	Collection of basic information about the context of the nurses' working environment–i.e. the number of departments/areas to be involved in the study; a number of nurses from each section; the type of work; the organizational structure and work schedules.	The Researcher & Managers of the Directorates
	Planning of the debriefing workshops with the managers in each directorate to include two debriefing workshops (one at the beginning of the financial year and the other one at the end) in their year plans.	The Researcher& Managers of the Directorates
	Discussing expectations about how the research will work to help nurses to become more open to change.	The Researcher& Managers of the Directorates
The debriefing workshop: **Omnibus and discrete context of the study**	<u>Day 1</u> • Introductions • Meeting with nurses to explain the goals of the project • Explaining the aim of the study/workshop to the nurses • Discussing expectations and ways of collecting data • Encouraging nurses to give feedback about what they hoping the project would assist them • Discussing the benefits of the workshop/study given its nature	The Researcher& nursing nurses

	• Collaboratively developing expectations about the outcomes of the project, the time frame and how we would work to deal with their work-related stressors**.** • Discussing and signing consent forms	
Implementation and change process	Day 2 Pre-evaluations (assessing the level of • awareness of the risk of burnout and • compassion fatigue) – Demographic • questionnaire, Professional Quality of • Life Scale and available self-care • practices. • Conducting focus groups to discuss the impact of helping Deep exploration of the nurses' work stressors /pain of helping Observations: - information will be collected about working conditions, group dynamics, and possible stressors, other concerns faced by the nurses and what has been done to address the concerns. Consolidation of the themes from the focus groups by presentation and psycho-education on traumatization	The Researcher & nursing nurses
Implementation and change process	Day 3 Conduct focus groups to discuss gaps in • the level of self-care Consolidation of the • themes from the focus groups by • presentation and psycho-education on self-care to empower nurses Engaging nurses in self-care activities such as relaxation training and didactic	The Researcher & nursing nurses

	and cognitive stress management skills	
Intervention	**Design**	
Focus groups **Outcomes - Immediate**	• **Focus** groups will be run with the • nurses to develop an understanding of specific stressors within their work environment and how those stressors might be addressed. Discussing findings from phase 1 and 2 of the project with the nurses to allow for the revision of possible and feasible solutions.	The Researcher& nursing nurses
	• The object of this phase will be to develop a formal intervention program with the help of the information collected in the initial phases (phase1 and 2). • Recap of the 3-day workshop • Planning for follow up and closure	
Intervention Design, Implementation and evaluation (Phase 3) – FOLLOW UP WORKSHOP		
Implementation and change process	• The information collected during phase 1 • and 2 will be used to design the intervention during this phase. This phase will involve problem and opportunity identification, analysis of strategic action options/results, program design and implementation, program evaluation and recycling.	The Researcher& nursing nurses

Implementation and change process	Day 1 • Post-Evaluations using the survey method to assess changes in the levels • of work stressors as well as asking specific questions about changes in their work environment after some time following the implementation of the program. Discussing findings from phase 1 and 2 of the project with the nurses to allow for the revision of possible and feasible solutions	The Researcher& nursing nurses
Outcomes – intermediate and distal	Day 2 • Discuss possible changes and improvements following the • implementation of the intervention programme Discuss changes in the levels of work stressors as well as asking specific questions about changes in their work environment after some time following the implementation of the program.	The Researcher& nursing nurses
Outcomes – intermediate and distal	Day 3 • Possible development of a manual for assisting health professionals in dealing • with their pain of helping Debriefing of nurses following post evaluations and concluding the follow-up.	The Researcher& nursing nurses

APPENDIX H: GUIDING QUESTIONS FOR FOCUS GROUPS

The questions will be focused on eliciting information from health care workers with regards to the following questions about themselves:

- Is there anything wrong with what I do?
- Is my job fulfilling?
- Do I have painful moments?
- Is my pain legitimate?
- What does the pain emanate from?
- Am I contributing anything to health care services?
- Who do I benefit in my work?
- How do I feel?
- How do I cope?
- What sustains me?
- What would I like to do?
- Am I at risk?
- How do I recharge?
- How long do I plan to continue my work?

APPENDIX I: GUIDING QUESTIONS FOR MANAGERS

The guiding questions will be based on the collection of basic information about:

- The context of the nurses' working environment–i.e. the number of departments/areas that are relevant to involve in the study
- General observations made on how the nurses respond to the environment of their work, the number of nurses from each section; the type of work they do; the organizational structure and work schedules.
- Planning schedule of the debriefing workshops with the managers in each directorate to include two debriefing workshops (one at the beginning of the financial year and the other one at the end) in their year plans.
- Discussing expectations about how the research will work to help nurses to become more open to change.