

**PROFESSIONAL QUALITY OF LIFE AMONG NURSES IN  
PSYCHIATRIC OBSERVATION UNITS IN THE  
METROPOLE DISTRICT HEALTH SERVICES**

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A mini-thesis submitted in fulfilment of the requirements for  
the degree of Magister Curationis in the School of Nursing,

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## ABSTRACT

**Background:** Psychiatric observation units are the units where 72-hour psychiatric observations are conducted in the district and in some of the regional hospitals. These hospitals were selected under the Mental Health Care Act No. 17 of 2002 (MHCA 2002) to admit patients suspected to be mentally ill, ascertain the cause of symptoms, exclude medical illness as a cause of the symptoms, treat and rehabilitate these patients; and at times transfer the patients to tertiary psychiatric hospitals. These units are often overcrowded as only about 30% of patients are transferred to the tertiary psychiatric hospitals. These units are fraught with challenges such as shortage of crucial facilities like seclusion rooms, specialised staff, resources and minimal budget is allocated to these units. Nursing staff in these units are faced with a number of challenges such as shortage of staff, patient overflow, prolonged patient stay, psychologically disturbed patients who can be agitated and violent, and are working long hours. Therefore, *Compassion Satisfaction* may be affected and these nurses are prone to Compassion Fatigue, which can lead to low Professional Quality of Life.

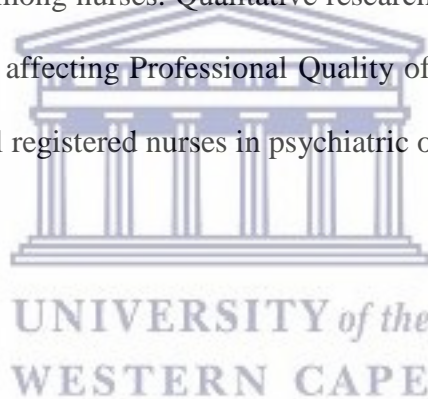
**Aim & objectives:** The aim was to investigate Professional Quality of Life among nurses working in psychiatric observation units in Metropole District Health Services in the Western Cape Metropole. The objectives were to measure *Compassion Satisfaction*, to measure levels of *Burnout* and determine levels of *Secondary Traumatic Stress* among nurses working in psychiatric observation units in the Metropole District Health Services.

**Method:** A quantitative research approach using a descriptive design was used to determine the Professional Quality of Life of nurses working in psychiatric observation units in the Metropole District Health Services. A self-administered survey using a structured questionnaire, the Professional Quality of Life version 5 (ProQoL 5) was used to collect data

from an all-inclusive sample of 175 nurses, yielding a response rate of 93% (n=163). Data was analysed using the Statistical Package of Social Services (SPSS) version 24.

**Findings:** The findings of this study showed that respondents experienced moderate *Compassion Satisfaction*, moderate *Burnout* and high *Secondary Traumatic Stress*. Advanced psychiatric nurse practitioners and registered nurses reported lower *Compassion Satisfaction*, higher *Burnout* and higher *Secondary Traumatic Stress* than enrolled nurses and enrolled nursing assistants.

**Recommendations:** Qualitative research studies need to be conducted on nurses working in psychiatric observation units in order to understand experiences and factors affecting Professional Quality of Life among nurses. Qualitative research studies need to be conducted in order to understand factors affecting Professional Quality of Life of advanced psychiatric nurse practitioners and general registered nurses in psychiatric observations units.



## KEYWORDS

Burnout

Compassion Fatigue

Compassion Satisfaction

District hospital

Mental health care user

Metropole District Health Services

Mental Health Care Act

Professional Quality of Life

Secondary Traumatic Stress



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## ABBREVIATIONS

KZN – KwaZulu-Natal

MHCA – Mental Health Care Act

MHCUs- Mental Health Care Users

MDHS – Metro District Health Services

ProQoL – Professional Quality of Life

PTSD – Post Traumatic Stress Disorder



## DECLARATION

I declare that the study, **Professional Quality of Life among nurses in psychiatric observation units, in the Metropole District Health Service**, is my original work, that it has not been submitted for any degree or examination at any other University, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Full name: Siyavuya Maila

Date: May 2019

Signed:



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## DEDICATION

I dedicate this study to Mitchell's Plain Hospital. I hereby express my sincere gratitude to the management of the Mitchell's Plain Hospital, under the leadership of Mrs Aletta Brown – this is for you. Thank you for sending me to study Advanced Psychiatric Nursing Science in 2016. You opened my academic doors. I am deeply indebted in you.



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Thank you so very much to the heads of the eight hospitals for allowing me into their institutions. To the nurses who participated in my study, I thank you, dear colleagues. I have gained a lot of knowledge. Sr AR Williams (5B), Sr N Gxabela (LAPRU) and the entire ward 5 B and LAPRU staff in Lentegeur Psychiatric Hospital, thank you for the support and for always allowing me to attend class when the need arose.

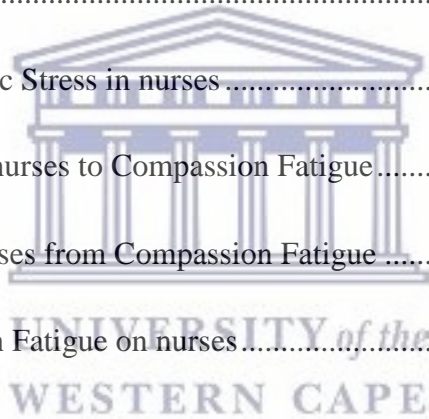
My colleagues, Anathi Tununu and Zintle Sobekwa, you were of great help whenever I needed it. Shoemeney Simmie Cloete, we have been in this game together since 2016 in Advanced Psychiatry; forward we go. To staff in LAPRU Jacqueline Vlotman, Mpho Lerotha, Confidence Maxhwele, Sanele Gwala and Mr Albert Rossouw, you deserve a special mention. Luyanda Mto, my good friend, and Jennifer Nteyi, I wouldn't have registered without the two of you. Skeem Sami Sisonke (Jennifer, Luyanda, Theresa, Khuthazwa Madolo, Xolelani Mphafa, Unam Rozani, Nangamso Chauke, Mandilakhe Walaza and Phelo Mafalala), thank you guys. Lastly, many thanks, to the Ada and Bertie Levestein Bursary for funding my studies.



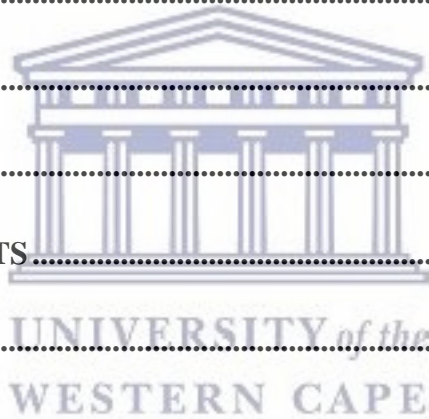
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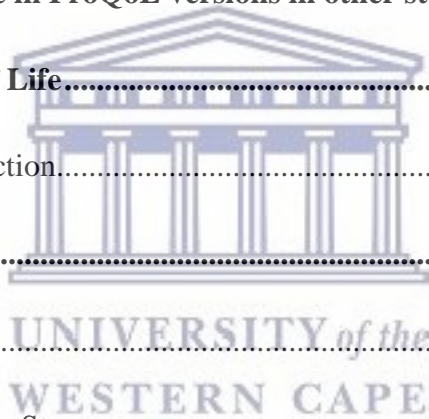
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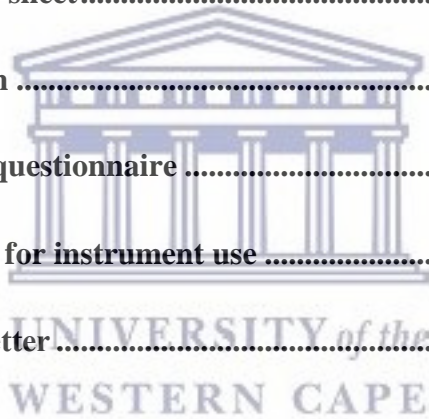
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# CHAPTER ONE: ORIENTATION TO THE STUDY

## 1.1 Introduction

Professional Quality of Life is the pleasure care providers derive from their work, Professional Quality of Life is comprised of two constructs, *Compassion Satisfaction* and *Compassion Fatigue*; *Compassion Fatigue* splits into two components: *Burnout* and *Secondary Traumatic Stress* (Stamm, 2010). Both the positive and negative aspects of doing one's job influence ones ProQoL (Stamm, 2010). Professional Quality of Life is affected by *Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress* in daily working lives; *Compassion Satisfaction* refers to the joy or fulfilment a care provider attains from helping and caring for others (Stamm, 2010). *Burnout* is defined as continuous exposure to an emotional, stressful and maladaptive occupational environment, whereby challenging and interesting tasks turn into depressing and pointless ones (Khamisa, Oldenburg, Peltzer, & Ilic, 2015). *Secondary Traumatic Stress* refers to stress associated with one's work, in which one is subjected to traumatic experiences in their job or through the trauma that has been experienced by their clients; is related to specific incidents and manifests with acute symptoms such as panic, sleep disturbances, intrusive thoughts and flashbacks (Stamm, 2010).

Khamisa et al. (2015) contends that occupational stress may be due to factors such as ineffective administration, shortage of resources, conflict amongst staff, challenging patients, excessive workload, working shifts and weekends, which may be linked to occupational stress and *Burnout*. Health care providers affected by *Burnout* and *Secondary Traumatic Stress* can negatively affect the institution as they tend take time off, have low job satisfaction and poor work performance, which may result in poor patient care (Ray, Wong, White, & Heaslip, 2013).

## 1.2 Background

Psychiatric observation units are based in district and some of the regional hospitals, where 72-hour psychiatric observation period takes place, and are a port of entry for users who require admission into mental health care services. People suspected to be mentally ill are admitted into these units to be observed, to exclude underlying medical conditions and to manage before they can be transferred to tertiary psychiatric hospitals, if required. The main aims of admitting patients into district hospitals are to ensure that mental health care is integrated into general health and that patients are cared for, receive treatment and are rehabilitated closer to the communities (Mental Health Care Act, 2002). Mental health care users patients may be aggressive and agitated for various reasons, such as: being admitted against their will, admission for social and behavioural control such as psychotic or mood disorders, being a danger to themselves and others, or, at times, substance abuse (Plüddemann, Flisher, Mcketin, Parry, & Lombard, 2010; Thomas, Cloete, Kidd, & Lategan, 2015). Caring for aggressive, psychologically disturbed, unpredictable and involuntary admitted patients may place the nurses working in the psychiatric observation units in danger, as the nurses spend the most time with the patients.

Nurses working in these units may be exposed to aggression, increased patient load, prolonged stay of patients and shortage of nursing staff (Ramlall, Chipps, & Mars, 2010; Simpson & Chipps, 2012). In addition to these challenges, there may be a shortage of nurses who are specialised in basic and advanced psychiatric nursing, doctors specialised in psychiatry and a lack of resources such as infrastructure, adding to the strain felt by nurses in these units (Ramlall et al., 2010; Simpson & Chipps, 2012) and other health allied professionals like social workers, psychologists and occupational therapists. The challenges that nurses face may create difficulty in the implementation of the MHCA 2002 and the 72-hour assessment guidelines. Psychiatric disorders are increasing, and the Western Cape Province has been found to be the



most severely affected in SA (Herman et al., 2009). The situation is worsened by the abuse of illicit substance (Thomas et al., 2015). Based on the above, nurses working in psychiatric observation units may be negatively impacted, resulting in Compassion Fatigue (*Burnout and Secondary Traumatic Stress*), which may lead to low Professional Quality of Life.

### **1.2.1 Mental health care transformation**

Exploitation of psychiatric patients was extremely high under the Mental Health Act No. 18 of 1973 (MHA 1973). Minimal suspicion of mental disturbance was sufficient rationale to certify an individual. Anyone over 18 years of age, even a stranger could get a person admitted into a psychiatric institution for a substantial amount of time (Burns, 2008). Burns (2008) further posits that the MHA 1973 infringed on the human rights of mental health patients by treating them in psychiatric institutions. In addition, mental health care services were run parallel to general health care in South Africa; MHCUs were treated in isolated psychiatric hospitals far from the communities before mental health care services were incorporated into primary health care services (Chippis & Ramlall, 2012).

The integration of mental health care services into primary health care ensured that mental health care services were provided closer to the community and averted prolonged stays in the psychiatric institutions. The Mental Health Care Act No. 17 of 2002 (MHCA 2002) selected specific general hospitals to render psychiatric services for involuntary and assisted care, treatment and rehabilitation for 72 hours, and exclusion of general medical illness; where necessary refer to a psychiatric hospital. The units in these hospitals assess, treat and rehabilitate; and discharge MHCUs at the district level, only about 30% of patients can be transferred to the tertiary psychiatric hospitals; and that leads to overcrowding. Scarcity of resources makes it difficult to fully execute the plan, and high patient turnover and overflow necessitates longer stays (Ramlall et al., 2010). Therefore, this initiative to restore and treat

MHCUs with respect and dignity, and to treat them closer to the community, brought with it many challenges and strain for general hospitals and nurses.

Mental health care plays a pivotal role in the wellbeing of society and the health care system, psychiatric disorders are one of the major problems and rated third in terms of burden of disease in South Africa. They also have a severe negative effect on the health budget (Ramlall et al., 2010).

### **1.2.2 The Mental Health Care Act No. 17 of 2002**

The MHCA 2002 was introduced was to protect the best interests of MHCUs, bring about the acknowledgement and respect of their rights, and give them community-based care. This deinstitutionalisation and rehabilitative care in mental health care services came at the dawn of democracy in South Africa, with health care provision at community level being stipulated in the 1997 White Paper for the transformation of the health system and the passage of the MHCA 2002 (Burns, Durkin & Nicholas, 2009; Petersen et al., 2009). Compared to the MHA, the new Act requires a person applying for an admission of someone suspected to be mentally ill to have a relationship with the individual and to have seen him/her within a period of seven days of the application. Two mental health care practitioners then need to assess the patient, and one of them must be able to conduct a physical assessment. If their findings concur, the 72-hour assessment period can commence. Otherwise, a third mental health care practitioner also has to conduct an assessment. A review board must be established for all health care establishments to aid in protection of users, their interests and other factors as stipulated in the MHCA 2002. “In terms of Section 19, these Boards have an oversight function: they monitor and control admissions to care establishments; they inspect such establishments, and further hear representations and complaints from MHCUs and their families as well from staff” (Simpson & Chipps, 2012).

The admission criteria need to be strictly followed. Although they are important, they add workload to nurses, who are already affected by a shortage of staff and some lack training in psychiatry.

### **1.2.3 Challenges with implementation of the Mental Health Care Act**

The implementation of the MHCA 2002 regarding integration of mental health care services into general health was not without challenges. Among these are a lack of resources such as nurses and doctors specialised in psychiatry, facilities such as seclusion rooms and wards suitable to admit patients with psychological disturbances, and overflow in 72-hour assessment units. The collaboration and the approach came with a number of changes, which included allocation of increased budget and resources for provision of infrastructure, training and producing skilled staff. Changes in overall attitudes took time and were costly. They negatively affected mental health care providers by increasing workload and exacerbating the lack of resources, which added to their stress (Ramlall et al., 2010). These challenges have been experienced by both MHCUs and the nurses, leading to difficulty in properly implementing the Act.

The implementation of the 72-hour assessment in general hospitals also came with challenges in the district hospitals in all provinces (Burns, 2008). However, it was of paramount importance that the assessment to be implemented, as under the MHA, patients had been admitted into psychiatric care despite the fact that the underlying cause of their mental illness was a medical condition. Burns (2008) contends that the 72-hour assessment at a district hospital is advantageous as the patients suspected of mental illness are assessed by medical officers who can exclude any pathological causes of mental illness.

Ramlall et al. (2010) found that 27.77% of the designated hospitals did not have psychiatric units, 41.6% did not have exclusive beds for MHCUs, and 55% lacked facilities like seclusion

rooms. Some of the units depended on staff from the general ward, who do not have the necessary training and experience to deal with patients that are at risk of self-harm, harm to others or to staff (Ramlall et al., 2010). Lack of human resources such as a complete multidisciplinary team (psychologists, social workers and occupational therapists) in the psychiatric observation units at district level may have been the cause of aggression and violence. Therefore, nurses are faced with violence and abuse from MHCUs as well as stressors from the working conditions and flaws in the system (Plüddemann et al., 2013), which, as literature indicates, can lead to *Secondary Traumatic Stress* and *Burnout*.

Researchers, Thomas, Cloete, Kidd and Lategan (2015) conducted a study encompassing demographic data, clinical diagnosis, length of stay, referral profile and outcomes of patients admitted under the MHCA (2002) for the period 11 January 2011 to December 2011 in a general hospital in the Western Cape. Thomas et al. (2015) found that mental health care providers dealt with a number of issues such as involuntarily admitted MHCUs escaping from the ward (n=184, 38%) and substance-related disorders (n=37, 57%). Oser et al. (2013) cited Covington (2007), who reported that health care providers in psychiatric units were more prone to emotional exhaustion and occupational stress due to factors like poor remuneration, emotionally demanding jobs, poor insight of MHCUs into their illness and behavioural problems, MCHUs having no place to stay, repeated admissions, forensic history and aggression. Due to the above challenges, the workers in these units are prone to *Secondary Traumatic Stress* and *Burnout*.

#### **1.2.4 Challenges with the 72-hour assessment observation period**

District hospitals are those closest to communities in terms of geographical location. These hospitals also serve as referral points of for clinics and community health centres. Patients who present with medical or surgical emergencies which cannot be managed in a community health

centres are usually taken to the district hospital. Patients who are admitted for a 72-hour assessment period in accordance with the MHCA 2002, as amended, are initially treated in the trauma and emergency units before being transferred to the psychiatric observation units. This implies that part of the 72-hour assessment period takes place in the trauma unit. Burns (2008) contends that the observation could be hampered by sedatives given to the MHCUs to contain their disturbed behaviour in trauma and emergency units, as they may pose a danger to health care providers, other patients or themselves. Sedation to control the MHCUs happens more often when the patients are still in the trauma and emergency units, because in this setting, the environment is not conducive to controlling the MHCUs as most cases present with disturbed behaviours and the patients tend to be physically ill. Furthermore, the lack of infrastructural resources like seclusion rooms and specialised personnel trained in psychiatry in these district hospitals results in difficulties in effective management of MHCUs.

Assessment of MHCUs as stipulated by the MHCA 2002 may not be conducted adequately in the district hospitals due to the workload, patients presenting with medical emergencies and the stigma attached to mental illness. The staff may display reluctance to complete the admission forms according to the MHCA 2002 as this process may be deemed an additional workload. Burns et al. (2009) assert that the shortage of health care providers trained in psychiatric nursing has a negative impact, and that lack of knowledge of the MHCA 2002 forms, inadequate knowledge about the MHCA 2002 and lack of support agencies such as security personnel and police services increase the burden. In addition, these factors may result in pressure on nurses and delays in the movement of MHCUs from trauma and emergency units to psychiatric observation units and to tertiary psychiatric hospitals.

Mental health care is afforded low priority, and policy makers are unable to translate the principles enshrined in the MHCA 2002 into implementable policies (Simpson & Chipps, 2012). Inadequate care at district hospitals not only violates the rights of MHCUs to adequate

care and treatment, but it also puts other health care users at risk. The lack of community services for families and the burden of caring for a family member with psychiatric problems take their toll on the family, and there is a risk that the human rights of both the family and the MHCU may be violated (Simpson & Chipps, 2012).

### **1.2.5 Challenges with 72-hour assessment units in general hospitals**

Nurses working in psychiatric observation units spend most of their time in the units. These nurses are not only affected by the patients or the implementation of the Act; as discussed above, they are also affected by budget shortages, lack of infrastructure and trained personnel in psychiatry, among other things. Conflict with the referring wards, such as general and emergency wards, has been cited, regrettably adding to the strain felt by psychiatric nurses. When nurses in general wards have patients with psychological problems, they are reluctant and fearful to care for them. Even when the mental illness is under control, poor attention is given and the patients may simply be referred to a psychiatric ward. Fights may ensue among staff in the different wards over unnecessary referrals (Mavundla & Uys, 1997).

Nurses in psychiatric observation units are exposed to aggression and abuse, and about 70% of them experience violence from their patients (Lauvrud, Nonstad, & Palmstierna, 2009). One of the major contributing factors to abuse towards nurses could be that they are the professionals who spend most of the time with patients, patients are admitted without their consent, some are intoxicated and others may be acutely psychotic. Joyce, Oladotun, Afolabi and Blessing (2016) assert that nurses in psychiatric units are prone to abuse due to the nature of the patients they care for. These patients' thought processes and emotions are severely impaired due to mental disorder. Lauvrud et al. (2009) state that the fact that psychiatric nurses admit patients involuntarily and keep them against their will often leads to an unpleasant working environment as patients act out, leading to nurses feeling fearful, worried or nervous. These



nurses are under constant pressure because they have to be empathic, to care for and nurse patients with varied mental and psychological challenges (Schulz et al., 1997; Ohaeri, 2003) cited by (Rossi et al., 2012).

Aggression towards psychiatric nurses affects them mentally and emotionally. These effects can be long-lasting; nurses may not be keen to work in the setting and high rates of Compassion Fatigue may result (Lauvrud et al., 2009). Similarly, Joyce et al. (2016) argue that brutality, cruelty towards nurses, shortage of staff and high workload, stressful work environment and poor social support were found to lead to Compassion Fatigue. This can simply be attributed to the working conditions in these units, which are unfavourable and may negatively affect their health. Nurses in a psychiatric setting are exposed to continuous difficult working conditions that may lead to mental and or emotional problems, which may be a result of prolonged exposure to direct and indirect trauma in the units (Christodoulou-Fella, Middleton, Papathanassoglou, & Karanikola, 2017).

Lauvrud et al. (2009) found that nurses working in psychiatric units did not necessarily have post-traumatic stress disorder, but they had some symptoms. Among nurses who had recently experienced aggression, 17% had PTSD and more than 10% had symptoms that continued for a half a year (Richter, 2006) cited by (Lauvrud et al., 2009).

### **1.3 Problem statement**

According to the MHCA 2002, as amended, patients suspected of having a mental illness who require admission involuntarily must be admitted to selected regional and district hospitals for care (Chippis & Ramlall, 2010; Thomas et al., 2015). The Act also aims to provide treatment and rehabilitation for a period of 72 hours closer to the community, to integrate mental health into general health and to exclude organic pathology and intoxication before transferring the patient to a psychiatric institution (Chippis & Ramlall, 2010; Thomas et al., 2015).

Despite this legislated imperative, Ramlall et al. (2010) found that almost 70% of district hospitals had inadequate or limited financial, infrastructure and human resources. This can result in an increase of patients in the unit with acute behavioural problems, such as attention seeking, demanding, manipulative, psychosis, suicidal and homicidal behaviours (Klonsky, 2007). Not having training in psychiatric nursing and having to provide acute mental health care predisposes nurses to emotional and physical exhaustion, resulting in *Burnout* and *Secondary Traumatic Stress* (Chipps & Ramlall, 2012).

Staff members who are subjected to constant demanding work with immense pressure have a greater chance of being physically and mentally exhausted, resulting in *Burnout* and occupational stress (Khamisa et al., 2015). Most studies conducted have been regarding job satisfaction, *Burnout* and occupational stress in general, psychiatric and community settings. This study will investigate Professional Quality of Life among nurses in psychiatric observation units in the Metropole District Health Services.

#### **1.4 Aim**

The aim is to investigate Professional Quality of Life among nurses working in psychiatric observation units in the Metropole District Health Services.

#### **1.5 Objectives of the study**

1. Measure *Compassion Satisfaction*,
2. Measure levels of *Burnout* and
3. Determine levels of *Secondary Traumatic Stress* among nurses in psychiatric observation units in the Metropole District Health Services.



## **1.6 Significance of the study**

The findings may add to the body of literature about Professional Quality of Life among nurses in psychiatric observation units. Nursing students will be educated and academics will gain more information about Professional Quality of Life. Nursing management and nurses in the eight hospitals could gain understanding of Professional Quality of Life among nurses in psychiatric observation units, and come up with strategies to support and help nurses prevent, identify early signs and manage Compassion Fatigue in practice.

## **1.7 Research methodology**

The research approach used in this study was quantitative, using a descriptive survey. Professional Quality of Life version 5 (ProQoL 5) was used to collect data. The research approach, design and instrument will be discussed in detail in chapter three.

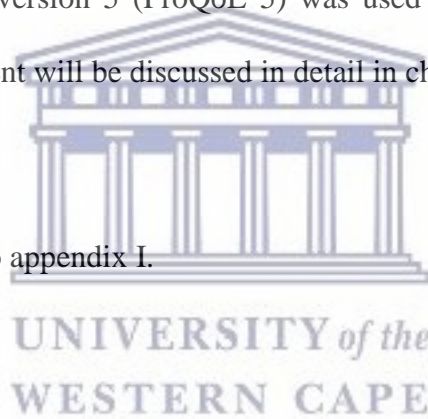
## **1.8 Definition of terms**

For definition of terms refer to appendix I.

## **1.9 Outline of the study**

The outline of the study is as follows:

- Chapter one profiles the study by way of an introduction, background, problem of statement, definition of terms, the aim, objectives and methodology of the proposed study.
- Chapter two delineates the literature review, which entails an introduction, nurses working in psychiatric observation units, the mental care act in the Apartheid era and Democratic South Africa, challenges in 72-hour assessment, Professional Quality of Life, *Compassion Satisfaction*, *Compassion Fatigue*, *Burnout*,



*Secondary Traumatic Stress*, Predisposing and protective factors and the impact of Compassion Fatigue.

Chapter three describes the methodology that was used to achieve the aim and objectives.

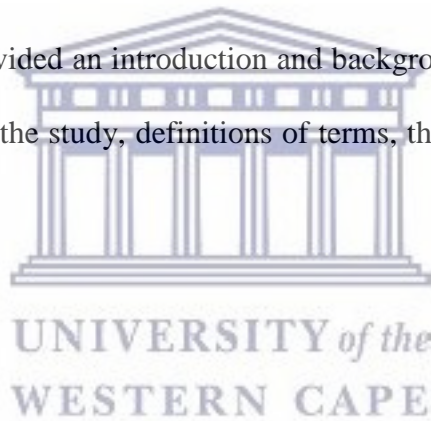
Chapter four delineates the findings of this study.

Chapter five discusses the findings in relation to previous studies.

Chapter six consists of the study summary, conclusion, findings, recommendations regarding practice and research, and the limitations of this study.

### **1.10 Summary**

In this chapter, the author provided an introduction and background to the study, the problem statement, the significance of the study, definitions of terms, the aim and objectives, method and design.



## CHAPTER TWO: LITERATURE REVIEW

### 2.1 Introduction

Literature review is defined as the process whereby the author orientates and acquaints the reader with data, found through research by the scholars, regarding the study being perused (Brink, Van der Walt & Van Rensburg, 2012).

In the process of literature review, the researcher used the online library of the University of the Western Cape (Ukwazi search) and electronic databases such as EbscoHost, Google Scholar, MEDLINE, the US National Library of Medicine, National Institutes of Health, PubMed, ScienceDirect and Wiley Online Library. The author also requested some of the articles by sending a message to the authors through ResearchGate ([www.researchgate.net](http://www.researchgate.net)).

The search terms used in the process of searching the literature were Professional Quality of Life, *Compassion Satisfaction*, *Compassion Fatigue*, *Burnout*, *Secondary Traumatic Stress*, psychiatric nurses, psychiatric units, 72-hour assessment units, mental health care act, violence and aggression on nurses.

The researcher searched topics that may have been related or similar to the title of the study or any of its objectives. The researcher then scrutinised the abstracts of the articles and briefly perused the articles to assess their relevance to the current study. The researcher reviewed these articles and the written literature to check for accuracy, thoroughness, relevance to the study and how recent they were.

The literature review will be structured as follows: The first part will be on Professional Quality of Life, followed by the components of Professional Quality of Life for nurses, namely *Compassion Satisfaction* and *Compassion Fatigue*. The two domains of *Compassion Fatigue*, *Burnout* and *Secondary Traumatic Stress*, will then be discussed, followed by the factors

predisposing nurses to Compassion Fatigue, factors protecting nurses from Compassion Fatigue and the impact of Compassion Fatigue.

## **2.2 Professional Quality of Life of nurses**

Professional Quality of Life refers to the quality a person derives in context of his/her work as a care provider, and incorporates two components, the positive (*Compassion Satisfaction*) and the negative (*Compassion Fatigue*) (Stamm, 2010). *Compassion Satisfaction* refers to the pleasure one derives from being able to do one's work well (Stamm, 2010). *Compassion Fatigue* breaks into two components: *Burnout* and *Secondary Traumatic Stress*. *Burnout* is associated with exhaustion, frustration, anger and depressive symptoms, and *Secondary Traumatic Stress* is defined as negative feelings resulting from fear and work-related trauma, which can be primary or secondary (Stamm, 2010).

Kim, Han, Kwak and Kim (2015) assert that people in helping/caring professions like nursing often experience *Compassion Fatigue*, which affects them physically and psychologically, and in turn affects their performance as caregivers. This could be caused by the fact that nurses get emotionally involved in the suffering of patients, with the therapeutic relationships they need to build making them vulnerable. In addition, due to the demands placed on the health care system, nurses are prone to low Professional Quality of Life, which may also affect their performance in their care for patients (Kim et al., 2015).

Mangoulia et al. (2015) conducted a study to investigate the prevalence of *Secondary Traumatic Stress* among 174 psychiatric nurses in 12 public hospitals in Greece. The authors concluded that almost two thirds (64.9%) of the psychiatric nurses had low *Compassion Satisfaction*, almost 50% had increased exposure to *Burnout* and 44.8% had increased risk for *Secondary Traumatic Stress*. Joyce et al. (2016), in their study investigating factors influencing the Professional Quality of Life of 234 mental health professionals in Nigeria, found that

participants who had encountered violence from their patients were prone to *Secondary Traumatic Stress*.

Due to limited literature on studies conducted on Professional Quality of Life among nurses in psychiatry, focus was also given to the general population of nurses. There is limited literature focusing on *Compassion Satisfaction* and even less that focuses on Compassion Fatigue (Ray et al., 2013). Nurses in midwifery and obstetrics were found to be averagely affected by *Secondary Traumatic Stress*, at 35% of all participants (Beck, 2011).

Adeyemo et al. (2015) inferred that participants with life partners scored higher in Professional Quality of Life, as they may have an opportunity to ventilate at home and come up with better coping strategies. A conducive work environment and good relations with colleagues contributed positively to the Professional Quality of Life of the participants, whereas participants with poor working relations with colleagues and poor social support scored poorly on Professional Quality of Life (Murray et al., 2009 cited by Adeyemo et al., 2015). Kim et al. (2015) found that nurses who were older, had been in the profession longer, and were married, religious, well-educated and higher in their employment hierarchy scored higher on Professional Quality of Life.

### **2.3 Compassion Satisfaction in nurses**

*Compassion Satisfaction* is the gratification or contentment a carer acquires from caring for others. For example, when nurses render care to alleviate pain and suffering from the ill, this can lead to happiness and fulfilment (Mangoulia et al., 2015). Furthermore, the researchers assert that *Compassion Satisfaction* is a good protective factor for Compassion Fatigue.

High *Compassion Satisfaction* has the advantages that quality and effective nursing care can be rendered, and nurses are positive and more compassionate in their care. Nurses with high *Compassion Satisfaction* interacted well with patients, their families and multidisciplinary

teams, and approached the work environment with a more positive and peaceful spirit (Kim et al., 2015). *Compassion Satisfaction* encompasses a wide range of aspects, such as the fulfilment nurses get from the work they do. Skills, knowledge and the ability to do their work may have positive effects on nurses, as may good spirits, teamwork, administration and good systems (Stamm, 2002 cited by Sodeke-Gregson, Holttum, & Billings, 2013).

*Compassion Satisfaction* can be achieved by continuous assessment of the work environment, the relationship between nurses and patients or a particular illness, the nurses' resilience, their hobbies and coping strategies, and responding well to challenges and matters at hand (Lambardo & Eyre, 2011). Kim et al. (2015) found having competency in one's work, ability to deliver quality nursing care and having a therapeutic environment for healing led to nurses experiencing higher *Compassion Satisfaction*.

Lambardo and Eyre (2011) suggest that orientation of new nurses, allocating experienced and specialised nurses with juniors, regular in-service training, working flexible hours and taking regular vacations could assist in increasing *Compassion Satisfaction* and reducing *Compassion Fatigue*. In ensuring nurses score high in Professional Quality of Life, they need to ensure that they care for themselves in totality, ensuring that their spiritual, physical, emotional and psychological needs are met (Lambardo & Eyre, 2011). Healthy eating habits, adequate sleep and exercise are also important, and the hospitals can assist by providing therapeutic resting rooms and debriefing sessions where nurses can ventilate and support one another (Lambardo & Eyre, 2011). A conducive work environment and strong social supports at work, home and in the community lead to *Compassion Satisfaction* (Adeyemo et al., 2015).

#### **2.4 Compassion Fatigue in nurses**

Compassion Fatigue refers to the negative effects that result from constant exposure to caring for people suffering both psychologically and physically, leading to the care provider becoming

physically and psychologically exhausted, which in turn results in reduction of compassionate care (Anewalt, 2009 and Figley, 1995 cited by Lombardo & Eyre, 2011). Nurses may render compassionate care, but constant exposure to ailing people may lead to post traumatic stress, exhaustion and *Burnout* (Sacco et al., 2015). Nurses are expected to be empathetic and compassionate, which can have negative effects on them, especially when faced with critical and traumatic situations, leading to Compassion Fatigue (Duarte, 2016).

Tay et al. (2014) contend that, compared to other health care professionals, nurses are particularly prone to Compassion Fatigue because they spend most of their time with patients, and nurses are the first line of contact with ailing patients. Compassion Fatigue among nurses is attributed to scarcity of essential requirements in hospitals like skilled staff, equipment and adequate budget (Duarte & Pinto-Gouveia, 2016). Tay et al. (2014), like other researchers, note that nurses affected by Compassion Fatigue exhibit constant errors in their work, poor attendance and poor productivity.

Nursing management and nurses specialised in psychiatry and mental health need to be supportive and be able to identify nurses in the unit that may be prone to Compassion Fatigue, as well as factors that predispose nurses to Compassion Fatigue (Lambardo & Eyre, 2011). Nurses need to be educated and made aware of Compassion Fatigue and its symptoms in order to detect it early and play a role in preventing it (Kim et al., 2015). Lambardo and Eyre (2011) cited Koloroutis (2007), who contends that in order to manage and prevent Compassion Fatigue, a therapeutic nurse-patient relationship is important because the nurses have the power to be self-aware and conscious, aware of their surroundings, including the needs of the patient and the family. Lambardo and Eyre (2011) state that one measure to avert and manage Compassion Fatigue in nurses is to ensure that nurses effectively communicate and interact with one another, empowering them to detect early signs of *Burnout* and *Secondary Traumatic Stress* and manage stressors effectively.



Prevention of Compassion Fatigue goes beyond addressing work-related issues, and it may be necessary to provide coaching in management of time, financial management, dealing with and managing familial issues, and appropriate ways to address issues and life stressors (Lambardo & Eyre, 2011).

Compassion Fatigue consists of two components *Burnout* and *Secondary Traumatic Stress* (Stamm, 2010).

#### **2.4.1 Burnout in nurses**

Regular occurrence of a cluster of symptoms, such as feeling drained, emotionally worn-out, scepticism and inability to produce desired effects by caring professionals, is defined as *Burnout* by Maslach & Jackson (1981). *Burnout* levels in psychiatric nurses have been found to be high due to the therapeutic relationship, in which compassion and empathy are necessary, because nurses need to address the emotional problems users and their families present with (Zapf, Seifert, Schmutte, Mertini, & Holz, 2001 cited by Garcia et al., 2015). According to Garcia et al. (2015), health care workers in psychiatry are more prone to *Burnout* than any other professionals in the health care sector. Regrettably, this impacts negatively on their work output. Similarly, Rossi et al. (2012) found psychiatrists and social workers to be more burnt out than any other professionals.

In a systematic review of almost 20 quantitative studies conducted from 1987 to 2012, more than a quarter of trauma and emergency nurses reported *Burnout*, just over a quarter reported emotional fatigue, more than a third (35%) reported cynicism, and almost 30% reported inability to accomplish desired effects (Gucht, Maes, & Adriaenssens, 2015). Therefore, attention needs to be given to *Burnout* in the nursing profession as a whole, for the sake of the nurses, the institutions and especially the patients. According to Khamisa et al. (2015), nurses attributed *Burnout* to increased workload in the wards, patient overflow accompanied by tons



of paperwork, management of assets essential for running the unit (like stock), and nurses that are not productive in the units.

*Burnout* has detrimental effects on psychiatric nurses, both physiological and psychological, which can affect their sense of compassion and thus negatively impact on the institution (Gucht et al., 2015). Rossi et al. (2012) found that psychiatric nurses who had been exposed to trauma more than once had higher *Burnout* levels than those who had not experienced traumatic events, and those who had problems and were unhappy had higher *Burnout* levels than those who did not. Nurses who had specialised in psychiatric nursing and had studied beyond honours level had higher *Burnout* levels than nurses who did not (Rossi et al., 2012).

According to Gucht et al. (2015), variables such as the sex, age and income of nurses, tolerance to stress and adaptation to demanding situation and events that cause physical, psychological or spiritual harm, can foretell *Burnout*. The researchers also mentioned independence of nurses, working relations, institutional or unit factors and management strategies as potential contributing factors to nurse *Burnout*. Sabbah, Sabbah, Sabbah, Akoum and Droubi (2012) conducted a study in seven hospitals in South Lebanon on nurses. They found that older nurses, married nurses and those with longer experience were at higher risk of *Burnout*.

#### **2.4.2 Secondary Traumatic Stress in nurses**

*Secondary Traumatic Stress* has been recognised as a public health priority and should be treated with the urgency and attention it deserves to ensure the wellbeing of workers. Literature has shown that if the good health of health care workers is ensured, quality care is rendered (Christodoulou-Fella et al., 2017). Nurses experience more *Secondary Traumatic Stress* than other health care worker, resulting in poor quality and hazardous care to their patients and low Professional Quality of Life and health problems for them as care providers (Christodoulou-Fella et al., 2017). Poor relationships with fellow nurses were reported by all categories of

nurses as a contributing factor to *Secondary Traumatic Stress* (Khamisa et al., 2015). Mangoulia et al. (2015) state that two studies with an 11-year interval between them (one in 1995 and the other 2006) found that *Secondary Traumatic Stress* was higher in females in all professions and categories. The researchers further found that male nursing staff had lesser chances of developing Compassion Fatigue than females.

Surprisingly, Mangoulia et al. (2015) found that stress management sessions and debriefing sessions conducted by qualified personnel did not make any difference in *Secondary Traumatic Stress*, although they noted that O'Halloran & Linton (2000) had postulated that healthy lifestyle and attending stress management and debriefing sessions reduce *Secondary Traumatic Stress*.

Robins, Meltzer and Zelikovsky (2009) found that almost 40% of the health care providers working in a children's hospital who had experienced trauma had a greater chance of developing *Secondary Traumatic Stress*, while 21% had high chances of developing *Burnout*. Nurses are susceptible to *Secondary Traumatic Stress* because they have to understand and share the patient's experience, as they have to form a special bond and walk the same path with the patients in the healing process (Sabin-Farrell and Turpin, 2003 as cited by Robins et al., 2009). Beck (2011) contends that *Secondary Traumatic Stress* can be experienced by a health care provider due to direct exposure to traumatic experience or caring for a traumatised individual. Beck (2011) further cited Figley (1995), who argued that the therapeutic relationship formed with the traumatised individual, previous traumatic experience by the nurse, underlying trauma being revived by that of a patient, and inability to bare unpleasant experiences can cause *Secondary Traumatic Stress*.

Awareness about *Secondary Traumatic Stress* is important to curb *Secondary Traumatic Stress*. It empowers nurses by educating them on predisposing factors, clinical manifestation, impact

and protective factors (Gates & Gillespie, 2008) cited by (Beck, 2011). Mangoulia et al. (2015) found that nursing qualifications are related to *Secondary Traumatic Stress*, with nursing assistants experiencing higher levels than professional nurses. They deemed educational level as a protective factor. Another explanation might be that professional nurses play a delegating role and are more concerned with administrative duties in the psychiatric unit like formulation of care plans. Meanwhile, assistant nurses are mainly directly involved in patient care, taking orders from general registered nurses and implementing the formulated care plans.

Beck (2011) postulates that *Secondary Traumatic Stress* may manifest very suddenly. Its clinical manifestation can involve vulnerability and defencelessness, loss of control, bafflement and loneliness. Craun and Bourke (2014) suggest that a relaxed working environment and teamwork can alleviate stress, even in demanding times, which can work to nurses' advantage.

Years of experience and number of patients in the ward have been found to influence *Secondary Traumatic Stress* on nurses. Mangoulia et al. (2015) state that the number of years a nurse has served in the psychiatric unit and the number of patients he/she has looked after were connected to *Secondary Traumatic Stress*. They further postulate that the number of years in the unit should curb *Secondary Traumatic Stress*. However, the greater number of years in the unit could also put nurses at a greater risk for the condition as they maybe have a greater chance of being exposed to critical patients. Longer experience working in the units can have a positive effect in prevention of *Secondary Traumatic Stress* if the nurses are educated about the predisposing factors, warning signs and protective factors of *Secondary Traumatic Stress* (Mangoulia et al., 2015). Furthermore, the patient-nurse ratio should be well balanced, nurses should work appropriate hours and they should take regular vacations.

## 2.5 Factors predisposing nurses to Compassion Fatigue

There are many factors that predispose nurses to Compassion Fatigue, such as the manner in which they handle personal issues and issues at work, the number of hours they work, and the amount of stress in the work environment. Lombardo and Eyre (2011) state that nurses in specialised units like psychiatry are most affected by *Burnout* and *Secondary Traumatic Stress* because they become personally involved in the compassionate and culturally sensitive care they render. Rendering compassionate, holistic, ethical and evidence-based care to a diverse cultural and ethnic clientele causes nurses to be more prone to *Burnout* and *Secondary Traumatic Stress*, said to be the most affected among all professions within health care (Khamisa et al., 2015). Adeyemo et al. (2015) in their study conducted in Nigeria, found that Compassion Fatigue was worsened by pressure at work, overflow and lack of staff trained in mental health care, which had negative effects for mental health care providers and the patients. Mental health care providers with personal problems and stressors at work had high compassion fatigue, and symptoms would be sudden and lead to Compassion Fatigue (Adeyemo et al., 2015). Similarly, Hegney et al. (2014) postulate that the presence of psychiatric mood-related disorders among nurses may make it difficult to manage and prevent the *Secondary Traumatic Stress* and *Burnout*, putting them at even greater risk for Compassion Fatigue. Adeyemo et al. (2015) state that nurses in psychiatric wards are abused physically, emotionally and verbally by their patients due to the nature of their illnesses. Working with aggressive mental health patients lowers *Compassion Satisfaction* among nurses in psychiatric observation units, leading to *Secondary Traumatic Stress* and *Burnout* (Lauvrud et al., 2009).

The admission process, including the mandatory paperwork involved in the admission, care, treatment and rehabilitation of MHCUs, as well as poor working relations with co-workers and stressors on personal lives, were found to be additional factors that contribute to Compassion Fatigue (Adeyemo et al., 2015). Adeyemo et al. (2015) inferred that specific efforts, both

behavioural and psychological, employed by nurses to reduce and tolerate the effects of caring for MHCUs could foretell Compassion Fatigue. Furthermore, the researchers argue that their findings are consistent with those of the researchers they cited.

Ray et al. (2013) contend that poor working relations among staff, poor administration, rigid and long working hours allowing little rest, being in debt and financial issues, and workers having familial issues and ill health increased the chances of *Burnout* and stress. Nursing patients who are psychologically disturbed can be very difficult to care for, even for trained care providers. The process is emotionally and physically draining as their patients are mostly psychologically challenged. This puts the nurses at greater risk for Compassion Fatigue (Adeyemo et al., 2015).

## **2.6 Factors protecting nurses from Compassion Fatigue**

Adeyemo et al. (2015) found that participants who had life partners scored higher on Professional Quality of Life, presumably due to emotional support at home. A link was evident between assault and *Secondary Traumatic Stress* among participants. Good working relations and support among workers decreased the chances of Compassion Fatigue (Murray et al., 2009 cited by Sunday et al., 2015) in comparison with those with poor working relations and lacking social support. Strong relationships at home and at work with co-workers relieved the pressure faced by the participants and they scored higher on *Compassion Satisfaction* (Murray et al., 2009 cited by Adeyemo et al., 2015).

Khamisa et al. (2015) assert that nurses need to be trained on stress management techniques, fairly remunerated and work in a safe environment. Good administration, evidence-informed policies and adherence and engagement of staff in decision-making are cited as protective factors (Khamisa et al., 2015).

Adeyemo et al. (2015) suggest that good management systems, evidence-based policies, continual staff development and training are good measures to prevent Compassion Fatigue. Managers in nursing need to be proactive and continually review measures to support nursing staff and interventions where necessary, as flexibility may be needed when addressing the challenges nurses face that may lead to Compassion Fatigue (Kim et al., 2015).

## **2.7 Impact of Compassion Fatigue on nurses**

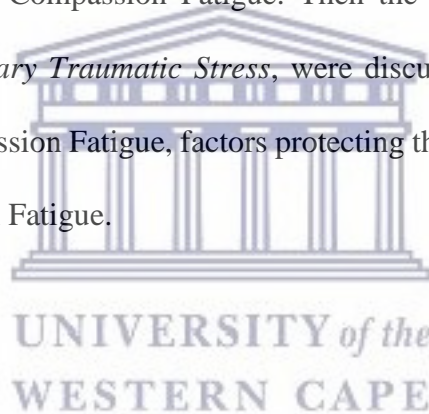
When nurses are affected by Compassion Fatigue, their observations, judgment and compassion regarding their patients declines (Kim et al., 2015). Furthermore, their clinical competency and skills tend to be affected, and participation in the multidisciplinary team declines due to Compassion Fatigue. Nurses who reported Compassion Fatigue generally performed poorly in their work, could not see progress in their patients and lacked connection and empathy with their patients (Austin et al., 2009 cited by Adeyemo et al., 2015). Christodoulou-Fella et al. (2017) argues that Compassion Fatigue affects the individual in totality, which may include expression of emotions and mental wellbeing. The individual may be physically tired, perform tasks poorly and not feel like coming to work, resulting in a high absenteeism rate. Compassion Fatigue negatively impacts interaction and relations between nurses and other multidisciplinary team members, patients and family members. Effective communications and good relations are core aspects of effective nursing care and empathy (Christodoulou-Fella et al., 2017). Compassion Fatigue may affect the personal lives of nurses, leading to maladaptive behaviours such as substance abuse, irritability and aggression, family disorganisation and relationship problems (Tay et al., 2014). Mental health problems may manifest, such as feelings of rejection, hopelessness and dejection, fearfulness and worry, or at times thinking of ending one's own life (Tay et al., 2014). Therefore, if not managed correctly, Compassion Fatigue may lead to serious psychological issues such as depression.



Implications of Compassion Fatigue are extreme physical and psychological tiredness, regularly not arriving for work, disinterest in work and decline in productivity. Ultimately, the ones to suffer most are the MHCUs and the caregivers themselves. Adeyemo et al. (2016) recommend that the institution do all it can to ensure that nurses are empowered to predict and avert Compassion Fatigue, and provide continuous supporting counselling and post-incident debriefings.

## **2.8 Summary**

The literature review was structured in the following manner: The first part was on Professional Quality of Life, followed by the components of Professional Quality of Life for nurses, namely *Compassion Satisfaction* and *Compassion Fatigue*. Then the two domains of *Compassion Fatigue*, *Burnout* and *Secondary Traumatic Stress*, were discussed, followed by the factors predisposing nurses to *Compassion Fatigue*, factors protecting them from *Compassion Fatigue* and the impact of *Compassion Fatigue*.



## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.1 Introduction**

In chapter three, the researcher describes the methodology that was employed to meet the set objectives for the study. This chapter include the research method and design, the population of the study, the instrument used to collect data, reliability, validity and ethical considerations.

### **3.2. Research approach**

Quantitative, descriptive design was applied to describe Professional Quality of Life among nurses in psychiatric observation units in the Metropole District Health Services. Quantitative research design is informed by the research or hypothesis and the purpose of the study (Brink et al., 2012). Brink et al. (2012) state that quantitative research emanates from the research problem or hypothesis, and a particular purpose that the research is interested in. The researcher opted for quantitative research because of the peculiar approach the research design has, the quality of being factually sound. Its reliability has been tested and can be defined in a clear, detailed manner (Kumar, 2011). The researcher sought to gather data and describe Professional Quality of Life among nurses in psychiatric observation units in the Metropole District Health Services.

### **3.3 Study design**

A descriptive survey research design was used to achieve the aim of this study. Descriptive research designs serve to note, delineate and record the findings of the investigated problem as they occur, without any intervention, and at times to initiate a theory or hypothesis (Polit & Beck, 2017). The research design is a plan, structure and strategy of investigation so conceived as to obtain answers to research questions or problems (Kumar, 2011).

The research design was a descriptive research approach using a self-administered survey and a structured questionnaire to determine the Professional Quality of Life of nurses in psychiatric



observation units in the Metropole District Health Services. The descriptive survey design was the most suitable as participants responded to structured questionnaires (Polit & Beck, 2010). The descriptive design was suitable because the variables were described in order to answer the research question and as they happened (Brink et al., 2012). In addition, the descriptive design may be used to identify the problems within practice (Burns & Grove, 2011:256 and LoBiondo-Wood & Haber, 2010:198 cited by Brink et al., 2012).

### 3.4 Research setting

Research setting is defined as the location/s or region/s where the researcher will collect and assemble the required data (Brink et. al, 2012). This study was conducted in eight hospitals in the Metropole District Health Services. These hospitals are situated in the Cape Town Metropole region. The geographical location is divided into the following substructures: the Southern, Western, Klipfontein/Mitchells Plain, Northern/Tygerberg and Eastern/Khayelitsha substructures. Table 1 outlines the capacity of the hospitals, beds of the psychiatric observation units (both male and female) and substructures referring MHCUs.

**Table 1: Hospitals, bed capacity and substructures**

Hospital	Hospital beds	Male unit beds	Female unit beds	Substructure served
A	330	18	13	Southern/Western
B	65	4	3	Southern
C	180	9	9	Southern
D	230	36	14	Mitchells Plain
E	217	18	18	Northern/Tygerburg
F	162	10	4	Eastern
G	300	34	13	Khayelitsha
H	124	30	20	Eastern

Various general health services are offered by these hospitals, such as trauma and emergency units, general outpatients, medical adult wards, obstetrics, paediatrics, surgical adult wards and

psychiatric observation units. These hospitals were selected as they represent all the hospitals in the metro region that admit involuntary MHCUs for 72-hour assessment, treat them, and, where necessary, refer them to tertiary psychiatric hospitals. Various nursing categories work in these units, including some with advanced psychiatric nursing and basic psychiatric nursing training, as well as some who are not trained in psychiatric nursing. Literature indicates that the psychiatric units in the district hospitals are overcrowded and MHCUs stay longer than the 72 hours stipulated by the MHCA 2002.

### **3.5 Population and sampling**

#### **3.5.1 Sampling and sample size**

Sampling is the exercise whereby the researcher determines a section of the population to represent the entire population (Polit & Beck, 2017). Periodically, the whole population may be taken for a particular study, particularly when the population is quite small (Brink et al., 2012). Because the population in this study is relatively small, with 175 nurses working in psychiatric observation units in the Metropole District Health Services, all-inclusive sampling was used, with a sample size of 175.

#### **3.5.2 Population of the study**

Polit and Beck (2017:249) refer to population as the “entire aggregation of cases in which the researcher is interested”. The population consisted of nurses working in psychiatric observation units in the hospitals within the Metropole District Health Services (N=175) (Table 2).

#### **Table 2: Population of the study**

Hospital	Advanced psychiatric nurse practitioners	General registered nurses	Enrolled Nurses	Enrolled nursing assistants	Total
A	4	4	0	16	24
B	0	4	0	0	4
C	1	9	0	8	18
D	4	9	4	10	27
E	0	9	8	16	33
F	3	4	0	8	15
G	1	13	4	4	22
H	1	7	8	16	32
Total	14	59	24	78	175

Inclusion criteria: General registered nurses specialised in psychiatry, general registered nurses, enrolled nurses and enrolled nursing assistants were included as they are directly involved in patient care.

Exclusion criteria: Area managers and directors of nursing were excluded as they have limited contact with patients.



### 3.6 Data collection

The method of collecting data used by nursing researchers in most cases is self-report, which has structured questions or statements (Polit & Beck, 2017).

#### 3.6.1 Data collection process

Ethics approval was obtained from the Biomedical Research Committee (BMREC) at the University of the Western Cape (UWC) (Appendix II), and permission to access potential respondents was obtained from the Western Cape Department of Health through the National Health Research Database (NHRD) (Appendix III). The researcher phoned the chief executive officers of each of the eight hospitals to request permission to access the staff. The researcher also phoned the operational managers at the hospitals to gain access to the nursing staff in the

wards. The researcher arranged for suitable times to collect data, to avoid disturbing the patient-care routine. Data was collected from August 2018 to October 2018.

On arrival, the researcher visited each ward, all four shifts (both day and night shifts). The researcher explained the study and invited nurses to volunteer to participate in the study. The researcher gave an explanation about the study (including the title, aim of the study, possible advantages of the study, the risks, and the role of participants, confidentiality and privacy), granted the participants an opportunity to ask questions and responded to questions.

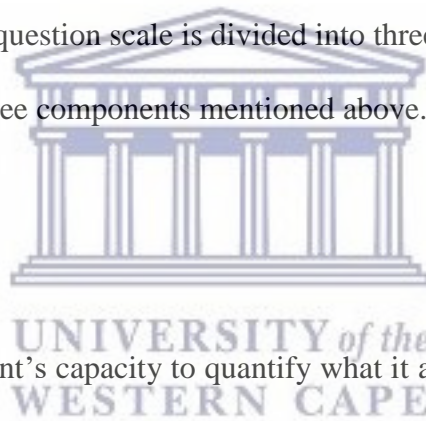
The researcher clearly explained the information sheet (Appendix IV) and how it was to be completed. Then, the researcher explained and provided the participants with consent forms (Appendix V) that were simple, concise and clear to read, as well as information sheets to allow them to understand the process. The researcher provided clarification where necessary and ensured all parties understood before signing and dating the form. Nursing staff were addressed either in nurse's stations, conference rooms or tea rooms. The data collection tool consisted of closed-ended, specific questions and took about 20 minutes to complete. The researcher provided participants with the questionnaires to complete, first to the day shift, then collecting the completed forms when visiting the night shift. The researcher then thanked participants for their participation.

### **3.7 Data collection instrument**

The data collections instrument is the instrument used to collect data, which incorporates structured questions and often a choice of responses that have been determined in advance (Polit & Beck, 2017).

The questionnaire consisted of two sections. Section A collected information on the demographic information of the population e.g. age, occupation/rank, race, number of years in the unit, gender, race, marital status, hospital, years in the ward and shift worked. Section B

collected information on the Professional Quality of Life among nurses in psychiatric observation units in the Metropole District Health Services using the ProQoL 5 (Appendix VI). Permission to use the tool was obtained (Appendix VII). The ProQoL 5 was developed by Stamm (2010) to assess two components of Professional Quality of Life, namely *Compassion Satisfaction* and *Compassion Fatigue*, with *Compassion Fatigue* further splitting into *Burnout* and *Secondary Traumatic Stress* (Stamm, 2010). For the purposes of this study, the researcher will refer to three ProQoL subscales: *Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress*. Stamm (2010) developed a tool consisting of 30 questions which rated how often the participants had encountered certain feelings or experiences in the last 30 days using a five-point Likert scale where 1 = never, 2 = rarely, 3 = sometimes, 4 = often and 5 = very often (Stamm, 2010). The 30-question scale is divided into three subscales, each consisting of ten questions on one of the three components mentioned above. Data reveals the scale to hold a strong internal consistency.



### 3.7 Validity

Validity refers to the instrument's capacity to quantify what it aims to survey (Kumar, 2011). Kumar (2011) cited Smith's (1991) definition of validity, which states that "Validity is defined as the degree to which the researcher has measured what he has set out to measure". Stamm (2010) states that ProQoL 5 has proper construct validity, as more than 200 published articles (50% of all articles about *Compassion Fatigue*, *Secondary Traumatic Stress* and other forms of trauma) have used it. The inter-scale correlations show 2% shared variance ( $r = -.23$ ;  $\text{co-}\sigma = 5\%$ ;  $n = 1187$ ) with *Secondary Traumatic Stress* and 5% shared variance ( $r = -.14$ ;  $\text{co-}\sigma = 2\%$ ;  $n = 1187$ ) with *Burnout* (Stamm, 2010). The shared variance between *Burnout* and *Secondary Traumatic Stress* scales is 34% ( $r = .58$ ;  $\text{co-}\sigma = 34\%$ ;  $n = 1187$ ). The scales both measure negative effects but are clearly different; the *Burnout* scale does not address fear while the *Secondary Traumatic Stress* scale does (Stamm, 2010).

### 3.7.1.1 Face validity

Face validity is the ability of the research instrument to measure and answer the research question or the objectives of the study (Kumar, 2011). The tool was reviewed by experts in the School of Nursing at the University of the Western Cape to establish face validity.

### 3.7.1.2 Content validity

“Content validity is also judged on the basis of the extent to which statements or questions represent the issue they are supposed to measure, as judged by you as a researcher, your readership and experts in the field” (Kumar, 2011). Table 3 alludes to content validity of the study instrument.

**Table 3: Content validity of the study instrument**

Objective	Professional Quality of Life model	Question number
1. Measure levels of <i>Compassion Satisfaction</i>	<i>Compassion Satisfaction</i>	3, 6, 12, 16, 18, 20, 22, 24, 27, 30.
2. Measure levels of <i>Burnout</i>	<i>Burnout</i>	*1,*4, 8, 10,*15,*17, 19, 21, 26,*29.
3. Determine levels of <i>Secondary Traumatic Stress</i>	<i>Secondary Traumatic Stress</i>	2, 5, 7, 9, 11, 13, 14, 23, 25, 28.

### 3.7.2 Reliability

Reliability is ensured by the equilibrium, accuracy and stability of the instrument, instrument tends to be more reliable when the equilibrium, accuracy and stability are higher (Kumar, 2011). Polit and Beck (2017) argue that correctness and lack of deviation of collected data determine reliability.

Stamm (2010) reported that for *Compassion Satisfaction* the Cronbach’s alpha scale reliability of ProQoL 5 is  $\alpha = .88$ , for *Burnout* it is  $\alpha = .75$ , and for *Secondary Traumatic Stress* it is  $\alpha = .81$ . Therefore, the all the subscales fall within normal ranges and the score is higher. Cronbach’s alpha and the composite reliability estimates indicate that all three scales across all

three datasets were reliable ( $>.70$ ) (Hemsworth, Baregheh, Aoun, Hegney, & Kazanjian, 2017). Hemsworth et al. (2017) found that the reliability of the three scales calculated using standard methods, Cronbach's alpha and composite reliability (CR), in the Australian nurses dataset: *Compassion Satisfaction*  $\alpha = .90$ ,  $CR = .92$ ; *Secondary Traumatic Stress*  $\alpha = .82$ ,  $CR = .88$ ; and *Burnout*  $\alpha = .80$ ,  $CR = .83$ . With respect to the Canada nurses dataset: *Compassion Satisfaction*  $\alpha = .91$ ,  $CR = .93$ ; *Secondary Traumatic Stress*  $\alpha = .85$ ,  $CR = .89$ ; and *Burnout*  $\alpha = .75$ ,  $CR = .79$ . With respect to the palliative nurses dataset: *Compassion Satisfaction*  $\alpha = .89$ ,  $CR = .93$ ; *Secondary Traumatic Stress*  $\alpha = .78$ ,  $CR = .86$ ; and *Burnout*  $\alpha = .74$ ,  $CR = .78$  (Hemsworth et al., 2017). Scores for *Compassion Satisfaction* are as follows: high =  $\geq 57$ , moderate = 44–56 and low =  $\leq 43$ ; for *Burnout*: high =  $\geq 57$ , moderate = 44–56 and low =  $\leq 43$ ; and for *Secondary Traumatic Stress*: high =  $\geq 57$ , moderate = 44–56 and low =  $\leq 43$  (Stamm, 2010).

### 3.8 Data analysis

On completion of data collection, the researcher checked if all questionnaires were completed with no errors, and numbering (coding) was assigned to each questionnaire. Before the researcher could start with data analysis, cleaning and checking of data for errors or missing data was done. This is one of the empirical steps, as making a mistake while feeding data into SPSS can happen. Values referred to as outliers (any values below or above the scores 1–5 on the subscales) may lead to errors in findings as well. Demographic data was checked for errors, any values falling out of the range and any missing values.

Data was transformed into symbols through the process of coding, then it was fed into Microsoft Excel and imported into the Statistical Package for Social Science (SPSS) version 24. The calculation of the ProQoL scores was calculated as per the recommended in the precise ProQoL manual by (Stamm, 2010) (Table 4).



**Table 4: Calculation of the ProQoL scores**

From this point, the first step was to reverse the items on the Burnout subscale (some of the question numbers with \* are reverse scored). The reversed items were recoded pq1 pq4 pq15 pq17 pq29 (1=5) (2=4) (3=3) (4=2) (5=1) INTO pq1R pq4R pq15R pq17R pq29R, because scientifically the measure works well when questions are posed in a positive manner despite being a negative question. For instance, the first statement on the questionnaire was “I am happy” responds more about the effects of helping people the participant is not happy has to reverse scoring (Stamm, 2010).

The second step was to compute the sum scores of all variables per subscale. All items of the ProQoL 5 subscales were summed up as follows:

Compute

$$CS = \text{SUM}(pq3, pq6, pq12, pq16, pq18, pq20, pq22, pq24, pq27, pq30),$$

$$BO = \text{SUM}(pq1r, pq4r, pq8, pq10, pq15r, pq17r, pq19, pq21, pq26, pq29r)$$

and

$$STS = \text{SUM}(pq2, pq5, pq7, pq9, pq11, pq13, pq14, pq23, pq25, pq28).$$

The raw scores were converted to Z-scores, then the third step was to convert the Z-scores into T-scores, with raw score mean = 50 and the raw score standard deviation = 10.

Compute

$$tCS = (ZCS * 10) + 50. \text{ The variable labels were } tCS \text{ 'CS t score'}$$

$$tBO = (ZBO * 10) + 50. \text{ The variable labels were } tBO \text{ 'BO t score'}$$

$$tSTS = (ZSTS * 10) + 50. \text{ The variable labels were } tSTS \text{ 'STS t score'}$$

In order to ensure easy and understandable reporting, the researcher had to recode some of the variable (age in years was recoded to 20–35, 36–49 and 50–64; experience in years 0–2 years, 3–9 years and 10–35 years).

Descriptive statistics were utilised to characterise and outline the data and to make it easy to understand (Brink et al., 2012; Polit & Beck, 2017). Descriptive statistics were also used to describe the categorical demographic data and the three constructs (*Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress*) as per the recommendations in the concise ProQoL manual's cut points for the low, middle and high scores. If the respondent's score was  $\geq 57$  it was categorised as high, if a respondent's score was between 44 and 56 it was categorised as moderate, and if the respondent's score was  $\leq 43$  it was categorised as low (Stamm, 2010).

Frequencies were utilised to describe the demographics of the respondents, with chi-square analysis set at  $p = .05$  for significance. Descriptive statistics were computed for individual statements for *Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress*, where Confidence Interval (CI), mean and standard deviation were computed, with Kruskal-Wallis analysis set at  $.05$  for significance. Kruskal-Wallis analysis, mean and standard deviation were also employed to check for associations between the demographic data (age, gender, rank and years of experience) and each of the subscales (*Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress*). Overall T-scores for *Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress* were calculated with the T-score percentiles set at 25<sup>th</sup> and 75<sup>th</sup> percentile. Overall raw scores for *Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress* were also calculated with raw mean, standard deviations and the raw score percentiles set at 25<sup>th</sup>, 50<sup>th</sup> and 75<sup>th</sup> percentile; and compared as stipulated by Stamm (2005). The raw mean was then converted into a T-score mean.

The reason for computing the raw mean score for *Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress* was that Stamm (2010) strongly suggests using the continuous mean scores for the subscales because the measure is most sensitive when using continuous scores. The raw mean score was then standardised/converted into a T-score mean, as per the table stipulating the scores in the concise ProQoL manual (Stamm, 2010). To enable comparison with the older ProQoL versions and scales (and some studies that used raw scores in the ProQoL 5) raw scores were standardised as directed in the concise ProQoL manual (Stamm, 2010). A brief explanation of the standardisation will be given in chapter five (5.4).

### **3.9 Research ethics**

Ethics clearance was obtained from the Bio-Medical Research Ethics Committee of University of the Western Cape (17 July 2018 – 17 July 2019). Permission to conduct the proposed study was obtained from the Western Cape Department of Health and the chief executive officers of the eight district hospitals. During recruitment and the period of the study, ethical guidelines in the Declaration of Helsinki were adhered to, which emphasise that researchers should prevent harm to study participants, as were the ethical principles of autonomy, beneficence and justice of medical research as described by Polit & Beck (2010).

**Principle of autonomy:** The researcher provided a thorough explanation of the research study, explained all data that would be collected and why, granted participants the opportunity to ask question and answered fully, explained and gave the written consent form to the participants and granted them an opportunity to decide whether to participate or not (Polit & Beck, 2010), informed participants of their right to decide to pull out any time they wish without any explanation, disadvantage or difficulty (Polit & Beck, 2010).

**Principle of beneficence:** The researcher ensured that participants were not exposed to any form of uneasiness, physical discomfort, psychological, social, financial or spiritual harm (Polit

& Beck, 2010). Should distress, worry or uneasiness result, the researcher would refer participants to a counsellor, which had been pre-arranged by the researcher (Munhull, 2001 cited in Brink et.al, 2012).

**Principle of justice:** The researcher treated all participants fairly, was punctual, attended all set appointments, held all agreements, maintained privacy and took cultural diversity into consideration. Data was kept discreet, then locked in the in a cupboard where only the researcher could access it and coded to protect the identity of respondents (Polit & Beck, 2010).

### 3.10 Summary

In this chapter, the following headings were discussed: research approach, study design, research setting, population, sample, sampling, data collection, data collection instrument, instrument validity and reliability; data analysis and research ethics. Chapter four will detail the findings of the study.



## CHAPTER FOUR: RESULTS

### 4.1 Introduction

In this chapter, the findings of the study are presented. The aim of the study was to investigate Professional Quality of Life among nurses working in psychiatric observation units in the Metropole District Health Services. The study had three objectives, namely:

1. Measure levels of *Compassion Satisfaction*,
2. Measure levels of *Burnout* and
3. Determine levels of *Secondary Traumatic Stress* among nurses in psychiatric observation units in the Metropole District Health Services.

This chapter is structured as follows: the first section will present the sample realisation, and in the second section, the findings according to the Professional Quality of Life will be presented.

### 4.2 Sample realisation

The population of nurses working in psychiatric observation units in the eight district hospitals within the Metropole District Health Services was (N=175). As this number represented the total population of the nurses working in these units, an all-inclusive sampling method was employed. A total of 175 nurses were approached for the study, 163 of whom submitted the completed questionnaires, yielding a response rate of 93%. All submitted questionnaires had no errors (Table 5).

**Table 5: Sample realisation**

Hospital	Sample	Response
A	31	31 (17.71%)
B	4	4 (2.28%)
C	31	31 (17.71%)

D	31	31 (17.71%)
E	21	14 (8%)
F	12	12 (6.85%)
G	20	15 (8.57%)
H	25	25 (14.28%)
Total	175	163 (93.11%)

#### 4.2.1 Demographics of respondents

Of the 163 respondents, less than a third (n=50, 30.7%) were males and more than two thirds (n=113, 69.3%) were females. The ages of the respondents ranged between 20 and 64 years, with a mean age of 37.50 years ( $\pm 9.42$ ). The biggest age group was 20–35 years (n=73, 44.8%), followed by the 36–49 years group (n=72, 44.2%) and lastly respondents over 50-64 years group (n=18, 11%).

Almost two thirds of the respondents were single (n=103, 63.2%) and less than a third (n=48, 29.4%) were married. Only seven (n=7, 4.3%) were divorced and only five (n=5, 3.1%) were widowed. Most of the respondents were African (n=132, 81%), followed by coloured (n=25, 15.3%), Indian (n=4, 2.5%) and white (n=2, 1.2%) respondents. More than a third (n=68, 41.9%) of the respondents were enrolled nursing assistants, followed by general registered nurses (n=60, 36.8%), enrolled nurses (n=21, 12.9%) and advanced psychiatric nurse practitioners (n=14, 8.6%). The mean number of years of experience was 7.57 ( $\pm 8.46$ ) years. More than three quarters (n=125, 76.7%) of respondents had 0–2 years of experience, less than a quarter (n=33, 20%) had 3–9 years of experience and five (n=5, 3.1%) had 10 years or more. More than half of the respondents worked day shift (n=91, 55.8%), while (n=72, 44.2%) worked the night shift (Table 6).

**Table 6: Demographics of respondents**

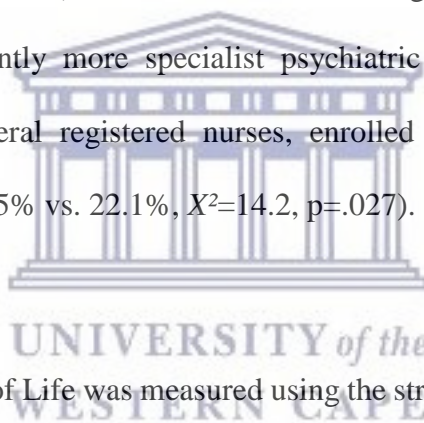
Demographics	All n=163	Advanced psychiatric nurse practitioners n=14 (8.60%)	General registered nurses n=60 (36.80%)	Enrolled nurses n=21 (12.9%)	Enrolled nursing assistants n=68 (41.9%)	T-test	P value
Gender						$\chi^2=16.68$	.001*
Male	50 (30.7%)	10 (71.4%)	18 (30%)	9 (42.9%)	13 (19.1%)		
Female	113 (69.3%)	4 (28.6%)	42 (70%)	12 (57.1%)	55 (80.9%)		
Marital status						$\chi^2=12.204$	.202
Single	103 (63.2%)	7 (50%)	36(60%)	16 (76.2%)	44 (64.7%)		
Married	48(29.4 %)	7 (50%)	20(33.3%)	3 (14.3%)	18 (26.5%)		
Divorced	7 (4.3%)	0 (0%)	2(3.3%)	0 0%	5 (7.4%)		
Widowed	5 (3.1%)	0 (%)	2(3.3%)	2 (9.5%)	1 (1.5%)		
Race:						$\chi^2=11.469$	.245
African	132 (81%)	10(71.4%)	44 (73.3%)	17 (81%)	61 (89.7%)		
Coloured	25 (15.3%)	3 (21.4%)	13 (21.7%)	3 (14.3%)	6 (8.8%)		
Indian	4 (2.5%)	1 (7.1%)	2 (3.3%)	1 (4.8%)	1 (1.5%)		
White	2 (1.2%)	1 (7.1%)	1 (1.7%)	0 (0%)	0 (0%)		
Age (years)						$\chi^2=134.187$	.095
20–35	73 (44.8%)	3 (21.4%)	35 (58.3%)	12 (57.1%)	23 (33.8%)		
36–49	72 (44.2%)	9 (64.3%)	17 (28.3%)	8 (38.1%)	38 (55.9%)		
50–64	18 (11%)	2 (14.3)	8 (13.3%)	1 (4.8%)	7 (8.3%)		
Experience (years)						$\chi^2=14.256$	.027*
0–2	125 (76.7%)	7 (50%)	47(78.3%)	19 (90.5%)	52 (76.5%)		
3–9	33 (20.2%)	7 (50%)	9 (15%)	2 (9.5%)	15 (22.1%)		



10–35	5 (3.1%)	0 (0%)	4 (6.7%)	0 (0%)	1 (1.5%)		
Shift						$X^2=4.737$	.192
Day	n=91 (55.8%)	11(78.6%)	34 (56.7%)	13 (61.9%)	33 (48.5%)		
Night	n=72 (44.2%)	3 (21.4%)	26 (43.3%)	8 (38.1%)	35 (51.5%)		

$X^2$  = Chi square test or Fisher Exact Test where relevant. \*Significant at  $p < .05$

In comparing the demographic profile of the categories of nurses (Table 6), there were no significant differences except for gender and years of experience. There were significantly more males in the general registered nurses specialised in psychiatric nursing compared to general registered nurses, enrolled nurses and enrolled nursing assistants (71.4% vs. 30% vs. 42.9% vs. 19.1%,  $X^2=16.68$ ,  $p=.001$ ). In addition, there was a significant difference in the years of experience, with significantly more specialist psychiatric nurses who had 3–9 years' experience compared to general registered nurses, enrolled nurses and enrolled nursing assistants (50% vs. 15% vs. 9.5% vs. 22.1%,  $X^2=14.2$ ,  $p=.027$ ).



### 4.3 Reliability

Overall, Professional Quality of Life was measured using the structured questionnaire ProQoL 5, which consists of three subscales (*Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress*) each subscale consists of ten questions. In the current study, all three scales showed moderate to good internal consistency, with Cronbach alpha  $\alpha$ 's for *Compassion Satisfaction*  $\alpha=.763$ , *Burnout*  $\alpha=.590$  and *Secondary Traumatic Stress*  $\alpha=.741$ .

### 4.4 Professional Quality of Life

#### 4.4.1 Compassion Satisfaction

##### 4.4.1.1. Respondent Compassion Satisfaction individual statements means

Ten statements make up the *Compassion Satisfaction* construct. The highest level of agreement among respondents was with the statement *I am proud of what I can do to help* (4.4 [CI 95%

4.26-4.55]) and the lowest was with the statement *I have thoughts that I am a "success" as a nurse* (4 [CI 95% 3.83-4.17]) (Table 7). In comparing the different categories of nurses, there were no significant differences between the categories except for the following three statements. *I am happy I chose to do this work*, which was rated significantly lower by the general registered nurses specialised in psychiatric nursing respondents than by general registered nurses, enrolled nurses and enrolled nursing assistants (3.79 vs. 3.98 vs. 4.52 vs. 4.71  $K=25.1$ ,  $p<.001$ ). *I like my work as a nurse* was rated significantly lower by general registered nurses than by advanced psychiatric nurse practitioners, enrolled nurses and enrolled nursing assistants (4.3 vs. 4.4 vs. 4.55 vs. 4.9 vs. 4.7  $K=14.713$   $p=.002$ ). *I am pleased with how I am able to keep up with nursing techniques and protocols* was rated significantly lower by general registered nurses than by advanced psychiatric nurse practitioners, enrolled nurses and enrolled nursing assistants (3.83 vs. 4.21 vs. 4.2 vs. 4.3  $K=8.693$   $p=.034$ ) (Table 7).

**Table 7: Respondent Compassion Satisfaction individual statement means**

Compassion Satisfaction statements	All N=163 m (sd) [CI 95%]	Advanced psychiatric nurse practitioners n=14 (%) m(sd)	General registered nurses n=60 (%) m(sd)	Enrolled nurses n=21% m(sd)	Enrolled nursing assistants n=68 (%) m(sd)	Test K	P value
24. I am proud of what I can do to help	4.4 (±0.92) [4.26-4.55]	4.21 (±1.12)	4.37 (±0.88)	4.52 (±0.75)	4.44 (±0.96)	$K=1.294$	.730
22. I believe I can make a difference through my work	4.38 (±0.88) [4.24-4.52]	4.07 (±1.07)	4.23 (±0.94)	4.33 (±0.96)	4.59 (±0.71)	$K=7.537$	.057
30. I am happy I chose to do this work	4.34 (±0.98) [4.19-4.49]	3.79 (±1.25)	3.98 (±1.09)	4.52 (±0.81)	4.71 (±0.67)	$K=25.086$	<.001*
20. I have happy thoughts and feelings about of those I nurse and how I could help them	4.2 (±0.89) [4.06-4.28]	4.14 (±0.77)	4.13 (±0.89)	4.43 (±0.74)	4.21 (±0.95)	$K=2.009$	.570

27. I have thoughts that I am a "success" as a nurse	4.0 (±1.09) [3.83-4.17]	3.86 (±1.09)	3.85 (±1.087)	4.10 (±1.09)	4.13 (±1.10)	K=3.537	.316
12. I like my work as a nurse	4.55 (±0.87) [4.42-4.67]	4.4 (±0.93)	4.3 (±0.93)	4.9 (±0.35)	4.7 (±0.61)	K=14.713	.002*
3. I get satisfaction from being able to nurse people	4.36 (±0.87) [4.23-450]	4.07 (±1.07)	4.48 (±0.74)	4.19 (±0.87)	4.37 (±0.92)	K=3.061	.382
16. I am pleased with how I am able to keep up with nursing techniques and protocols	4.1 (±0.99) [3.95-4.26]	4.21 (±0.97)	3.83 (±0.99)	4.2 (±1.04)	4.3 (±0.960)	K=8.693	.034*
18. My work makes me feel satisfied	3.96 (±1.1) [3.79-4.13]	4.07 (±1.26)	3.77 (±0.96)	3.95 (±1.16)	4.12 (±1.16)	K=6.493	.090
6. I feel invigorated after working with those I nurse	3.34 (±1.2) [3.16-3.35]	3.43 (±1.22)	3.1 (±1.09)	3.33 (±1.42)	3.51 (±1.24)	K=3.663	.300

K= Kruskal–Wallis test

\*Significance at  $p < .05$

#### 4.4.1.2 Overall Compassion Satisfaction score

The mean raw score for all the respondents for *Compassion Satisfaction* was 41.64 (±5.55), with 50% of the respondents scoring between raw score values of 39.00 and 46.00 (Table 8).

**Table 8: Overall Compassion Satisfaction score (mean and percentiles)**

Raw score			T-score	
Measure	Current study	Stamm (2005)	Current study	Stamm (2010)
Mean	41.64	37	56	50
Standard deviation	± 5.55	± 7.3	±10	±10
Percentile 25	39.00	33	45.24	43
50	43.00	37	52.44	50
75	46.00	47	57.84	57

The converted T-score mean for *Compassion Satisfaction*, as per Stamm's (2010) instructions, was 56, with 50% of the respondents scoring between T-score values of 45.24 and 57.84. (Table 8).

#### 4.4.2 Compassion Fatigue

Compassion Fatigue consists of two constructs: *Burnout* and *Secondary Traumatic Stress* (Stamm, 2010).

##### 4.4.2.1 Burnout

###### 4.4.2.1.1 Respondent Burnout individual statements means

Ten statements make up the *Burnout* construct. The highest level of agreement was with the statement *I feel overwhelmed because my case workload seems endless* (3.28 [CI 95% 3.09-3.48]) and the lowest was with *I am a very caring person* (1.69 [CI 95% 1.52-1.87]) (Table 9). In comparing the different categories of nurses, statistically significant difference was found in some of the statements. The statement *I feel "bogged" down by the system* was rated significantly lower by the enrolled nurses than by the advanced psychiatric nurse practitioners, general registered nurses and enrolled nursing assistants (2.62 vs. 3.71 vs. 3.32 and 3.01,  $X^2=8.367$   $p=.039^*$ ). The enrolled nurses rated the statement *I feel trapped in my job as a nurse* lowest compared to the registered nurses specialised in psychiatry, general registered nurses and enrolled nursing assistants (1.76 vs. 3.00 vs. 2.38 vs. 1.99,  $X^2=10.642$   $p=.014^*$ ). The statement *I feel overwhelmed because my workload my case work load seems endless* was rated significantly lower by enrolled nurse respondents than by general registered nurses specialised in psychiatry, general registered nurses and enrolled nursing assistants (2.62 vs. 4.00 vs. 3.35 vs. 3.28,  $K=9.064$   $p=.028^*$ ) (Table 9).

#### Table 9: Respondent Burnout individual statement means

Burnout statements	All N=163 m (sd) [CI 95%]	Advanced psychiatric nurse practitioners n=14 (%) m (sd)	General registered nurses n=60 (%) (sd)	Enrolled nurses n=21% m (sd)	Enrolled nursing assistants n=68 (%) m (sd)	Test K	P value
21. I feel overwhelmed because my case workload seems endless	3.28 (±1.27) [3.09-3.48]	4.00 (±0.87)	3.35 (±1.10)	2.62 (±1.62)	3.28 (±1.29)	K=9.064	.028*
19. I feel worn out because of my work as a nurse	3.28 (±1.3) [3.08-3.48]	3.79 (±1.31)	3.32 (±1.15)	2.67 (±1.46)	3.34 (±1.34)	K=6.519	.089
26. I feel "bogged" down by the system	3.13 (±1.28) [2.94-3.33]	3.71 (±1.14)	3.32 (±1.30)	2.62 (±1.28)	3.01 (±1.25)	K=8.367	.039*
15. I have belief system that sustain me	2.6 (±1.35) [2.39-2.80]	2.07 (±1.26)	2.50 (±1.43)	2.81 (±1.28)	2.72 (±1.30)	K=4.241	.237
17. I am the person I always wanted to be	2.25 (1.33) [2.05-2.46]	2.07 (±1.20)	2.55 (±1.30)	2.52 (±1.43)	1.94 (±1.30)	K=10.289	.016*
1. I am happy	2.08 (±1.06) [1.92-2.24]	2.29 (0.72)	2.08 (±0.97)	1.71 (±0.9)	2.15 (±1.2)	K=4.136	.247
10. I feel trapped in my job as a nurse	2.19 (±1.36) [1.98-2.40]	3.00 (±1.46)	2.38 (±1.37)	1.76 (±1.22)	1.99 (±1.3)	K=10.642	.014*
4. I feel connected to others	2.1 (±1.06) [1.93-2.27]	2.00 (±1.03)	2.18 (±1.03)	1.86 (±0.91)	2.13 (±1.22)	K=1.543	.672
8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I nursed	2.03 (±1.24) [1.84-2.22]	2.29 (±0.82)	1.98 (±1.24)	1.76 (±1.09)	2.10 (±1.36)	K=3.487	.322
29. I am a very caring person	1.69 (±1.13) [1.52-1.87]	1.71 (±0.91)	1.73 (±1.02)	1.52 (±1.12)	1.71 (±1.28)	K=3.116	.374

K=Kruskal-Wallis Test

\*Significance set at  $p = <.05$

#### 4.4.2.1.2 Overall Burnout score

The mean raw score for all the respondents in *Burnout* was 24.64 ( $\pm 5.77$ ), with 50% of the respondents scoring raw score values between 20.00 and 29.00 (Table 10).

**Table 10: Overall Burnout score (mean and percentiles)**

Raw score			T-score	
Measure	Current study	Stamm (2005)	Current study	Stamm (2010)
Mean	24.64	22	55	50
Standard deviation	( $\pm 5.77$ )	( $\pm 6.8$ )	$\pm 10$	$\pm 10$
Percentile 25	20.00	18	41.95	43
50	24.00	22	48.88	50
75	29.00	27	57.55	57

The converted T-score mean for *Burnout*, as per Stamm's (2010) instructions was 55, with 50% of the respondents scoring between the T-score values 41.95 and 57.55 (Table 10).

#### 4.4.2.2 Secondary Traumatic Stress

##### 4.4.2.2.1 Respondent Secondary Traumatic Stress individual statement mean

The *Secondary Traumatic Stress* construct consists of ten statements. The highest level of agreement was with the statement *I am preoccupied with more than one person I nurse* (3.55 [CI 95% 3.34-3.75]) and the lowest was with *I feel depressed because of traumatic experiences of the people I nursed* (2.4 [CI 95% 2.21-2.59]) (Table 11). In comparing the different categories of nurses, there were no significant difference. However, one statement was moving towards statistical significance, *I think that I might have been affected by the traumatic stress of those I nurse*, which enrolled nurses rated significantly lower compared to advanced psychiatric nurse practitioners, general registered nurses and enrolled nursing assistants (1.76 vs. 2.71 vs. 2.43 vs. 2.24 vs.  $K=6.843$   $p=.077$ ) (Table 11).

**Table 11: Respondent Secondary Traumatic Stress individual statement means**



Secondary Traumatic Stress statements	All N=163 m (sd) [CI 95%]	Advanced psychiatric nurse practitioners n=14 (%) m (sd)	General registered nurses n=60 (%) m (sd)	Enrolled nurses n=21% m (sd)	Enrolled nursing assistants n=68 (%) m (sd)	Test K	P value
2. I am preoccupied with more than one person I nurse	3.55 (±1.32) [3.34- 3.75]	4.14 (±0.86)	3.60 (±1.27)	3.33 (±1.35)	3.44 (±1.41)	K=3.334	.343
5. I jump or am startled by unexpected sounds	2.94 (±1.23) [2.75- 3.14]	2.57 (±1.01)	3.23 (±1.14)	2.76 (±1.26)	2.82 (±1.32)	K=5.978	.113
7. I find it difficult to separate personal life from my life as a nurse	2.94 (±1.43) [2.27- 2.71]	2.57 (±1.34)	2.52 (±1.46)	2.14 (±1.45)	2.56 (±1.42)	K=2.002	.572
11. Because of my work, I have felt "on edge" on various things	2.84 (±1.2) [2.65- 3.03]	3.36 (±1.15)	2.97 (±1.17)	2.62 (±1.16)	2.69 (±1.22)	K=4.458	.216
9. I think that I might have been affected by the traumatic stress of those I nurse	2.29 (±1.22) [2.10- 2.48]	2.71 (±0.99)	2.43 (±1.28)	1.76 (±0.83)	2.24 (±1.27)	K=6.843	.077
28. I can't recall important parts of my work with trauma victims	2.95 (±1.26) [2.21- 2.63]	2.36 (±0.63)	2.75 (±1.18)	3.05 (±1.53)	3.15 (±1.29)	K=6.206	.102
25. As a result of my helping, I have intrusive frightening thoughts	2.75 (±1.51) [2.21- 2.62]	2.57 (±1.34)	2.92 (±1.46)	2.81 (±1.69)	2.63 (±1.54)	K=1.310	.727
23. I avoid certain activities or situations because they remind of frightening experiences of the people I nurse	2.59 (±1.33) [2.21- 2.61]	2.50 (±0.94)	2.67 (±1.36)	2.62 (±1.46)	2.53 (±1.36)	K=.332	.954
14. I feel as though I am experiencing the trauma of someone I have nursed	2.58 (±1.29) [2.21- 2.60]	2.36 (±0.84)	2.68 (±1.37)	2.57 (±1.20)	2.54 (±1.33)	K=.592	.898
13. I feel depressed because of traumatic experience of the people I nurse	2.4 (±1.22) [2.21- 2.59]	2.50 (±0.85)	2.60 (±1.34)	2.10 (±1.17)	2.29 (±1.18)	K=3.006	.391



$K = \text{Kruskal-Wallis test}$       \*Significance set at  $p = <.05$

#### 4.4.2.2.2 Overall Secondary Traumatic Stress score

The mean raw score for all the respondents in *Secondary Traumatic Stress* was 27.36 ( $\pm 7.16$ ), with 50% of the respondents scoring raw score values between 22.00 and 33.00 (Table 12).

**Table 12: Overall Secondary Traumatic Stress score (mean and percentiles)**

Raw score			T-score	
Measure	Current study	Stamm (2005)	Current Study	Stamm (2010)
Mean	27.36	13	71	50
Standard deviation	( $\pm 7.16$ )	( $\pm 6.3$ )	( $\pm 10$ )	( $\pm 10$ )
Percentile 25	22.00	8	42.53	43
50	27.00	13	49.50	50
75	33.00	17	57.88	57

The converted *Secondary Traumatic Stress* mean T-score mean, as per Stamm's (2010) instructions was 71, with 50% of the respondents scoring between the T-score values 42.53 and 57.88 (Table 12).

### 4.5 Comparison between ProQoL components and demographic variables

The subscales of the ProQoL 5 and demographic variables (namely gender, age, rank and experience of respondents) are described below.

#### 4.5.1 T-score mean comparison with age

Comparing the T-score mean with age, *Compassion Satisfaction* for nurses between 20 and 35 years was lower (48.32) compared to nurses between the ages of 36 and 49 years (51.36) and nurses aged between 50 and 64 years (50.34) ( $K = 4.086, p = .130$ ) (Table 13). The *Burnout* T-score mean for nurses between the ages of 50 and 64 years was lower (46.00) compared to nurses between 36 and 49 years (50.91) and nurses between 20 and 35 years of age (50.09) ( $K = 3.580, p = .167$ ) (Table 4.9). The *Secondary Traumatic Stress* T-score mean nurses between

50 and 64 years of age was lower (47.10), compared to nurses between the ages of 20 and 35 (49.10) and nurses aged 36 to 49 years (51.64) ( $K=4.224$ ,  $p= .121$ ) (Table 13).

**Table 13: Average T-score for age of respondents**

Subscales	20–35 years of experience m (sd)	36–49 years of experience m (sd)	50–64 years of experience m (sd)	<i>K</i>	P value
<i>Compassion Satisfaction</i>	48.32 (±10.71)	51.62 (±9.18)	50.34 (±9.55)	$K=4.086$	.130
<i>Burnout</i>	50.09 (±10.57)	50.91 (±9.41)	46.00 (±9.43)	$K=3.580$	.167
<i>Secondary Traumatic Stress</i>	49.10 (±10.85)	51.64 (±9.43)	47.10 (±7.64)	$K=4.224$	.121

*K* = Kruskal–Wallis test      \*Significance set at  $p= <.05$

#### 4.5.2 T-score mean comparison by gender

Comparing T-score with the gender of respondents on *Compassion Satisfaction*, both genders reported moderate *Compassion Satisfaction*; however, males reported a lower T-score mean (47.08) than females (51.29) ( $X^2=24.876$ ,  $p=.413$ ) (Table 14).

Comparing T-score mean with gender, *Burnout* was reported by both males and females; however, males reported a slightly lower *Burnout* T-score 49.58, compared with females reporting 50.19 ( $X^2=29.888$ ,  $p=.272$ ) (Table 14).

Comparing the T-score with gender on *Secondary Traumatic Stress*, both males and females reported moderate *Secondary Traumatic Stress*, with males reporting a lower T-score mean (46.28) than females (51.41) ( $X^2=40.131$ ,  $p=.102$ ) (Table 14).

**Table 14: T-score mean comparison with gender of respondents**

Subscales	Male n=50 m (sd)	Female n=113 m (sd)	T-test $X^2$	P value
<i>Compassion Satisfaction</i>	47.08 (±11.47)	51.29 (±11.47)	$X^2=24.876$	.413
<i>Burnout</i>	49.58 (±10.61)	50.19 (±9.75)	$X^2=29.888$	.272
<i>Secondary Traumatic Stress</i>	46.82 (±8.83)	51.41 (±10.19)	$X^2=40.131$	.102

$X^2 = Chi\ square\ test$

\*Significant set at  $p = <.05$

#### 4.5.3 T-score mean comparison by nursing categories

Comparing the mean T-score among the nursing categories in *Compassion Satisfaction*, significantly lower average scores were reported by general registered nurses (47.13) than by general registered nurses specialised in psychiatry (47.55), enrolled nurses (51.50) and enrolled nursing assistants (52.57) ( $K=12.293$ ,  $p=<.007$ ) (Table 15).

Comparing the mean T-score between the nursing categories in *Burnout*, advanced psychiatric nurse practitioners reported significantly higher *Burnout* (53.96) than general registered nurses (51.31), enrolled nurses (45.17) and enrolled nursing assistants (49.52). Significant difference was found ( $K= 8.314$ ,  $p= .040$ ) (Table 15).

Comparing the mean T-score between the nursing categories in *Secondary Traumatic Stress*, general registered nurses reported higher scores for *Secondary Traumatic Stress* (51.41) than advanced psychiatric nurse practitioners (50.40), enrolled nurses (47.78) and enrolled nursing assistants (49.36). No significant difference was found ( $K= 2.389$ ,  $p=.496$ ) (Table 15).

**Table 15: T-score mean comparison with nursing categories**

Subscales	Advanced psychiatric nurse practitioner n=14 m (sd)	General registered nurse n=60 m (sd)	Enrolled nurse n=21 m (sd)	Enrolled nursing assistant n=68 m (sd)	K	P value
<i>Compassion Satisfaction</i>	47.55 (±13.39)	47.13 (±9.58)	51.50 (7.05)	52.57 (±9.75)	K= 12.239	.007*
<i>Burnout</i>	53.96 (±10.10)	51.31 (±9.92)	45.17 (9.04)	49.52 (±9.80)	K= 8.314	.040*
<i>Secondary Traumatic Stress</i>	50.40 (±6.18)	51.41 (±10.14)	47.78 (9.401)	49.36 (±10.65)	K= 2.389	.496

K= Kruskal–Wallis test \*Significance set at  $p = <.05$

#### 4.5.4 T-score mean comparison by years of experience

Comparing the T-mean score with years of experience, the *Compassion Satisfaction* T-score mean for nurses with 10 – 35 years of experience was higher (57.84) than for nurses with between 3 and 9 years of experience (50.53) and nurses with between 0 and 2 years of experience (49.55) ( $K = 4.684$ ,  $p = .906$ ) (Table 16). The *Burnout* T-score mean for nurses with between 0 and 2 years of experience was higher (50.26) than for nurses with 3 to 9 years (49.36) and nurses with  $\geq 10$  years of experience (47.84) ( $K = .534$ ,  $p = .766$ ) (Table 16). The *Secondary Traumatic Stress* T-score mean for nurses with between 3 and 9 years of experience was lower (49.76) than for nurses with between 0 and 2 years (50.06) and nurses with 10-35 years of experience (50.06) ( $K = .021$ ,  $p = .989$ ) (Table 16).

**Table 16: T-score mean for years of experience of respondents**

Subscales	0–2 years of experience m (sd)	3–9 years of experience m (sd)	10- 35 years of experience m (sd)	T-test $X^2$	P value
<i>Compassion Satisfaction</i>	49.55 (±9.89)	50.53 (±10.69)	57.84 (±4.22)	K= 4.684	.906
<i>Burnout</i>	50.26 (±10.08)	49.36 (±10.01)	47.84 (±9.21)	K= .534	.766
<i>Secondary Traumatic Stress</i>	50.06 (±9.97)	49.76 (±10.67)	50.06 (±7.42)	K= .021	.989

K= Kruskal–Wallis test \*Significance set at  $p = <.05$

#### **4.6 Summary**

This chapter presented sample realisation, outlining the *Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress* levels of nurses working in psychiatric observation units in the Metropole District Health Services in order to address the objectives of the study. The averages, standard deviations and confidence intervals of individual statements were also outlined.

The next chapter discusses the findings.



## CHAPTER FIVE: DISCUSSION OF THE FINDINGS

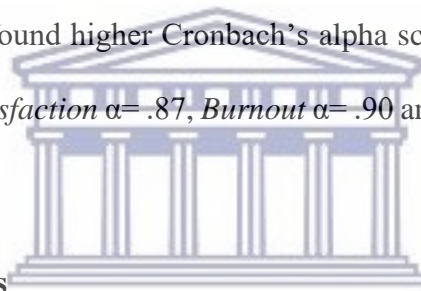
### 5.1. Introduction

In this chapter, the findings presented in chapter four will be discussed. This chapter is structured as follows: the reliability of scales, *Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress* findings. This is followed by a discussion of *Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress* among nurses in psychiatric observation units in relation to existing literature, to address the three objectives. Note, in the discussion, previous studies which used earlier ProQoL versions were converted to T-Scores as per instructions from Stamm (2010).

### 5.2 Reliability of scales

Internationally, the reliability of the ProQoL is well established. This study confirmed average to good reliability for the scale in this setting, with Cronbach's alpha scores of  $\alpha = .76$  for *Compassion Satisfaction* and  $\alpha = .74$  for *Secondary Traumatic Stress* consistent with consistent with those in the concise ProQoL manual by Stamm (2010) (*Compassion Satisfaction*  $\alpha = .88$  and *Secondary Traumatic Stress*  $\alpha = .81$ ). However, the *Burnout* Cronbach's alpha score for this study was  $\alpha = .59$ , slightly lower than that predicted by Stamm (2010) ( $\alpha = .75$ ). Our study had marginally lower reliability than a study by Mangoulia et al. (2015) of 174 psychiatric nurses in 12 public hospitals in Greece. Mangoulia et al. (2015) achieved Cronbach's alpha scores of  $\alpha = .89$  for *Compassion Satisfaction*,  $\alpha = .94$  for *Burnout*, and  $\alpha = .92$  for *Secondary Traumatic Stress*. Galiana, Arena, Oliver, Sansó and Benito (2017) conducted a study among palliative care professionals in Spain and in Brazil, in Spain the *Compassion Satisfaction* Cronbach's alpha score was  $\alpha = .774$ , *Burnout* was  $\alpha = .537$  and *Secondary Traumatic Stress* was  $\alpha = .774$ , and in Brazil the *Compassion Satisfaction* Cronbach's alpha score was  $\alpha = .857$ , *Burnout* was  $\alpha = .654$  and *Secondary Traumatic Stress* was  $\alpha = .770$ .

Mason and Nel (2012) conducted a study on nursing students enrolled in their first, second and third years of study in nursing science in South Africa. They achieved the following Cronbach's alpha scores: *Compassion Satisfaction* was  $\alpha = .87$ , *Burnout* was  $\alpha = .72$  and *Secondary Traumatic Stress* was  $\alpha = .80$ . Sacco, Cuizynski, Harvey and Harvey (2015) found higher Cronbach's alpha score for the *Compassion Satisfaction* subscale, slightly higher for *Secondary Traumatic Stress*  $\alpha = .91$  and the *Burnout* Cronbach's alpha score  $\alpha = .45$ , was lower than that of the current study. Mashego, Nesengani and Wyatt (2016), who conducted a study among nurses exposed to maternal and perinatal deaths, found lower Cronbach's alpha score for *Burnout*  $\alpha = .46$  and *Secondary Traumatic Stress*  $\alpha = .741$  than in the current study, while their *Compassion Satisfaction* Cronbach's alpha score was slightly higher  $\alpha = .79$  than of our study. Mathias and Wentzel (2017) found higher Cronbach's alpha scores than the current study on all subscales: *Compassion Satisfaction*  $\alpha = .87$ , *Burnout*  $\alpha = .90$  and *Secondary Traumatic Stress*  $\alpha = .87$  (Table 17).



**Table 17: Reliability of scales**

Scale	This study	Stamm (2010)	Mangoulia (2015)	Mashego et al. (2016)	Sacco (2015)	Galiana et al. (2016) Spain	Galiana et al. (2016) Brazil	Mathias & Wentzel (2014)	Mason & Nel (2012)
<i>Compassion Satisfaction</i>	$\alpha = .76$	$\alpha = .88 \uparrow$	$\alpha = .89 \uparrow$	$\alpha = .79 \uparrow$	$\alpha = .91 \uparrow$	$\alpha = .774 \uparrow$	$\alpha = .857 \uparrow$	$\alpha = .87 \uparrow$	$\alpha = .87 \uparrow$
<i>Burnout</i>	$\alpha = .59$	$\alpha = .75 \uparrow$	$\alpha = .94 \uparrow$	$\alpha = .46 \downarrow$	$\alpha = .45 \downarrow$	$\alpha = .537 \downarrow$	$\alpha = .654 \uparrow$	$\alpha = .90 \uparrow$	$\alpha = .72 \uparrow$
<i>Secondary Traumatic Stress</i>	$\alpha = .74$	$\alpha = .81 \uparrow$	$\alpha = .92 \uparrow$	$\alpha = .68 \downarrow$	$\alpha = .73 \downarrow$	$\alpha = .782 \uparrow$	$\alpha = .770 \uparrow$	$\alpha = .87 \uparrow$	$\alpha = .80 \uparrow$

$\uparrow$  refers to higher and  $\downarrow$  refers to lower

### 5.3 Overall Professional Quality of Life

Stamm (2010), in the concise ProQoL manual, reported the T-scoring threshold of *Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress* as  $\geq 57 =$  high,  $44-56 =$  moderate and  $\leq 43 =$  low. In *Compassion Satisfaction*, the T-score mean was 56: about 50% of the



respondents scored between 45.24 and 57.84, about 25% scored above 57.84 and about 25% scored below 45.24. In *Burnout*, the T-score mean was 55: about 50% of the respondents scored between 41.95 and 57.55, about 25% scored below 41.95 and about 25% scored above 57.55. In *Secondary Traumatic Stress*, the T-score mean was 71: about 50% of the respondents scored between 42.59 and 57.88, about 25% scored below 42.59 and about 25% scored above 57.88.

#### **5.4. The usage of raw score in ProQoL versions in other studies**

A number of studies that used the different ProQoL versions, such as ProQoL version 3 and version 4 (ProQoL 4), used the raw mean score to calculate the average score for the ProQoL subscales, as Stamm had advised in their manuals. Some of the researchers who used ProQoL 5 also used the raw score, despite the fact that in the concise ProQoL manual, Stamm (2010) suggesting that when using ProQoL 5, scores should be reported in standardised form (T-score), because the raw score format had challenges – for instance, a particular score meant something different on other scale and on a different ProQoL version. Standardised scores are the same on all ProQoL versions, with the mean of 50 and standard deviation of 10 on any scale. The standardised scores, therefore, allow comparison of scores across all ProQoL versions. Information on the standardising of scales is provided in the concise ProQoL manual 2010 (Stamm, 2010). The raw scores found in studies that used ProQoL 4 (and some of the studies that used ProQoL 5 that used raw scores) were converted to the standardised T-scores for discussion and comparison purposes, as advised by Stamm (2010) in the concise ProQoL manual. The reason for computing the raw mean score for *Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress*, was that Stamm (2010) strongly suggests the use of the continuous mean scores for the subscales because the measure is most sensitive when using continuous scores. The raw mean score was then standardised/converted into T-score mean, as per the table stipulating the scores in the concise ProQoL manual (Stamm, 2010). To enable comparison with the older ProQoL versions and scales, the older versions' raw scores (and

those of some studies that used raw scores in version 5) were standardised as directed in the concise ProQoL manual (Stamm, 2010). Table 18 below presents the raw scores for *Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress* as found on the studies.

**Table 18: Usage of raw scores in ProQoL versions in other studies**

Study	Sample description	ProQoL version	<i>Compassion Satisfaction</i> M (SD)	<i>Burnout</i> M (SD)	<i>Secondary Traumatic Stress</i> M (SD)
Current study	Nurses in psychiatric observation units	5	41.64 ( $\pm 5.55$ )	24.64 ( $\pm 5.77$ )	27.36 ( $\pm 7.166$ )
Stamm (2005)	Various professionals ProQoL manual	4	37.0 ( $\pm 7.0$ )	22.0 ( $\pm 6$ )	13.0 ( $\pm 6.0$ )
Mangoulia (2012)	Psychiatric nurses	4	28.36 ( $\pm 9.46$ )	25.17 ( $\pm .94$ )	16.45 ( $\pm 8.58$ )
Adeyemo et al. (2015)	Mental health professionals	5	Violence (n=175) 38.10 ( $\pm 7.756$ ) No violence (n=58) 39.69 ( $\pm 7.165$ )	Violence (n=176) 28.06 (5.800) No violence (n=57) 26.95 ( $\pm 4.270$ )	Violence (n=176) 18.59 ( $\pm 6.328$ ) No violence (n=57) 16.63 ( $\pm 4.761$ )
Pruginin et al. (2016)	Mental health care professionals	5	38.6 ( $\pm 4.1$ ) 38.7 ( $\pm 5.3$ )	22.8 ( $\pm 3.7$ ) 23.1 ( $\pm 4.8$ )	22.4 ( $\pm 4.9$ ) 22.8 ( $\pm 5.3$ )
Lauvrud et al. 2009	Psychiatric nurses	4	30.2 - 35.7 ( $\pm 6.5$ ) in 4 wards	17.3 ( $\pm 4.4$ ) for all four wards	5.8 ( $\pm$ SD 3.6)
Ray et al. (2013)	Mental health care professionals	4	36.9 ( $\pm 6.3$ )	Maslach burnout inventory tool	11.8 ( $\pm 6.7$ )
Mason and Nel (2012)	Nursing students	4	41.63 ( $\pm 3.5$ )	18.5 ( $\pm 2.12$ )	19.9 ( $\pm 4.95$ )
Mashego et al. 2016;	Nurses in hospitals	4	37.9 ( $\pm 8.8$ )	30.7 ( $\pm 53$ )	31.1 ( $\pm 8.9$ )
Potter et al. (2010)	Oncology health care staff	4	38.3 ( $\pm 7.2$ )	21.5 ( $\pm 6.4$ )	15.2 ( $\pm 6.6$ )
Wentzel & Brysiewicz 2018	Oncology nurses	5	41.48 ( $\pm 4.61$ )	23.35 ( $\pm 4.03$ )	26.93 ( $\pm 5.36$ )
Hunsaker et al. (2015)	General registered nurses	5	39.77 ( $\pm 6.32$ )	23.66 ( $\pm 5.87$ )	21.57 ( $\pm 5.44$ )
Hegney et al. (2013)	Nurses	5	35.66 (7.60)	23.66 ( $\pm 5.91$ )	18.60 ( $\pm 5.71$ )

*Note: First authors listed where there are more than two authors due to space*

## 5.5 Professional Quality of Life

### 5.5.1 Compassion Satisfaction

Stamm (2010), in the concise ProQoL manual, reported the T-scoring threshold for *Compassion Satisfaction* as  $\geq 57$ = high, 44-56= moderate/average and  $\leq 43$ = low. In this study, the respondents (nurses in psychiatric observation units) reported moderate *Compassion Satisfaction* levels (raw m= 41.64, T-score m= 56). These findings were higher than those reported by Mangoulia et al. (2015) in a study to investigate *Secondary Traumatic Stress, Burnout and Compassion Satisfaction* in 174 psychiatric nurses and their risk factors in 12 public hospitals in Greece, who reported low *Compassion Satisfaction* levels (raw m= 28.36, T-score m= 39). In Norway, findings in psychiatric units were lower regardless of the type of admissions in these units, such as patients sentenced to psychiatric care, with severe psychiatric disorders, aggression and severe behavioural problems (Lauvrud et al., 2009). Lauvrud et al. (2009) explored occurrence of symptoms on post-traumatic stress and their relationship to Professional Quality of Life on 70 psychiatric nurses, and found low to moderate *Compassion Satisfaction* levels (raw m= 30, 2 to 35.7, T-score m= 41- 48), which was attributed to a number of factors such as aggression and violence faced by nurses in psychiatric units (Lauvrud et al., 2009). Adeyemo et al. (2015) conducted a study to examine the factors influencing Professional Quality of Life of professionals in a mental health facility, among 234 mental health professionals in Benin City, Nigeria. The professionals included nurses, psychiatrists, psychologists, social workers and occupational therapists. The *Compassion Satisfaction* mean rating was assessed as per professionals who experienced violence in the line of duty and those who did not. Similar to the current study, *Compassion Satisfaction* levels were moderate for both professionals who did not experience violence in the ward and those who did. The score for the professionals who experienced violence was (raw m= 38.10, T-score m= 52), lower than the professionals who had no violence experience (raw m= 39.69, T-score m= 53)

(Adeyemo et al., 2015). Ray, Wong, White and Heaslip (2013) conducted a study on 169 frontline mental health care professionals (general registered nurses, registered practical nurses and health allied professionals) in south-western Ontario, in which majority were general registered nurses and registered practical nurses. ProQoL was used to assess the *Compassion Satisfaction* and *Secondary Traumatic Stress*, and *Burnout* was assessed using Maslach's *Burnout Inventory* tool. The respondents rated *Compassion Satisfaction* as moderate (raw m= 36.9, T-score m= 49) (Ray et al., 2013).

In comparing the current study with studies conducted in child psychiatry, Foster (2019) conducted a longitudinal study with 17 registered mental health nurses working in an adolescent psychiatric intensive care unit in the north of England. The ProQoL 5 was administered on four consecutive occasions, three months apart, and the raw mean scores showed moderate *Compassion Satisfaction*. Foster (2019) found *Compassion Satisfaction* scores of (raw m= 40.59, T-score m= 55) for the first administration, (raw m= 36.3, T-score= 49) for the second administration, (raw m= 41.71, T-score m= 56) for the third administration, and (raw m= 39.69, T-score m= 53) for the fourth administration. Berger, Polivka, Smoot and Owens (2015) conducted a study to determine the prevalence and severity of *Compassion Fatigue* among 117 nurses (accounting for variations in prevalence based on respondent demographics by using a cross-sectional survey design) in a tertiary care teaching hospital in Kentucky. Similar to our study, Berger et al. (2015) found that nurses in paediatric psychiatry reported moderate *Compassion Satisfaction* levels (T-score m= 45, sd ±10).

Due to limited studies conducted in psychiatric settings regarding Professional Quality of Life among nurses, ProQoL studies administered in other settings were also considered. Comparing the findings of our study with other South African studies, Mason and Nel (2012), in a study with nursing students enrolled in their first, second and third years of study, found almost the same rating as our study: moderate *Compassion Satisfaction* score (raw m= 41.63, T-score m=

56). Wentzel and Brysiewicz (2018) conducted a study with nurses working in oncology in Durban, KwaZulu-Natal, South Africa. The average *Compassion Satisfaction* score was moderate (raw m= 41.48, T-score m= 56). In another SA study, where nurses were exposed to stressful working conditions such as maternal and infant deaths in six hospitals in Limpopo, Mashego et al. (2016) found a moderate *Compassion Satisfaction* score of (raw m= 37.9, T-score m= 51). The findings of our study were also similar to those for other health care workers in South Africa, with *Compassion Satisfaction* at moderate to high levels (Mashego et al., 2016; Mason & Nel, 2012; Mathias & Wentzel, 2014). In these studies, authors credited the high *Compassion Satisfaction* among the health care professionals to optimism, tolerance of disagreements, time management, conducive work environments and being able to care for oneself (Mashego et al., 2016; Wentzel & Brysiewicz, 2018).

Comparing our study with studies conducted abroad, Hunsaker, Chen, Maughan and Heaston (2015) found moderate *Compassion Satisfaction* among nurses working in emergency casualty in the United States (raw m= 39.77, T-score m= 53). Hegney et al. (2014) conducted a study of 132 nurses working in a tertiary hospital in Australia, who rated *Compassion Satisfaction* as moderate (raw m= 35.66, T-score m= 48). Potter et al. (2010) investigated *Compassion Fatigue* and *Burnout* prevalence among oncology nurses in the Midwestern United States, and found moderate *Compassion Satisfaction* (raw m= 38.3, T-score m= 52).

#### **5.5.1.1 Individual statements on Compassion Satisfaction component**

Considering the individual statement ratings by the nurses, the highest level of agreement was with the statement *I am proud of what I can do to help* (m= 4.4 [CI 95% 4.26-4.55]). The statement was rated significantly higher by enrolled nurses (m= 4.52) than enrolled nursing assistants (m= 4.44), general registered nurses (m= 4.37) and general registered nurses specialised psychiatry (m= 4.21). Although no statistically significant difference was found, the statement was moving towards statistical significance:  $K= 1.294$ ,  $p= .730$ .

### 5.5.1.2 Demographic factor influence on *Compassion Satisfaction*

Considering demographic factors that may have influenced levels of *Compassion Satisfaction* in the current study, the first might be the gender of the respondents. Both male and female respondents reported moderate *Compassion Satisfaction*, with male respondents reported lower *Compassion Satisfaction* (T-score  $m= 47.09$ ) than the female respondents (T-score  $m= 51.29$ ) no statistical difference found. Comparing the findings of the current study with those reported by Stamm (2010) in the concise ProQoL manual, *Compassion Satisfaction* was moderate for both male and female respondents, similar to the current study. The male respondents also reported lower *Compassion Satisfaction* (T-score  $m= 49.01$ ) than the female respondents (T-score  $m= 51.14$ ) no statistical difference found. Berger et al. (2015) found moderate *Compassion Satisfaction* on both male and female respondents, with male respondents reporting lower *Compassion Satisfaction* (T-score  $m= 45.9$ ), than female respondents (T-score  $m= 50.0$ ) no statistical difference found.

The second factor could be the age of the respondents, *Compassion Satisfaction* was found to be moderate across all age groups, with nurses between the ages of 36 and 49 reporting higher *Compassion Satisfaction* (T-score  $m= 51.62$ ) than those between 50 and 64 (T-score  $m= 50.34$ ), and with the lowest score on *Compassion Satisfaction* among nurses between 20 and 35 years old (T-score  $m= 48.32$ ). No statistically significant difference was found. Comparing the findings of the current study with those reported by Stamm (2010) in the concise ProQoL manual, *Compassion Satisfaction* was moderate for both age group of respondents, similar to the current study. The age group of 36 years and above reported higher *Compassion Satisfaction* (T- score mean= 51) than respondents between ages 18 and 35 years reported (T-score  $m= 50.2$ ) and no statistically significant difference was found (Stamm, 2010). Similar to the current study, Berger, Polivka, Smoot and Owens (2015) found moderate *Compassion Satisfaction* across all age groups, with on older nurses above 40 years reporting higher



*Compassion Satisfaction* (T-score  $m= 52.1$ ) than nurses between 18 and 39 years (T-score  $m= 47.3$ ). Mashego et al. (2016) also found older nurses reporting higher *Compassion Satisfaction* than younger nurses; nurses between the ages 44 and 49 scored the highest on *Compassion Satisfaction* (raw  $m= 41.5$ , T-score  $m= 56$ ), compared to 50 years and older (raw  $m= 38.2$ , T-score  $m= 52$ ), those aged between 20 and 31 years (raw  $m= 38.1$ , T-score  $m= 52$ ) and those between the ages of 32 and 43 (raw  $m= 34.9$ , T-score  $m= 47$ ). No statistically significant difference was found.

The third demographic factor could be the rank, qualifications and roles of the nurses. Our study found that nurses with lower educational qualifications (enrolled nurses and enrolled nursing assistants) reported higher *Compassion Satisfaction* than those with higher qualifications (the general registered nurses); however, all nursing ranks reported moderate *Compassion Satisfaction*. The enrolled nursing assistants reported significantly higher *Compassion Satisfaction* (T-score  $m= 52.57$ ), than the enrolled nurses (T-score  $m= 51.50$ ), advanced psychiatric nurse practitioners (T-score  $m= 47.55$ ) and general registered nurses (T-score  $m= 47.13$ ). Statistically significant difference was found  $K= 4.086$   $p = .007$ . The results of our study corroborate those of Nabirye, Brown, Pryor and Maples (2011), who also found nurses with lower qualifications (e.g. enrolled nurses and enrolled midwives) reported higher job satisfaction compared to professional nurses with diplomas, degrees in nursing or higher nursing qualifications. Mashego et al. (2016) found moderate *Compassion Satisfaction* among all nursing categories; however, in contrast to our findings, Mashego et al. (2016) found that registered nurses reported higher *Compassion Satisfaction* (raw  $m= 38.6$ , T-score  $m= 52$ ) than enrolled nurses (raw  $m= 33.4$ , T-score  $m= 45$ ), and nurse managers scored the highest (raw  $m= 39.1$ , T-score  $m= 53$ ). No statistically significant difference was found. In the current study, the results could be high among enrolled nurses and enrolled nursing assistants because they do not have much accountability or responsibility in psychiatry. This is because they do not



possess training in the field, are working under the supervision of general registered nurses/ advanced psychiatric nurse practitioners and have lower educational qualifications. General registered nurses and advanced psychiatric nurse practitioners are responsible for most of the work, such as MHCA 2002 forms, admissions, assessments, crisis management, psychosocial interventions, ward rounds, overseeing medication administration and recording in scheduled drug book. Findings that opposed those of our study were found in a study conducted among paediatric nurses by Berger et al. (2015), which found that enrolled nurses had lower levels of *Compassion Satisfaction* than other nursing categories. Similarly, nurses with qualifications equivalent to or slightly higher than the enrolled nurses were also found to have the highest percentage of low *Compassion Satisfaction* scores (Kleintjes & Cooper, 2015).

The fourth factor could be the years of experience of the respondents. Nurses with working experience of a decade or more reported high *Compassion Satisfaction* levels (T-score  $m=57.84$ ) compared to nurses with 3 to 9 years, who reported moderate *Compassion Satisfaction* levels (T-score  $m=50.53$ ) and nurses with 0 to 2 years, who had the lowest scores, moderate *Compassion Satisfaction* levels (T-score  $m=49.55$ ). No statistically significant difference was found. In contrast to the current study, Stamm (2010) reported moderate *Compassion Satisfaction* levels across all groups by years of experience. Stamm (2010) found that respondents with  $< 5$  years of experience reported *Compassion Satisfaction* (T-score  $m=49.55$ ), compared to respondents between 5 and 15 years (T-score 49.49) and respondents with  $>15$  years of working experience reporting higher *Compassion Satisfaction* (T-score  $m=50.31$ ). In other settings, Hegney et al. (2014) found that nurses with longer than 15 years' experience derived more satisfaction and fulfilment from their jobs as nurses, reporting high *Compassion Satisfaction* (raw  $m=42.09$ , T-score  $m=57$ ), more than those who were new to the field (fewer than five years), reporting moderate *Compassion Satisfaction* (raw  $m=34.69$ , T-score  $m=47$ ). Berger et al. (2015) similarly found that nurses with more than a decade of

experience reported higher *Compassion Satisfaction* than nurses with less than a decade of working experience. Nurses with  $\geq 21$  years and 11-20 years of experience reported a higher *Compassion Satisfaction* (T-score  $m= 51.8$ ) and (T-score  $m= 51.8$ ), than nurses with  $\leq 5$  years reporting (T-score  $m= 48.3$ ) and, with the lowest *Compassion Satisfaction* score were nurses between 6 and 10 years' experience (T-score  $m= 46.9$ ). In contrast to the findings of our study, Mashego et al. (2016) found that nurses with shorter working experience ( $\leq 1$  year) in maternity reported higher *Compassion Satisfaction* (raw  $m= 39.2$ , T-score  $m= 53$ ) than nurses between 2 and 5 years of experience (raw  $m= 37.8$ , T-score  $m= 51$ ), and nurses with  $> 5$  years' experience reported the least *Compassion Satisfaction* (raw  $m= 36.8$ , T-score  $m= 49$ ) no statistical difference found. Nabirye et al. (2011) conducted a study among hospital nurses in Kampala, Uganda, and also found nurses with less working experience reported higher levels of job satisfaction than nurses with longer working experience. Nabirye et al. (2011) postulate that lower levels of job satisfaction among nurses with more experience could be related to institutional politics, the need to play an influential role in the unit/institution, lack of acknowledgement by the seniors and lack of growth within the institution.

## **5.6 Compassion Fatigue**

### **5.6.1 Burnout**

*Burnout* is a cluster of symptoms related to feelings of despair, hopelessness and inability to execute one's work effectively. It is associated with work-related pressure, poor administration and conflict at work. The symptoms initially manifest slowly (Maslach & Jackson, 1981; Stamm, 2005). Stamm (2010), in the concise ProQoL manual, reported the T-scoring threshold for *Burnout* as  $\geq 57=$  high,  $44-56=$  moderate/average and  $\leq 43=$  low.

The nurses in the psychiatric observation units in this study reported moderate *Burnout* (raw  $m= 24.64$ ,  $sd= \pm 5.77$ , T-score  $m= 55$ ). Comparing our findings to other studies in psychiatric

settings, Mangoulia et al. (2015), in 12 hospitals in Greece, found moderate *Burnout* levels (raw m= 25.17, T-score m= 56); however, they found slightly higher T-scores than the current study. In contrast to our study, Lauvrud et al. (2009) found *Burnout* scores to be well below average in each of the four psychiatric wards in Norway, with the average score for all wards being (raw m= 17.3, T-score m= 45), despite having patients with severe mental disorders, who were difficult to manage in general psychiatric wards, and displayed violence and aggression. Adeyemo et al. (2015) found the high *Burnout* levels among 234 mental health care professionals (including nurses, psychiatrists, social workers and occupational therapists). The mental health professionals who had experienced violence reported higher *Burnout* (raw m= 28.06, T-score m= 60) than those who did not (raw m= 26.95, T-score m= 58).

Comparing our study with studies conducted in child psychiatry, Foster (2019) conducted a longitudinal study with 17 nurses working in an adolescent psychiatric intensive care unit in the north of England. The ProQoL 5 was administered on four consecutive occasions, three months apart, and the raw mean scores were used. Foster (2019) found *Burnout* levels varying from moderate to high in a period of a year: moderate *Burnout* (raw m= 23.59, T-score m= 53) on the first administration, high *Burnout* (raw m= 26.50, T-score m= 58) on the second administration, moderate *Burnout* (raw m= 21.86, T-score m= 51) on the third administration, and moderate *Burnout* (raw m= 23.94, T-score m= 53) on the fourth administration. Berger et al. (2015) conducted a study with 117 nurses in a paediatric tertiary care teaching hospital in Kentucky, who reported a *Burnout* score of (T-score m= 51).

General population studies regarding Professional Quality of Life of nurses were considered due to the limited studies of Professional Quality of Life among nurses in a psychiatric setting. Comparing the findings of our study with other South African studies, Mason and Nel (2012), in a study with nursing students in a tertiary institution in SA, found a lower *Burnout* score (raw m= 18.5, T-score m= 46) compared to the current study. Wentzel and Brysiewicz (2018)

conducted a study with nurses working in oncology settings in Durban, KwaZulu-Natal. The *Burnout* score was moderate (raw  $m= 23.35$ , T-score  $m= 53$ ). In another SA study where nurses, were exposed to stressful working conditions such as maternal and infant deaths in six hospitals in Limpopo, Mashego et al. (2016) found a high *Burnout* score of (raw  $m= 30.7$ , T-score  $m= 63$ ).

Comparing the findings of our study with overseas studies conducted on nurses working in emergency and casualty departments, in the south-eastern United States, Petleski (2013) conducted a study with 24 nurses and found moderate *Burnout* (T-score= 53.54), while Hunsaker et al. (2015) conducted a study with 284 nurses in the United States and found moderate *Burnout* levels (raw  $m= 23.66$ , T-score  $m= 53$ ).

#### **5.6.1.1 Individual statement on Burnout component**

Considering the average ratings on individual statements, the highest levels of agreement by all nurses was with *I feel overwhelmed because my case workload seems endless* ( $m= 3.28$  [CI 95% 3.09-3.48]) and the lowest was with *I am a very caring person* ( $m= 1.69$  [CI 95% 1.52-1.87]). In comparing the different categories of nurses, statistically significant difference was found in some of the statements. The statement *I feel "bogged" down by the system* was rated significantly lower by enrolled nurses ( $m= 2.62$ ) than by advanced psychiatric nurse practitioners ( $m= 3.71$ ), general registered nurses ( $m= 3.32$ ) and enrolled nursing assistants ( $m= 3.01$ )  $X^2=8.367$   $p = .039$ . Enrolled nurses also rated the statement *I feel trapped in my job as a nurse* significantly lower ( $m= 1.76$ ) than enrolled nursing assistants ( $m= 1.99$ ), registered nurses specialised in psychiatry ( $m= 3.00$ ) and general registered nurses ( $m= 2.38$ )  $X^2 = 10.642$   $p=.014$ . The statement *I feel overwhelmed because my case work load seems endless* was rated significantly lower by enrolled nurses ( $m= 2.62$ ) than by general registered nurses specialised in psychiatry ( $m= 4.00$ ), general registered nurses ( $m= 3.35$ ) and enrolled nursing assistants ( $m= 3.28$ )  $K=9.064$   $p=.028$ .

### 5.6.1.2 Demographic factor influence on Burnout

Considering the moderate *Burnout* found in our study, these findings can be attributed to a number of demographic factors. The first factor could be gender. Both male and female respondents reported moderate *Burnout* levels; with male respondents reporting lower *Burnout* (T-score  $m= 49.58$ ) than female respondents (T-score  $m= 50.19$ ), no statistically significant difference was found. Stamm (2010), in the concise ProQoL manual, also reported moderate *Burnout* for both genders, with males also reporting lower *Burnout* (T-score  $m= 48.99$ ) than females (T-score  $m= 50.37$ ), no statistically significant difference was found. Berger et al. (2015) also found moderate *Burnout* among both male and female respondents; in contrast to the current study; male respondents reported higher *Burnout* (T-score  $m= 56.1$ ) than female respondents (T-score  $m= 49.9$ ).

The second factor could be the age. Across all age groups of respondents, moderate *Burnout* was found, with nurses between the ages of 50 and 64 years reporting lower *Burnout* scores (T-score  $m= 46.00$ ) than nurses aged 36–49 (T-score  $m= 50.91$ ) and nurses aged 20–35 (T-score  $m= 50.09$ ), no statistically significant difference was found. Stamm (2010) also reported moderate *Burnout* levels for both the age groups; with respondents aged between 18 and 36 years reporting higher *Burnout* (T-score  $m= 50$ ) than those aged 36 years and above (T-score  $m= 47.74$ ). In contrast to the current study, Mashego et al. (2016) found high *Burnout* levels among all age groups of nurses exposed to stressful working conditions such as maternal and infant deaths, in Limpopo SA. Mashego et al. (2016) found that nurses between 44 and 49 years of age reported higher *Burnout* (raw  $m= 32.9$ , T-score  $m= 66$ ) than nurses aged 20–31 (raw  $m= 31.2$ , T-score  $m= 65$ ), nurses aged  $\geq 50$  years (raw  $m= 30.3$ , T-score  $m= 63$ ) and nurses aged 32–43 (raw  $m= 29.3$ , T-score  $m= 62$ ). Berger et al. (2015) found that nurses below the age of 40 reported lower *Burnout* (T-score  $m= 48.8$ ), than the respondents between the ages 18 and 39 years (T-score  $m= 51.5$ ).

The third factor could be the rank held by the nurses. The advanced psychiatric nurse practitioners and the general registered nurses bear more responsibility in the units than the lower categories (enrolled nurses and enrolled nursing assistants). The advanced psychiatric nurse practitioners reported significantly high *Burnout* (T-score  $m= 53.96$ ) than general registered nurses (T-score  $m= 51.31$ ), enrolled nursing assistants (T-score  $m= 49.52$ ) and enrolled nurses (T-score  $m= 45.17$ ) ( $K= 8.314$ ,  $p= .040$ ). This indicates that the nurses with higher education levels (either master's degrees or postgraduate diplomas in advanced psychiatric nursing science) reported higher *Burnout* T-score mean. Mashego et al. (2016) found high *Burnout* among all nursing categories. The enrolled nurses reported lower *Burnout* (raw  $m= 29.3$ , T-score  $m= 62$ ) than general registered nurses (raw  $m= 30.7$ , T-score  $m= 63$ ) and nurse managers (raw  $m= 32.3$ , T-score  $m= 66$ ). The high *Burnout* among the advanced psychiatric nurses and general registered nurses could be related to the high responsibility and accountability they hold in the units. In the SA context, almost all the general registered nurses working in psychiatric units are trained in either basic psychiatric nursing and advanced psychiatric nurse practitioners are trained in post graduate diploma or master's degree in advanced psychiatric nursing. They need to oversee the proper admission process as per the MHCA 2002 and the completion of the MHCA 2002 forms by the head of health establishment, manage crisis, offer psychosocial interventions, administer medication especially schedule five and above and liaise with other multidisciplinary team members regarding the MHCA 2002; amongst other duties. They also liaise with the referral psychiatric hospitals and referring wards, community health centres or clinics regarding the legal status of the mental health care users (MHCUs). Advanced psychiatric nurses and general registered nurses manage the ward and have to delegate, render in-service training, supervise subordinates and novice nurses, and liaise with the multidisciplinary team members and families regarding the management of the MHCUs. The Advanced psychiatric nurses and general registered nurses take charge and



address the challenges that arise in the unit, such as adverse events, management of aggressive patients, psychosocial interventions etc., as they are the ones with the most insight and are responsible for the ward. District hospitals are mainly allocated lower budgets compared to regional and tertiary hospitals. These hospitals are affected by shortage of crucial resources, including staff and staff specialised in psychiatry. Psychiatric units at district levels often do not have all multidisciplinary team members, such as psychiatric registrars, social workers, psychologists and occupational therapists. General registered nurses often assume the duties of these absent multidisciplinary team members which adds to their burden. Poor support system from management and lack of crucial resources utilised in executing one's work were found to have a great impact on high *Burnout* (Khamisa, Peltzer, Ilic, & Oldenburg, 2016). These results were corroborated by Potter et al. (2010), who found that the general registered nurses with advanced degrees had a higher risk for *Burnout* than lower categories. Foster (2019) also found that general registered nurses reported higher *Burnout* levels than nursing assistants.

The fourth factor could be years of working experience. Although all categories of working experience reported moderate *Burnout*, nurses with experience of less than a decade reported higher *Burnout* T-score than nurses with more than a decade of working experience. Nurses with 0–2 years of experience reported higher *Burnout* (T-score  $m= 50.26$ ) than nurses with 3–9 years of experience (T-score  $m= 49.36$ ) and nurses with a decade or more of experience. No statistically significant difference was found. Stamm (2010) reported moderate *Burnout* levels across all experience groups and found that respondents with >15 years of working experience reported higher *Burnout* (T-score  $m= 49.43$ ) than those with < 5 years of experience (T-score  $m= 47.55$ ) and those with 5–15 years (T-score 47.32). Comparing our findings with a maternity setting in South Africa, high *Burnout* levels were found across all categories of working experience in a study conducted by (Mashego et al., 2016). Mashego et al. (2016) found that nurses with more experience reported slightly lower *Burnout* (raw  $m= 30.1$ , T-score  $m= 63$ )



than nurses with 2–5 years of experience (raw  $m=30.9$ , T-score  $m=63$ ) and nurses with  $\leq 1$  year (raw  $m=30.3$ , T-score  $m=63$ ) ( $p=0.753$ ). Berger et al. (2015) found that nurses with working experience longer than a decade scored lower on *Burnout* than nurses with experience of a decade or less. Berger et al. (2015) conducted a study on nurses caring for geriatrics and found moderate *Burnout* levels: nurses with 11–20 years reported lower *Burnout* (T-score 48.3) than nurses with  $\geq 21$  years (T-score 49.2), nurses with  $\leq 5$  years (T-score 51.2) and nurses with 6–9 years (T-score 51.9). A study conducted by Sekol & Kim (2014) in a children's hospital in southern California found that nurses with between five and ten years of working experience in a surgical setting reported the highest *Burnout* score, and nurses with more than two decades scored lower.

### **5.6.1.3 Other factors that could have influenced Burnout**

There could be a number of other factors that could have affected Burnout levels among nurses in the current study. Lauvrud et al. (2009) postulate that nurses working in stressful, emotionally draining and demanding units may not reveal their true feelings and experiences when responding to the questionnaire due to detachment from their true feelings fewer symptoms during the time of data collection or the most-affected nurses not participating. The nature of psychiatric observation units, being highly secured due to reception of severely disturbed and violent patients, may lead to nurses being emotionally distant to their patients, resulting in reduced psychological awareness and effect of violence towards nurses (Lauvrud et al., 2009). Hemsworth et al. (2017) and Hegney et al. (2014) found that *Burnout* and *Compassion Satisfaction* had a negative correlation, that *Burnout* and *Secondary Traumatic Stress* had positive correlation, and that there is no evidence of correlation between *Compassion Satisfaction* and *Secondary Traumatic Stress*. Foster (2019) also found that during the second administration of the ProQoL 5 questionnaire, it was evident that *Compassion Satisfaction* was rated lower and *Burnout* rated higher by the nurses, due to the increased

workload at the second interval of data collection. Therefore, *Burnout* levels could have been positively affected by the *Compassion Satisfaction*, resulting in moderate *Burnout* and moderate *Compassion Satisfaction*.

### 5.6.2 Secondary Traumatic Stress

*Secondary Traumatic Stress* refers to occupation-associated stress in which the worker is exposed to traumatic events that have happened to the clients, or the job itself puts one in danger. The onset is rather fast and it is linked to the specific incident. Symptoms may include panic, sleep disturbances, intrusive thoughts and flashbacks (Stamm, 2010).

In our study, nurses reported high *Secondary Traumatic Stress* levels (raw  $m= 27.36$ , T-score  $m= 71$ ) ( $\pm 7.166$ ). In contrast to the current study, Mangoulia et al. (2015) found moderate *Secondary Traumatic Stress* levels (raw  $m= 16.45$ , T-score  $m= 55$ ). In Norway, a study conducted in four psychiatric units by Lauvrud et al. (2009) found low *Secondary Traumatic Stress* levels in all four psychiatric wards, with a total mean for all four wards of (raw  $m= 5.8$ , T-score  $m= 39$ ). Adeyemo et al. (2015) found high *Secondary Traumatic Stress* levels (raw  $m= 18.59$ , T-score  $m= 58$ ) in a study conducted on 234 mental health care professionals (nurses, psychiatrists, social workers and occupational therapists) who had experienced violence, compared to those who had not experienced violence reporting moderate *Secondary Traumatic Stress* (raw  $m= 16.63$ , T-score  $m= 55$ ) in the same ward.

In comparing our study with studies conducted in child psychiatry, Foster (2019) conducted a longitudinal study with nurses working in an adolescent psychiatric intensive care unit in the north of England. The ProQoL 5 was administered on four consecutive occasions, three months apart, and the raw mean scores were used. High *Secondary Traumatic Stress* was found on all three occasions. Foster (2019) found high *Secondary Traumatic Stress* levels (raw  $m= 19.47$ , T-score  $m= 60$ ) on the first administration, (raw  $m= 18.75$ , T-score  $m= 58$ ) on the second

administration, (raw m= 18.86, T-score m= 58) on the third administration (raw m= 18.86, T-score m= 58), and on the fourth administration the score was (raw m= 19.16, T-score m= 60). Berger et al. (2015) conducted a study in a paediatric tertiary care teaching hospital in Kentucky. Similar to the current study, Berger et al. (2015) found that nurses reported moderate *Secondary Traumatic Stress* levels (T-score m= 52.0).

Due to limited studies conducted in psychiatric settings regarding Professional Quality of Life, studies conducted in other settings regarding Professional Quality of Life among nurses were considered. Comparing our study to studies conducted in South Africa, Mason and Nel (2012), in a study with nursing students in a tertiary institution, found high *Secondary Traumatic Stress* levels (raw m= 19.9, T-score m= 60). Wentzel and Brysiewicz (2018) conducted a study with nurses working in oncology settings in Durban, KwaZulu-Natal, and found the average *Secondary Traumatic Stress* score was high (raw m= 26.93, T-score m= 70). Comparing these findings with the nurses exposed to maternal and perinatal deaths in six hospitals in Limpopo province, Mashego et al. (2016) found a *Secondary Traumatic Stress* score of (raw m= 31.1, T-score m= 77).

Comparing the findings of our study with overseas studies, in the south-eastern United States, Petleski (2013) found that 17 nurses in an emergency department reported high *Secondary Traumatic Stress* levels (T-score m= 65.83). A study conducted in Bengalaru, India by Kaur, Sharma and Chaturvedi (2018) found that palliative professionals reported high *Secondary Traumatic Stress* (T-score = 70).

#### **5.6.2.1 Individual statement on Secondary Traumatic Stress component**

In considering the mean individual statements, the highest level of agreement was with the statement *I am preoccupied with more than one person I nurse* (m= 3.55 [CI 95% 3.34-3.75]) and the lowest was with *I feel depressed because of traumatic experience of the people I nurse*

( $m = 2.4$  [CI 95% 2.21-2.59]). No statistically significant difference was found. In comparing the different categories of nurses with regard to the statement *I think that I might have been affected by the traumatic stress of those I nurse*, the enrolled nurses rated this statement lower ( $m = 1.76$ ) than advanced psychiatric nurse practitioners ( $m = 2.71$ ), general registered nurses ( $m = 2.43$ ) and enrolled nursing assistants ( $m = 2.24$ ) moving towards significance:  $K = 6.843$   $p = .077$ .

### 5.6.2.2 Demographic factor influence on Secondary Traumatic Stress

Considering the high *Secondary Traumatic Stress* found in our study, these findings can be attributed to a number of factors. The first could be gender. In our study, both genders reported moderate *Secondary Traumatic Stress* levels, with male respondents reporting lower *Secondary Traumatic Stress* (T-score  $m = 46.82$ ) than female respondents (T-score  $m = 51.41$ ). No statistically significant difference was found. Stamm (2010), in the concise ProQoL manual, also reported moderate *Secondary Traumatic Stress* for both genders, with males reporting lower *Secondary Traumatic Stress* (T-score  $m = 49.05$ ) compared to female respondents (T-score  $m = 51.08$ ). No statistically significant difference was found. Berger et al. (2015) found moderate *Secondary Traumatic Stress* among both male and female respondents; however, male respondents reported higher *Secondary Traumatic Stress* (T-score  $m = 53.0$ ) compared to female respondents (T-score  $m = 49.8$ ).

The second factor could be the age group. High *Secondary Traumatic Stress* has been found across all age categories. Respondents aged between 50 and 64 years reported a lower *Secondary Traumatic Stress* score (T-score  $m = 47.10$ ) compared to nurses between the ages of 20 and 35 years (T-score  $m = 49.10$ ), while nurses between 36 and 49 years of age reported (T-score  $m = 51.46$ ) ( $X^2 = 62.008$ ,  $p = .404$ ). Stamm (2010) reported moderate *Secondary Traumatic Stress* levels for both the age groups, with respondents aged between 18 and 36 years reporting (T-score  $m = 53.61$ ), higher than the respondents aged 36 years and above (T-

score  $m = 50.75$ ). Unlike in the current study, Mashego et al. (2015) found high *Secondary Traumatic Stress* levels across all age groups in a study on 83 maternity nurses exposed to maternal and perinatal deaths in Limpopo, SA. Mashego et al. (2015) found nurses between the ages of 44 and 49 reported higher *Secondary Traumatic Stress* (raw  $m = 33.9$ , T-score  $m = >77$ ) compared to nurses aged 50 years and above (raw  $m = 31.4$ , T-score  $m = 77$ ), while nurses between the ages of 20 and 31 years reported (raw  $m = 31.1$ , T-score  $m = >77$ ) and nurses between 32 and 43 reported lower *Secondary Traumatic Stress* score than the others (raw  $m = 28.9$ , T-score  $m = >73$ ). Berger et al. (2015) found that nurses below the age of 40 years reported higher *Secondary Traumatic Stress* (T-score  $m = 48.7$ ) compared to respondents between 18 and 39 years (T-score  $m = 51.5$ ).

The third factor could be the rank, educational level and responsibilities of nurses in the unit. The general registered nurses rated themselves significantly higher in *Secondary Traumatic Stress* (T-score  $m = 51.41$ ) than the advanced psychiatric nurse practitioners (T-score  $m = 50.40$ ), while enrolled nursing assistants scored (T-score  $m = 47.36$ ) and enrolled nurses rated themselves least (T-score  $m = 47.78$ ). Statistically significant difference was found  $K = 2.389$ ,  $p = .496$ . Mashego et al. (2015) found high *Secondary Traumatic Stress* levels at all nursing ranks; the managers reported higher *Secondary Traumatic Stress* (raw  $m = 33.9$ , T-score  $m = >77$ ) than general registered nurses ( $m = 31.2$ , T-score  $m = 77$ ), and the enrolled nurses reported lower *Secondary Traumatic Stress* ( $m = 28.1$ , T-score  $m = 71$ ) than the other two categories. By contrast, a study conducted in a psychiatric setting in Greece by Mangoulia et al. (2015) found that that general registered nurses had lower *Secondary Traumatic Stress*, while assistant nurses had higher levels. Mangoulia et al. (2015) attribute these findings to Advanced psychiatric nurses and general registered nurses having higher education, mitigating *Secondary Traumatic Stress* by virtue of access to information, theoretical and practical understanding of matters. They further postulate that general registered nurses focus more on administrative duties and



have minimal encounters with patients. Nurses with lower educational levels working in critical departments had higher anxiety levels, which predisposed them to *Burnout* and *Secondary Traumatic Stress* (Zhang, Han, Yin, Zhang, Kong and Wang et al., 2018; Hegney et al., 2014; Mangoulia et al., 2015).

The fourth factor could be working experience. Moderate *Secondary Traumatic Stress* levels was found across all nursing ranks, with nurses between 0 and 2 years (T-score  $m= 50.06$ ) and over 10 years of experience (T-score = 50.06) reporting slightly higher *Secondary Traumatic Stress* than nurses with 3 to 9 years of experience, no statistically significant difference was found. Stamm (2010) reported moderate *Secondary Traumatic Stress* levels across all experience groups. Stamm (2010) found that respondents with < 5 years of experience reported *Secondary Traumatic Stress* (T-score  $m= 48.95$ ), while respondents with 5 to 15 years reported *Secondary Traumatic Stress* (T-score 47.95) and respondents with >15 years of working experience reported (T-score  $m= 49.01$ ). Comparing our findings with a study conducted in a maternity setting in South Africa where high *Secondary Traumatic Stress* levels were found, Mashego et al. (2015) found that nurses with the least experience ( $\leq 1$  year) reported higher *Secondary Traumatic Stress* (raw  $m= 31.6$ , T-score  $m= 77$ ) than nurses with more than 5 years of working experience (raw  $m= 31.2$ , T-score  $m= 77$ ), while nurses with 2 to 5 years of experience scored the least (raw  $m= 30.8$ , T-score  $m= 77$ ). Berger et al. (2015) found that nurses with the working experience of a decade or less reported higher on *Secondary Traumatic Stress* than those with experience of a decade or more. Berger et al. (2015) found that nurses with 11 to 20 years of experience reported *Secondary Traumatic Stress* scored (T-score = 48.8), while those with  $\geq 21$  years scored (T-score = 48.5), those with  $\leq 5$  years scored (T-score = 52.5) and those with 6 to 9 years reported (T-score = 51.0).

### 5.6.2.3 Other factors that could have influenced Secondary Traumatic Stress

The high *Secondary Traumatic Stress* levels in the current study could be attributed to the violence, aggression and traumatic events experienced by patients outside the hospital, and the frustration of witnessing poor progress and prognosis of patients. Aggression from patients and families is mostly inflicted on the advanced psychiatric nurses and general registered nurses as they are the most senior in the absence of other multidisciplinary team members. The advanced psychiatric nurse practitioners are trained in advanced psychiatric nursing and general registered nurses are trained in basic psychiatric nursing; therefore, they articulate at a higher level than the other two categories, they manage crisis/ adverse events, offer psychosocial interventions; and advanced psychiatric nurses conducted more psychotherapeutic interventions as there are no psychologists in these units. Due to the resource constraints nurses in these units, all categories are often exposed to traumatic experiences, adverse events in that occur in and outside of the unit and challenges faced by the MCHUs. Senior management relies on them regarding patient conditions and operations of the unit. The patients can also be aggressive, violent and demanding to the advanced psychiatric nurses and general registered nurses, as they known to be the ones liaising with the multidisciplinary team members and the ones with the highest authority in the absence of the medical officers. Consistent with our findings, Potter et al. (2010) found that general registered nurses with degrees had the highest risk score for *Secondary Traumatic Stress*. A study conducted in Norway in a psychiatric institution by Lauvrud et al. (2009) found that almost all of the nurses (95.7%) working in psychiatric units had exposure to a cluster of PTSD symptoms, as per diagnosis in the DSM-IV, stating that they encountered threats or intimidation from their patients or families. Lauvrud et al. (2009) further state that some respondents were indirectly exposed to trauma, reporting to have been present when others were physically abused by their psychiatric patients, and 80% reported being assaulted. None of the respondents met the full description of PTSD. The nature



of the wards (being closed units, with patients admitted mostly against their will, presenting with various psychiatric disorders and at times arriving intoxicated) can lead to extreme violence and aggression towards nurses, which could in turn lead to nurses reporting high *Secondary Traumatic Stress* levels. A study conducted among nurses in Korea by Choi & Lee (2017) found high levels of *Secondary Traumatic Stress* among nurses who experienced about three types of violence compared to those who experienced one or none. Nurses claimed that intimidation from patients and families is a greater cause of *Secondary Traumatic Stress* than the actual physical abuse. Regrettably, aggression experienced by nurses may not necessarily be from patients and families. Choi & Lee (2017) states that the abuse found to be most traumatic and distressing was that perpetuated by other health care providers, although this type of abuse is usually not physical.

Choi and Lee (2017) found that verbal and physical aggression, including intimidation, were most commonly experienced by nurses in psychiatric units, especially those working night shift, those with less than five years of service and those who are general registered nurses. In this study, more than three quarters (n=125, 76.7%) of respondents had less than five years' working experience, almost half (n=72, 44.2%) worked night shifts, and nearly half (n=74, 45.4%) of the respondents were general registered nurses. Adeyemo et al. (2015) found that nurses who had encountered violence in a psychiatric setting indicated higher risk for *Secondary Traumatic Stress*. However, Lauvrud et al. (2009) found that exposure to violence did not lead to *Secondary Traumatic Stress* among psychiatric nurses.

## **5.6 Summary**

In this chapter, the findings of the study were discussed. This chapter was structured as follows: the reliability of scales, *Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress* findings. This was followed by a discussion of *Compassion Satisfaction*, *Burnout* and

*Secondary Traumatic Stress* among nurses in psychiatric observation units in relation to existing literature, to address the three objectives. Chapter six will present a summary of the findings, the limitations of the study and recommendations.



## CHAPTER SIX: CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

### 6.1. Introduction

The aim of the study was to investigate Professional Quality of Life among nurses in psychiatric observation units in the Metropole District Health Services. The objectives were as follows: to measure levels of *Compassion Satisfaction*, measure levels of *Burnout* and determine levels of *Secondary Traumatic Stress* among nurses in psychiatric observation units in the Metropole District Health Services. In this chapter, the key findings, limitations and recommendations will be described.

### 6.2 Key findings

The key findings are described per objective.

Objective 1: Measure *Compassion Satisfaction* among nurses in psychiatric observation units in the Metropole District Health Services.

Nurses in the psychiatric observation units in the Metropole District Health Services were found to have moderate *Compassion Satisfaction* levels, based on a T-score mean for *Compassion Satisfaction* T-score mean= 56.

Objective 2: Measure levels of *Burnout* among nurses in psychiatric observation units in the Metropole District Health Services.

The present study found moderate *Burnout* levels among nurses in psychiatric observation units in the Metropole District Health Services, based on a *Burnout* T-score mean= 55.

Objective 3: Determine levels of *Secondary Traumatic Stress* among nurses in psychiatric observation units in the Metropole District Health Services.

The findings of the current study indicate high *Secondary Traumatic Stress* levels among nurses in psychiatric observation units in the Metropole District Health Services, based on a T-score mean= 71.

### **6.3 Limitations**

The research setting included eight geographically dispersed hospitals. This setting brought challenges such as the fact that they were serving different communities with different clients, the differing sizes of the hospitals, differences in management, differences in the availability of resources such as specialised nurses and facilities like seclusion, and infrastructural differences such as ward build and suitability for 72-hour assessment observations. Some hospitals were still waiting for a ward suitable for psychiatric observations to be built by the Department of Health. All these factors possibly lead to variation in the findings.

The population of the study was relatively small (175 nurses). Sampling was affected by the small population size, and thus an all-inclusive sampling method was employed. Operational managers were included as part of the inclusion criteria as they also rendered direct patient care given that there was a shortage of nurses, or of nurses specialised in psychiatric nursing. Though all-inclusive sampling was employed, the inclusion of operational managers may have affected the study results and the results from this study is specific to this setting and generalisation should be done with caution.

The progression of the ProQoL versions also created further challenges as ProQoL 4 and 5 used different scoring methods, with ProQoL 5 recommended by the author to use T-scores. Most of the studies that have used ProQoL 5 analysed their data using raw scores and did not follow the instruction by Stamm (2010). Some articles used ProQoL 5 and referenced Stamm (2005). Critiquing research articles using the ProQoL was confusing as various authors analysed the data on the ProQoL differently despite there being a manual. Some authors used

the raw scores to report the findings on ProQoL 5. The scoring thresholds were confusing in some of the articles consulted. This was a result of vagueness in the ProQoL manual (Stamm, 2005; 2010). One of the published studies calculated the ProQoL score instead of subscale scores.

The researcher in the current study had to convert these findings into T-scores as stipulated by Stamm (2010) for comparison purposes. Internal consistency for the compassion Satisfaction and secondary traumatic stress subscales were consistent with those stipulated by Stamm (2005, 2010); however, with Burnout were quite lower and the reversed items were not statistically significant (Galiana et al., 2010). These authors imputed these challenges to reversed items in the ProQoL and reliability of the scale is tend to be lower when negative when reversed scores are used. The ProQoL instrument may have not been appropriate for South African nursing staff as it was created for the United States; however the ProQoL has been widely used among nursing staff in South Africa and showed good internal consistency. Reliability of *Burnout* and *Secondary Traumatic Stress* measures have been questioned by some researchers. In the current study, *Burnout* Cronbach's alpha score was far lower than that stipulated by Stamm's (2005; 2010) manuals. Despite the researcher explaining confidentiality and the research process to them, some respondents were sceptical and verbalised fear of the questionnaires being linked to them by management. Some were even fearful to sign the consent form as they believed the questionnaire may be linked to them. Therefore, true feelings and experiences may have not been projected on the responses due to fear of victimisation for exposing the institutions. This may have some influence in the study. In addition, data was collected at one point in time, which may have influenced the findings of the study. As seen in Foster (2019), administering ProQoL 5 four times, three months apart, elicited different results each time.

There was a paucity of research that has been conducted using the ProQoL questionnaire on psychiatric nurse research populations in South Africa and abroad. Given this paucity, comparison had to be made with other settings where Professional Quality of Life had been conducted in nurses.

## **6.4 Recommendations**

### **6.4.1 Clinical practice**

*Compassion Satisfaction* and *Burnout* were found to be moderate in the current study with high *Secondary Traumatic Stress*.

Having found moderate *Burnout* and high *Secondary Traumatic Stress* in the current study, *Burnout* and *Secondary Traumatic Stress* need to be monitored on these nurses. Evidence based methods can be used to address the *Burnout* and *Secondary Traumatic Stress*.

### **6.4.2 Education**

Findings of studies like this ought to be integrated into the clinical and educational fields to ensure that part of the training and education of nurses entails measures to identify, and manage *Burnout* and *Secondary Traumatic Stress*, ability to detect early signs/symptoms and how to increase *Compassion Satisfaction*.

### **6.4.3 Research**

More studies ought to be done about Professional Quality of Life, *Compassion Satisfaction*, *Burnout* and *Secondary Traumatic Stress* among nurses working in the Metropole District Health Services.

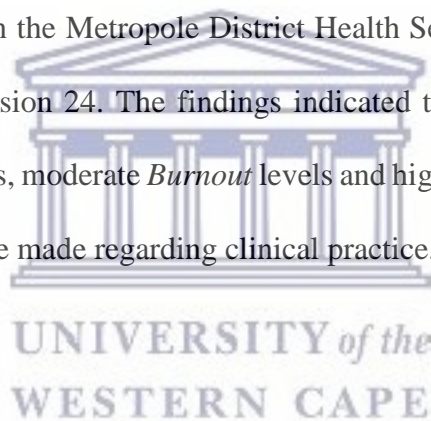
Research Qualitative and Quantitative studies need to be conducted in order to identify factors that are affecting *Compassion Satisfaction* levels among nurses in the Metropole District Health Services.

Investigations of *Burnout* ought to be done, including qualitative studies that would develop themes in the psychiatric observation units in the Metropole District Health Services.

Further investigations needs to be done to assess what measures can be put in place to reduce *Secondary Traumatic Stress* and what factors could be contributing to high *Secondary Traumatic Stress* among nurses in psychiatric observation unit in the Metropole District Health Services.

### **6.5 Conclusion**

The aim of the study was to investigate Professional Quality of Life among nurses in psychiatric observation units in the Metropole District Health Services. Data was collected on nurses in the eight hospitals in the Metropole District Health Services using ProQoL 5. Data was analysed using SPSS version 24. The findings indicated that nurses reported moderate *Compassion Satisfaction* levels, moderate *Burnout* levels and high *Secondary Traumatic Stress* levels. Recommendations were made regarding clinical practice, education and research.





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## APPENDICES

### Appendix I: Definition of Terms

*Burnout* is a condition related to negative feelings like despair and hopelessness, feeling like a failure, being overwhelmed by one's own work and decline in work performance; all this starts off slowly and the condition is mainly associated with demanding working conditions with poor support (Stamm, 2010; Maslach & Jackson, 1981).

**Operational definition:** *Burnout*: if a respondent scores  $\leq 43$ , he/she has low *Burnout*; if a respondent scores between 44 and 56, he/she has moderate *Burnout*; if a respondent scores  $\geq 57$ , he/she has high *Burnout* (Stamm, 2010).

Compassion Fatigue consists of two domains: *Burnout* and *Secondary Traumatic Stress* (Stamm, 2010).

**Operational definition:** Compassion Fatigue was assessed by asking questions about *Burnout* and *Secondary Traumatic Stress*.

*Compassion Satisfaction* is about the pleasure derived from being able to do one's work well, for example, feeling like it is a pleasure to help others through your work, feeling positive about your colleagues or your ability to contribute to the work setting, or even the greater good of society (Stamm, 2010).

**Operational definition:** *Compassion Satisfaction*: if a respondent scores  $\geq 57$ , he/she has high *Compassion Satisfaction*; if a respondent scores between 44 and 56, he/she has moderate *Compassion Satisfaction*; if a respondent scores  $\leq 43$ , he/she has low *Compassion Satisfaction* (Stamm, 2010).

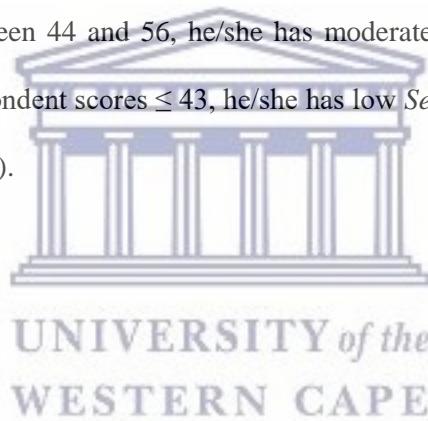
Professional Quality of Life is the quality one feels in relation to one's work as a care provider. Professional Quality of Life incorporates two aspects, the positive



(*Compassion Satisfaction*) and the negative (*Compassion Fatigue*) (Stamm, 2010). Both the positive and negative aspects of doing one's job influence one's Professional Quality of Life (Stamm, 2010).

*Secondary Traumatic Stress* refers to occupational stress, in which the service provider is exposed to traumatic events that have happened to the clients, or the job itself puts one in danger. The onset is rather fast and linked to a specific incident. Symptoms may include panic, sleep disturbances, intrusive thoughts and flashbacks (Stamm, 2010).

**Operational definition:** *Secondary Traumatic Stress*: if a respondent scores  $\geq 57$ , he/she has high *Secondary Traumatic Stress*; if a respondent scores between 44 and 56, he/she has moderate *Secondary Traumatic Stress*; if a respondent scores  $\leq 43$ , he/she has low *Secondary Traumatic Stress* (Stamm, 2010).



## Appendix II: University ethical clearance



### OFFICE OF THE DIRECTOR: RESEARCH RESEARCH AND INNOVATION DIVISION

Private Bag X17, Bellville 7535  
South Africa  
T: +27 21 959 4111/2948  
F: +27 21 959 3170  
E: [research-ethics@uwc.ac.za](mailto:research-ethics@uwc.ac.za)  
[www.uwc.ac.za](http://www.uwc.ac.za)

18 July 2018

Mr S Maila  
School of Nursing  
Faculty of Community and Health Sciences

Ethics Reference Number: BM18/5-21

Project Title: Professional quality of life among nurses in psychiatric observation units in the Metropole District Health Services.

Approval Period: 17 July 2018 – 17 July 2019

I hereby certify that the Biomedical Science Research Ethics Committee of the University of the Western Cape approved the scientific methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

**Please remember to submit a progress report in good time for annual renewal.**

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias  
Research Ethics Committee Officer  
University of the Western Cape

**PROVISIONAL REC NUMBER -130416-050**



## Appendix III: Registrar permission to conduct research



Western Cape  
Government

Health

Health impact assessment  
Health research sub-directorate

Health.Research@westerncape.gov.za

Tel: +27 21 483 0866; Fax: +27 21 483 9895

5<sup>th</sup> floor, Norton Rose House, 8 Riebeeck Street, Cape Town, 8001

[www.capegateway.gov.za/](http://www.capegateway.gov.za/)

REFERENCE: WC\_201807\_024

ENQUIRIES: Dr Sabela Petros

University of Western Cape

Robert Sobukwe Road

Bellville

Cape Town

7305

For attention: Mr Siyavuya Motta

Re: Professional Quality of life among nurses in psychiatric observation units in the Metropole District Health Services.



Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that the department has granted you approval for your research.

Please contact the following person to assist you with any further enquiries in accessing the following sites:

Mitchells Plain Hospital	Mrs Aletha Brown	021 377 4410
Victoria Hospital	Dr Graeme Dunbar	021 799 1211
New Somerset Hospital	Dr Donna Stokes	021 402 6850

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities of requested facilities are not interrupted.
2. By being granted access to provincial health facilities, you are expressing consent to provide the department with an electronic copy of the final feedback (annexure 9) within



REFERENCE: WC\_201807\_024

ENQUIRIES: Dr Sabela Petros

University of Western Cape

Robert Sobukwe Road

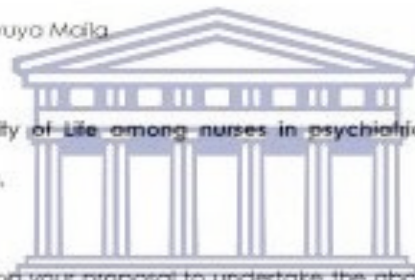
Belville

Cape Town

7305

For attention: Mr Siyavuya Moko

Re: **Professional Quality of Life among nurses in psychiatric observation units in the Metropole District Health Services.**



Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that the department has granted you approval for your research.

Please contact the following person to assist you with any further enquiries in accessing the following sites:

Khayelitsha Hospital	Dr Moses Wilbooi	021 340 4386
False Bay Hospital	Dr Wendy Waddington	021 782 1121
Helderberg Hospital	Dr Werner Viljoen	021 850 4704

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted.
2. By being granted access to provincial health facilities, you are expressing consent to provide the department with an electronic copy of the final feedback (**annexure 9**) within



**Western Cape  
Government**

Health

**Health impact assessment  
Health research sub-directorate**

Health Research@westerncape.gov.za  
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5<sup>th</sup> Floor, Norton Rose House, 8 Rebeek Street, Cape Town, 8001  
[www.capegateway.gov.za](http://www.capegateway.gov.za)

REFERENCE: WC\_201807\_024  
ENQUIRIES: Dr Sabela Petros

**University of Western Cape**  
**Robert Sobukwe Road**  
**Belville**  
**Cape Town**  
**7305**

For attention: Mr Siyavuya Molla

Re: **Professional Quality of Life among nurses in psychiatric observation units in the Metropole District Health Services.**

Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that the department has granted you approval for your research.

Please contact the following person to assist you with any further enquiries in accessing the following sites:

**Eerste River Hospital**

**Dr Adele Anthony**

**021 902 8019**

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities of requested facilities are not interrupted.
2. By being granted access to provincial health facilities, you are expressing consent to provide the department with an electronic copy of the final feedback (annexure 9) within six months of completion of your project. This can be submitted to the provincial Research Co-ordinator ([Health.Research@westerncape.gov.za](mailto:Health.Research@westerncape.gov.za)).





Western Cape  
Government

Health

Health impact assessment  
Health research sub-directorate

[Health.Research@westerncape.gov.za](mailto:Health.Research@westerncape.gov.za)

tel: +27 21 483 0866; fax: +27 21 483 9895

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[www.westerncape.gov.za](http://www.westerncape.gov.za)

REFERENCE: WC\_201807\_024  
ENQUIRIES: Dr Sabela Petros

University of Western Cape

Robert Sobukwe Road

Bellville

Cape Town

7305

For attention: Mr Siyavuya Majo

Re: Professional Quality of Life Among Nurses in Psychiatric Observation Units in the Metropole District Health Services.

Thank you for submitting ~~your proposal to undertake the above-~~mentioned study. We are pleased to inform you that the department has granted you approval for your research.

Please contact the following person to assist you with any further enquiries in accessing the following sites:

Karl Bremer Hospital

Sr Linden Mars

021 918 1223

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted.
2. By being granted access to provincial health facilities, you are expressing consent to provide the department with an electronic copy of the final feedback (**annexure 9**) within six months of completion of your project. This can be submitted to the provincial Research Co-ordinator ([Health.Research@westerncape.gov.za](mailto:Health.Research@westerncape.gov.za)).

## Appendix IV: Information sheet



**UNIVERSITY OF THE WESTERN CAPE**  
Private Bag X 17, Bellville 7535, South Africa  
Tel: +27 21-959 3074

### INFORMATION SHEET

Project title: Professional Quality of Life among nurses in Psychiatric Observation Units, in the Metropole District Health Services.

This is a research project being conducted by Siyavuya Maila Masters nursing education student at the University of the Western Cape. We are inviting you to participate in this research project because you are a nurse in a Psychiatric Observation Unit in the Metropole District Health Services. The purpose of this research project is to investigate Professional Quality of Life among nurses in Psychiatric Observation Unit in Metropole District Health Services.

What will I be asked to do if I agree to participate?

On agreeing to participate the study will be explained verbally to you, given a chance to ask questions. The questions will be about your current work environment, your feelings about the work you do, your experience pleasant and unpleasant care provider in doing your work. The questionnaire will take about 20 minutes to complete, the time will preferably be the lunch time in the unit or the most convenient for you as the participants. The research may not directly benefit you, however, you will be able to gain some understanding about burnout and secondary stress, be able to assess and know how to prevent it.

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, the surveys are anonymous and will not contain information that may personally identify you. For coded identifiable information, your name will not be included on the surveys and other collected data; (2) a code will be placed on the survey and other collected data; (3) through the use of an identification key, the researcher will be able to link your survey to your identity; and (4) only the researcher will have access to the identification key.

The researcher will prevent any form of discomfort be it physical, psychological, spiritual, emotional, social, financial and ensure no human rights will be infringed. When a need to





## UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa  
Tel: +27 21-959 3074

refer arises, the researcher will refer the participants to relevant health care providers to assist.

To ensure your confidentiality, the completed questionnaires will be kept safely and locked in a cupboard in which only the researcher will have access to. On the findings the name of the participant and that of the institution will be protected. If we write a report or article about this research project, your identity will be protected.

What are the risks of this research?

All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

This research is not designed to help individuals personally, but the findings may help the investigator learn more about Professional Quality of Life among nurses in Psychiatric Observation Units in the Metropole District Health Services. The findings will also add to the body of literature about Professional Quality of Life among nurses in Psychiatric Observation Units in the Metropole District Health Services, nursing students will be educated and academics will gain more information about Professional Quality of Life. Nursing management and nurses in the 8 district hospitals will gain understanding of Professional Quality of Life of nurses in Psychiatric Observation Units; on low Professional Quality of Life come up with strategies to support and help nurses to prevent, identify early signs and manage the compassion fatigue in practice.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?



## UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa  
Tel: +27 21-959 3074

This research is being conducted by Siyavuya Maila Master's Degree in nursing education at the University of the Western Cape. If you have any questions about the research study itself, please contact Siyavuya Maila at: [3770995@myuwc.ac.za](mailto:3770995@myuwc.ac.za), Cellphone number : 0829676776. Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Prof J. Chipps

A/Director School of Nursing

Faculty of community and health

University of the Western Cape

Private Bag X17

Bellville 7535

[jchipps@uwc.ac.za](mailto:jchipps@uwc.ac.za)



Prof Anthea Rhoda

Dean of the Faculty of Community and Health Sciences

University of the Western Cape

Private Bag X17

Bellville 7535

[chs-deansoffice@uwc.ac.za](mailto:chs-deansoffice@uwc.ac.za)

Further queries may be addressed by contacting the BMREC at :-

Research Ethics Committee

University of the Western Cape

Private Bag x17

Bellville

7535

Tel: +27 21 959 4111

Email: [research-ethics@uwc.ac.za](mailto:research-ethics@uwc.ac.za)

This research has been approved by the University of the Western Cape's Biomedical Research Ethics Committee. (REFERENCE NUMBER: BM18/5/ 21).

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## Appendix V: Consent form



### UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959- 3074

E-mail: [3770995@myuwc.ac.za](mailto:3770995@myuwc.ac.za)

Cell : 082-9676776

[jchippis@myuwc.ac.za](mailto:jchippis@myuwc.ac.za)

[pmartin@myuwc.ac.za](mailto:pmartin@myuwc.ac.za)

#### CONSENT FORM

Title of Research Project: Professional Quality of Life among nurses in  
Psychiatric Observation Units, in the Metropole  
District Health Services.

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

Participant's name.....

Participant's signature.....

Date.....



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## Appendix VI: Self-report questionnaire



### UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 3074

Title: Professional Quality of Life among nurses in Psychiatric Observation Units, in the Metropole District Health Services.

#### Questionnaire

#### Section A

Please tick on the appropriate box and fill where necessary.

1. Age in years					
2. Gender	Male	Female			
3. Marital status	Single	Married	Widow	Divorced	
4. Race	African	Coloured	Indian	White	Other
5. Occupation	Registered Professional Nurse: Specialized Psychiatry	Registered Professional Nurse: General	Enrolled nurse	Enrolled nursing assistant	
6. Years of experience					
7. Shift worked	Day	Night			

#### SECTION B

When you help people you have direct contact with their lives. As you may have found, your compassion for those you help can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a service provider.

Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the last 30 days. 1=never 2=rarely 3=sometimes 4=often 5=very often. Section B adapted from: Stamm (2010).

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WESTERN CAPE



## UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 3074

1=Never 2= Rarely 3= Sometimes 4= Often 5= Very often	1	2	3	4	5
1. * I am happy.					
2. I am preoccupied with more than one person I nurse.					
3. I get satisfaction from being able to help people					
4. * I feel connected to others					
5. I jump or am startled by unexpected sounds					
6. I feel invigorated after working with those, I nurse					
7. I find it difficult to separate my personal life from my life as a nurse					
8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I nurse					
9. I think that I might have been affected by the traumatic stress of those I nurse					
10. I feel trapped by my job as a nurse					
11. Because of my work, I have felt "on edge" about various things.					
12. I like my work as a nurse					
13. I feel depressed because of the traumatic experiences of the people I nurse					
14. I feel as though I am experiencing the trauma of someone I have nursed					
15. * I have beliefs that sustain me					
16. I am pleased with how I am able to keep up with helping techniques and protocols					
17. * I am the person I always wanted to be					
18. My work makes me feel satisfied					
19. I feel worn out because of my work as a nurse					
20. I have happy thoughts and feelings about those I help and how I could help them					
21. I feel overwhelmed because my case work load seems endless					
22. I believe I can make a difference through my work					
23. I avoid certain activities or situations because they remind me of frightening experiences of the people I nurse					
24. I am proud of what I can do to help					
25. As a result of my work, I have intrusive, frightening thoughts					
26. I feel "bogged down" by the system					
27. I have thoughts that I am a "success" as a nurse					
28. I can't recall important parts of my work with trauma victims					
29. * I am a very caring person					
30. I am happy that I chose to do this work					

## Appendix VII: Permission for instrument use

RE: Request Permission to Use the ProQOL

Inbox x



Alyce Eaton <AEaton@cvt.org>

Sep  
13

to me

Hello Siyavuya,

This request you sent (below; which we will keep on file) and the document attached here together comprise your permission to use the ProQOL. Please consider donating your de-identified baseline data to the ProQOL office if possible as this helps us maintain the measure.

Please let me know if you have any questions,

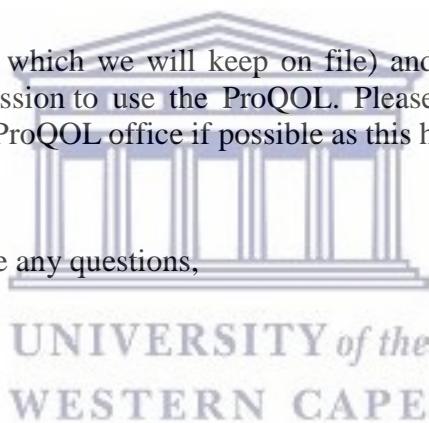
Alyce

Alyce Eaton  
Research Coordinator  
Direct: [+1.612.436.4896](tel:+1.612.436.4896)

Skype: alyce.eaton.cvt

The Center for Victims of Torture  
2356 University Ave W., Suite 430 / St. Paul, MN 55114

[www.cvt.org](http://www.cvt.org)





RE: Request Permission to Use the ProQOL

request permission

Mail

8 of 30

COMPOSE

RE: Request Permission to Use the ProQOL

Inbox

Alyce Eaton <AEaton@cvt.org>

to me

Sep 13

Show details

Hello Siyavuya,



This request you sent (below; which we will keep on file) and the document attached here together comprise your permission to use the ProQOL. Please consider donating your de-identified baseline data to the ProQOL office if possible as this helps us maintain the measure.

Please let me know if you have any questions,

Alyce

Alyce Eaton  
 Research Coordinator  
 Direct: [+1.612.436.4896](tel:+16124364896)  
 Skype: [alyce.eaton.cvt](https://www.skype.com/people/alyce.eaton.cvt)

The Center for Victims of Torture  
 2356 University Ave W., Suite 430 / St. Paul, MN 55114  
[www.cvt.org](http://www.cvt.org)

Make a call

Also try our mobile apps for [Android](#) and [iOS](#)

Permission\_for\_Us...PDF

28489.docx

Show all



## Appendix VIII: Editor's letter

Nathan T Lowe  
9 Lamborghini Avenue  
Wierda Park  
Centurion  
0157  
Tel: 076 362 7852  
Email: nathanthomaslowe@gmail.com

To whom it may concern

I hereby certify that I, Nathan Thomas Lowe, edited the mini-thesis of Siyavuya Maila, entitled 'Professional quality of life among nurses in psychiatric observation units in the Metropole District Health Services', for grammar, clarity and consistency.

Regards



Nathan T Lowe

Editor for the University of Pretoria's Language Unit



## Appendix: IX Turn it Score

Turn it in score= 21% similarities.

The screenshot displays the Turnitin Feedback Studio interface within a Google Chrome browser. The address bar shows the URL: [https://ev.turnitin.com/app/carta/en\\_us/?s=8student\\_user=1&io=1108218575&lang=en\\_us&u=1062498092](https://ev.turnitin.com/app/carta/en_us/?s=8student_user=1&io=1108218575&lang=en_us&u=1062498092). The page header includes the 'feedback studio' logo, the user name 'Siyavuya MAILA', and the document title 'Professional Quality of Life among nurses in Psychiatric Observations Units in the Metropole District Health Services'. The main content area shows a document page with a large watermark of the University of the Western Cape logo. The text on the page is: 'PROFESSIONAL QUALITY OF LIFE AMONG NURSES IN PSYCHIATRIC OBSERVATION UNITS IN THE UNIVERSITY of the WESTERN CAPE METROPOLE DISTRICT HEALTH SERVICES'. A green box highlights the word 'PROFESSIONAL' with a '17' in a green square to its left. On the right side of the document, a vertical toolbar contains several icons, including a red box with the number '21', indicating the similarity score. The bottom status bar shows 'Page: 1 of 120' and 'Word Count: 27432'. It also includes options for 'Text-only Report', 'Turnitin Classic', and 'High Resolution' (which is turned 'On'). A search icon and a 'Show all' button are also visible.

## Appendix X: Code book

Variable	SPSS Variable Name	Coding instructions
Number of each questionnaire assigned to Identify it.	ID	Number assigned to each questionnaire
Age in years	Age in years Recode	1= 20-29 2=30-39 3=40-49 4=50-59
AgeCatergoryR	Age in years Recode	5=60 and above 0=20-35 1=36-49 2=50-64
Gender	Sex	1 = Male 2 = Female
Marital Status	MaritalStatus	1 = Single 2 = Married 3 = Divorced 4 = Widow
Race	Ethnicity	1 = African 2 = Coloured 3 = Indian 4 = White
Occupation	Rank	1 = Registered nurse specialised in psychiatry 2 = Registered Professional Nurse General 3 = Enrolled nurse 4 = Enrolled nursing assistant
Experience in years	Recoded Experience	1 = 0-2 2 = 3-9 3 = 10-35



Shift worked

Day/Night

1 = Day shift

2 = Night shift

1. \* I am happy.

ProQoL questions

1=Never

2. I am preoccupied with more than one person I nurse.

2= Rarely

3. I get satisfaction from being able to help people

3= Sometimes

4. \* I feel connected to others

4= Often

5. I jump or am startled by unexpected sounds

5= Very often

6. I feel invigorated after working with those, I nurse

7. I find it difficult to separate my personal life from my life as a nurse

8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I nurse

9. I think that I might have been affected by the traumatic stress of those I nurse

10. I feel trapped by my job as a nurse

11. Because of my work, I have felt "on edge" about various things.

12. I like my work as a nurse

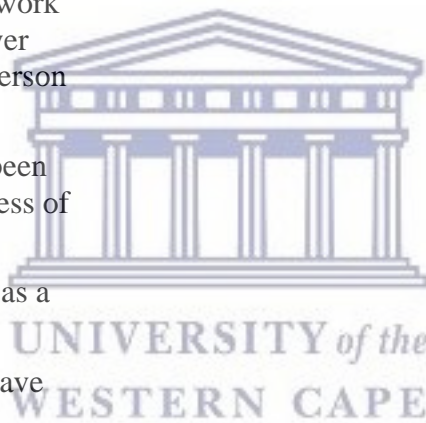
13. I feel depressed because of the traumatic experiences of the people I nurse

14. I feel as though I am experiencing the trauma of someone I have nursed

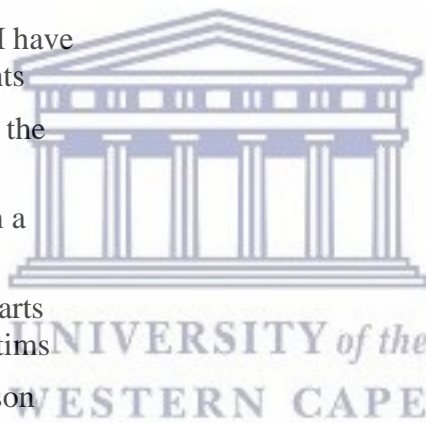
15. \* I have beliefs that sustain me

16. I am pleased with how I am able to keep up with helping techniques and protocols

17. \* I am the person I always wanted to be

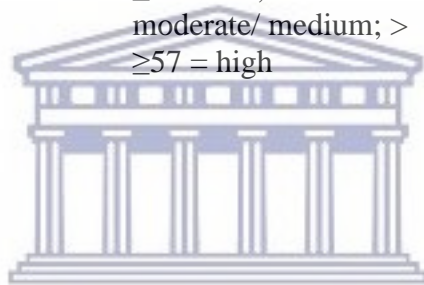


18. My work makes me feel satisfied
19. I feel worn out because of my work as a nurse
20. I have happy thoughts and feelings about those I help and how I could help them
21. I feel overwhelmed because my case work load seems endless
22. I believe I can make a difference through my work
23. I avoid certain activities or situations because they remind me of frightening experiences of the people I nurse
24. I am proud of what I can do to help
25. As a result of my work, I have intrusive, frightening thoughts
26. I feel "bogged down" by the system
27. I have thoughts that I am a "success" as a nurse
28. I can't recall important parts of my work with trauma victims
29. \* I am a very caring person
30. I am happy that I chose to do this work



<i>Compassion Satisfaction</i>	Sum of item 3,6,12,16,18,20,22,24,27 and 30.	CompSat = SC3 + SC6 + SC12 + SC16 + SC18 + SC20 + SC22 + SC24 + SC27 + SC30.
<i>Burnout</i>	Sum of item 1, 4, 8,10,15,17,19,21,26 and 29.	<i>Burnout</i> =BO1 + BO4 + BO8 + BO10 + BO15 + BO17 + BO19 + BO21 + BO26 + BO29)
<i>Secondary Traumatic Stress</i>	Sum of item 2,5,7,9,11,13,14,23,25 and 28 .	SecTrauma = STS2 + STS 5 + STS 7 + STS9 + STS11 + STS13 + STS 14 + STS 23 + STS25 + STS 28.
<i>Z- score Compassion Satisfaction</i>	ZCompSat	ZCompSat

<i>Z- score Burnout</i>	<i>ZBurnout</i>	<i>ZBurnout</i>
<i>Z- score Secondary Traumatic Stress</i>	<i>ZSecTrauma</i>	<i>ZSecTrauma</i>
<i>T-score Compassion Satisfaction</i>	<i>TCompSat</i>	$TcompSat=(ZCompSat * 10) + 50$
<i>T-score Burnout</i>	<i>TBurnout</i>	$TBurnout=(ZBurnout * 10) + 50$
<i>T-score Secondary Traumatic Stress</i>	<i>TSecTrauma</i>	$TSecTrauma=(ZSecTrauma * 10) + 50$
<i>Compassion Satisfaction</i>	$\leq 43 = \text{low}; 44-56 = \text{moderate}; \geq 57 = \text{high}$	$\leq 43 = \text{low}$ $44-56 = \text{moderate}$ $\geq 57 = \text{high}$
<i>Burnout</i>	$\leq 43 = \text{low}; 44-56 = \text{moderate/ medium}; \geq 57 = \text{high}$	$\leq 43 = \text{low}$ $44-56 = \text{moderate}$ $\geq 57 = \text{high}$
<i>Secondary Traumatic Stress</i>	$\leq 43 = \text{low}; 44-56 = \text{moderate/ medium}; > \geq 57 = \text{high}$	$\leq 43 = \text{low}$ $44-56 = \text{moderate}$ $\geq 57 = \text{high}$



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