

THE RELATIONSHIP BETWEEN VICARIOUS TRAUMATIZATION AND QUALITY OF
LIFE AND PURPOSE IN LIFE OF HEALTHCARE PROVIDERS OF CANCER PATIENTS
IN BOTSWANA

By

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A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

2010

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Dedication

In memory of my mother, Balindi Maphoto for her battle against cancer and my sister Rachel Majuta, a great nurse and friend.

Death be not proud, though some have called thee
Mighty and dreadful, for thou art not so,
For, those whom thou think'st, thou dost overthrow,
Die not, poore death...

John Donne (1572-1631) Holy Sonnet 10

ACKNOWLEDGMENTS

I would like to thank many individuals and organizations that have helped me go through the process of putting this work together. Firstly I would like to thank the University of Botswana (my employer) for its resources, Ministry of Health (Botswana) and various hospitals and hospices that agreed to participate in this study. This could not have been done without their great sense of understanding.

Next, I extend my sincere gratitude to my doctoral committee chair Dr. Edil Torres-Rivera for being available and reminding me to be present, persistent and endure the process. His empathy and humor kept me going. Under his guidance I understood the meaning of independent studies.

Dr. Cirecie West-Olatunji has been my inspiration through her hands on approach to guidance. Through her traveling experiences, research projects, and critique I understood the tools and dimensions of the research tool box. I thank her greatly.

Dr. Linda Behar-Horenstein was instrumental in helping me shape the topic, research questions and the proposal in general. Without her invaluable support and critique, this work would not have turned into what it eventually became. My sincere gratitude goes to her.

Thanks to Dr. Wayne Griffin for teaching me so passionately about trauma and crisis. That became an avenue for understanding a big part of life in my country, also a propeller that kept me going as I was writing this work. Thank you.

I would like to thank Dr. Sondra Smith and fellow students who were my support system through my doctoral studies at the University of Florida; Kevin Andrew Tate has been a friend and brother, Rachael Goodman my mentor, Lauren Shure, Blaire Cholewa, Richmond Wynn, Carrone Rush, Isabel Thompson, Anton Pustaver, Laura Reid, Laura Shannonhouse, Ryan Reese, Jessica Young, Niyama Ramlall and Jacque Huan Ye. My gratitude also goes to my friends

in Botswana for their support, Dr. Olekae Thakadu and his wife Grace, Dr. Naomi Moswete and her husband, Jeff McLucas, Joseph Tsimako and Dr. Bothepha Moselehi.

I owe a deep sense of gratitude to my family. Firstly my beloved wife Neo Nompi Majuta for kind and encouraging words from across the Atlantic. Her patience and belief in this process and goal was unsurpassed. My first son Mompoti deserves many thanks for believing in me, and reminding me constantly to bring the degree home. As for my second son Tiboke, his few words over the phone reminded me that I needed to be home soonest. Lastly, the thought of my daughter Wandipa, always reminded me how I enjoy her big personality, and I could not work fast enough to share the joy until today!

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Abstract of Dissertation Presented to the Graduate School
of the University of Florida in Partial Fulfillment of the
Requirements for the Degree of Doctor of Philosophy

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By

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December 2010

Chair: Edil Torres Rivera
Cochair: Cirecie West-Olatunji
Major: Mental Health Counseling

The purpose of this study was to establish the relationship between vicarious traumatization and professional quality of life and purpose in life among healthcare providers of cancer patients in Botswana. Based on the constructivist self development theory, data were collected through a cross sectional survey in nine hospitals in Botswana among 83 health care providers of cancer patients. The three instruments used for data collection were; trauma and attachment belief scale (TABS), professional quality of life scale (ProQOL) and purpose in life test (PIL). Presence and levels of trauma were established by computing t-scores from responses on the TABS using the profile autoscore sheet and interpretation table from the test manual. Across the ten subscales, the minimum score recorded was 13 (other safety) followed by 24 (self intimacy) and 24 (self control) indicating minimal disruption in these areas. The maximum or highest t-scores recorded were 80 (other trust), 80 (self trust), 79 (other esteem), 74 (self control), 73 (self safety) and 72 (self intimacy), indicating that these were areas where there was an extremely high level of disruption in the sample Bivariate correlations between TABS and ProQOL were run and yielded $r = -.11$ (not significant) indicating that there is a weak negative

relationship. Bivariate correlations were also run between TABS and PIL resulting in a $r = -.28$ (significant) which is a weak negative relationship.

Multinomial logistic regression was conducted among the three variables to determine if vicarious trauma predicted both professional quality of life and purpose in life among health care providers. While holding PIL constant, result showed that vicarious trauma did not predict professional quality of life. By the same token, vicarious trauma did not predict purpose in life when professional quality of life was held constant.

CHAPTER 1 INTRODUCTION

Providing care for cancer patients places healthcare providers at risk for experiencing elevated levels of stress (Swartz & Keir, 2007). The stress levels are a result of cancer patients' experiences of physical and mental traumas such as acute and chronic pains; existential distress and a sense of powerlessness that then vicariously affect healthcare providers. These experiences typically result in feelings of disappointment, futility and remorse that disrupt one's engagement with purpose of life (Lee, Cohen, Edgar, Laizer & Gagnon, 2006). In the advanced stages of cancer, in addition to the physical pain, patients suffer from high levels of depression coupled with hopelessness and anxiety (Mystakidou, Parpa, Tsilika, Athanasouli, Pathiaki, Galanos, & Pagoropoulou, 2008).

Delirium is another common mental health complication of cancer, occurring among 88% of patients prior to their death (Buss, Vanderwerker, Inouye, Bahui Zhang, Block & Prigerson, 2007). For the most part people who have been called upon to provide care are family members who provide physical, emotional, social, financial and spiritual support (Seloilwe, 2006; Mbata-Ndaba & Seloilwe, 2000; Swartz & Keir, 2007). In hospital and hospice settings, healthcare providers assume the primary role of taking care of the welfare and wellbeing of cancer patients. They see these patients in pain, provide chemotherapy, administer medication and listen to their stories and inadvertently absorb these experiences that demand high levels of bio-affective and cognitive energy (Buss, et al, 2007). Given a plethora of mental health issues associated with cancer that affect patients, a study of how this close interaction between the traumatized patients and healthcare providers manifests itself in professionals is essential to identifying ways of augmenting care-giving while meeting self care needs at the same time.

Rationale for the Study

Addressing vicarious traumatization and providing care among healthcare providers who work with traumatized cancer patients is vital in the current era especially in Africa where half a million people die from the disease every year. The World Health Organization (WHO, 2002) estimated that by 2020, seventy percent of new cancer cases will be in developing countries and in 50 years the projected growth rate for the cancer disease in Africa will be 400%. This phenomenon puts the healthcare providers at risk first by realizing the magnitude of care giving that lies ahead of them and secondly by getting actively involved in the provision of palliative care which is physically and emotional exhausting. For example, in Botswana, doctors in the Princess Marina Hospital oncology department have been seeing on average 20-30 patients a day working seven days a week (Staff writers, 2006).

The Ministry of Health (MOH) states that its objective is to “promote high levels of awareness of mental health issues among policy makers and ensure necessary support for the provision of services and resources for people with mental health problems and promotion of good mental health” (Ministry of Health, 2003, p.7). In recognition of the growing and projected numbers of cancer patients in the country, implementation of this objective would go a long way in reducing healthcare providers’ exposure to mental health hazards. To the contrary, while the National Policy Mental Health pledges to “advocate for the basic needs and human rights of the mentally ill individuals as a vulnerable group in society” (Ministry of Health, 2003: 6), its definition of a vulnerable group in society excludes healthcare providers of cancer patients, a group which is the most vulnerable to mental disorders due to exposure. Instead its definition of vulnerable groups is limited to “children, adolescents, orphans, women, abused spouses or partners, the elderly, the underprivileged, refugees and prisoners” (Ministry of Health, 2003, p. 10). As a means of advocating for the healthcare providers and contributing to public awareness

and policy makers, a relationship needs to be established between vicarious trauma, quality of life and purpose in life in this vulnerable group in Botswana in order to find out the rate at which trauma occurs and affects them.

Statement of the Problem

Healthcare providers are directly and indirectly exposed to the trauma experienced by the patients. This exposure may put them at risk for poor mental health in the form of depression (Swartz & Keir, 2007), generalized anxiety (Buss, et al., 2007), compassion fatigue (Figley, 1995) and others. While studies have documented factors associated with stress in cancer caregiver population and other chronic illnesses (Swartz & Keir, 2007), little has been documented about the mental health status of healthcare providers or vicarious trauma situations they experience in health settings especially in Africa, and Botswana in particular. Despite a lack of focus on and commitment to the mental health of healthcare providers, they still have to deal with escalating challenges associated with HIV/AIDS and cancer as evidenced by their active implementation of the National Strategic Framework (National Aids Coordinating Agency, 2003). An even bigger challenge arises when the question of their success in the care-giving process surfaces, calling into question, their professional quality of life. It is apparent for most oncology staff especially in hospice situations that their patients will eventually die (Running, Tolle, & Girard, 2008). Although during their hospitalization the situation might not present a bleak outlook, death is still prevalent among cancer patients. Caregiver success and compassion satisfaction become a continually illusive ideal to which research attention needs to be directed especially in Botswana.

In Africa each year, 2.5 million people die from HIV/AIDS, more than half a million die of cancer and about 80% of them will have pain in the terminal phase of their disease (Sepulveda, Habiymbere, Amandua, Borok, Kikule, Mudanga, Ngoma & Solomon, 2003). This

phenomenon requires the empathy of the healthcare providers who in turn get affected profoundly by the patients' trauma, pain and suffering resulting in a phenomenon called compassion fatigue (Sabo, 2006). In Botswana most healthcare providers have experienced multiple losses and pain due to HIV/AIDS in both their professional and private lives. The Nurse Association of Botswana (n. d) has observed that failure to adequately acknowledge and express feelings of sadness, anger, and frustration may result in bereavement overload, burnout and perhaps high rates of attrition. Healthcare providers need to realize that self-care is crucial to survival and turning away or ignoring it only perpetrates the distress (Nurses Association of Botswana, n. d). Yet little research has explored these consequences of care-giving in Botswana.

Nurses and other health professionals in Botswana whose work used to be oriented towards cure are now increasingly focused on caring for the dying. Healthcare providers administer treatment to alleviate suffering with a goal to cure diseases; however, if this goal is sabotaged by caring for the dying, dead and bereaved, professionals will feel a heightened sense of inadequacy, helplessness and grief (Nurses Association of Botswana, n. d). Given this scenario, the concern that supports this study is that healthcare providers' mental health has been ignored at a critical time when there is uncertainty about the national health status that requires health workers attention. While the National Policy on Mental Health of Botswana acknowledges that counseling services are a critical factor for chronically ill patients and their families, little consideration has been given to the psychological well being of the healthcare providers and how it affects their quality of life, their view of meaningful life and professional quality of life.

Countries that are plagued by some chronic illnesses need some form of palliative care structures such as counseling services, spirituality, and nutrition in their health system. Most African countries do not have a developed countries' model of palliative system which is

comprised of an interdisciplinary team of oncology nurses, physicians, social workers, physical and music therapists, psychologists and other professionals (Granda-Cameron, Viola, Lynch & Polomano, 2008). However, various counseling models have been provided for both patients and families. Despite numerous research reports about these health services, psychological needs for healthcare providers are rarely reported in published work (Harding & Higginson, 2005). This study therefore seeks to make a contribution by raising awareness about the mental health needs of healthcare providers in Botswana and also reduce the dearth of literature in this area.

The improvement of quality of health care for chronic conditions has been a preoccupation for many researchers and practitioners in developing countries. Issues of resources such as personnel and finance, physical and professional structures, cultural dimensions and service models have occupied the center stage (Harding & Higginson, 2005). However, non-communicable conditions and mental disorders have been reported as accounting for forty seven percent of the global disease burden in 2002 (Epping-Jordan, Pruitt, Bengoa, & Wagner, 2004). In these reports there is no evidence of the mental health status of healthcare providers despite reports about noticeable increase of cancer among other non-communicable diseases in Botswana (Epping-Jordan, et.al 2004). These omissions together with other emerging national health issues that healthcare providers have to deal with in the foreseeable future provide rationale for investigating psychological issues of this vulnerable group in Botswana, hence the production of the current study.

Mental health professionals generally agree that caregivers working with victims of violence (Pross, 2006), sexual abuse (Bell, et al., 2003) and cancer (Buss, 2007) are at a high risk of suffering from vicarious traumatization if necessary steps are not taken to prevent this occurrence. Although the concept of mental health and its practice has been in place for a long in

Botswana (Seloilwe, 2006), the counseling profession in the country is still new (Ministry of Education, 1996). Resources are limited to help facilitate “self-care, professional training in psychotherapy, therapeutic self-awareness, regular self-examination by collegial and external supervision and limiting caseloads are still limited” (Pross, 2006, p.1). A study of vicarious traumatization of healthcare providers and how it affects professional quality of life and purpose in life in the care-giving process is essential to broaden the philosophy and concept of mental health in the country. This will help to shift the understanding of the concept from the institutional care perspective to an all-encompassing model inclusive of professionals. This will further align this model with current global evidenced-based and empirically accepted mental health practices.

Theoretical Perspectives

The theoretical framework used in this study is the Constructivist Self-Development Theory (CSDT) of trauma propounded by MacCann and Pearlman (1990). The CSDT is a product of several theoretical and empirical contributions of people who studied trauma from a self-development and constructivist perspective (MacCann & Pearlman, 1990). In a way, it is a repackaging of developmental theory, self-psychology, social learning, and cognitive theory. Its main focus is that experience is the basis from which individuals order and assign new meanings to new experiences. For this reason, its other focal point is on the interaction between the person and the situation. This interactive approach allows for more understanding of the individual's unique adaptation to trauma because it encompasses characteristics of the event and personal characteristics beyond pre-existing conditions. It emphasizes the importance of the individual as an active agent in creating and constructing his or her reality. It further posits that adaptation to trauma is a complex interplay between life experiences including personal history, specific traumatic events, the social and cultural context, and the developing self which encompasses ego

resources, psychological needs and cognitive schemas (MacCann & Pearlman, 1990). In this case healthcare providers of cancer patients construct their personal realities and meanings as they interact with cancer patients on a day to day basis. The way they respond to treating cancer is a complex process that extends to the deepest parts of their beings thus leading to coping and adaptation or lack thereof.

MacCann and Pearlman (1990) maintain that the basic tenets or assumptions of their theory are that; 1) the experience of trauma begins with exposure to a non normative or highly distressing event that disrupts the self. 2). The individual unique response to trauma is a complex process that includes personal meanings and images of the event and extends to the deepest parts of a person's inner experience of self and world, and results in an individual adaptation. 3). Individuals possess the inherent capacity to construct their own personal realities as they interact with their environment. 4) Continuing psychological development depends on the evolution of differentiated psychological systems. The three psychological systems include; firstly the individual's sense of himself or herself as a knowing, sensing entity able to self regulate and negotiate relationships with others. Secondly, the psychological systems include needs that motivate behavior and, the cognitive schemas for organizing and interpreting experiences. 5). Trauma requires accommodation or modification in schemas. It disrupts at least temporarily, the psychological growth of an individual. The re-experiencing of traumatic imagery by healthcare providers of cancer patients is painful and disruptive and creating a defensive tendency to avoid this material. Using this theory, this study seeks to find out the relationship between healthcare providers' trauma and professional quality of life and purpose in life.

The study of trauma has evolved over many years and has acquired different interpretations ranging from ranging from the psychiatric version of post traumatic stress

disorder (PTSD) which perceives it as a sudden, unexpected, overwhelming blow assaulting the person from outside (Terr, 1990), to systemic oppression (Sue, 2002) and compassion fatigue (Figley, 1995) and vicarious traumatization (VT) (MacCann & Pearlman, 1990) which are responses to emotional demands on the therapists and social network members from exposure to trauma survivors' strong negative affect and intrusive traumatic memories (Jenkins & Baird, 2002). Vicarious traumatization in particular has been defined as a permanent transformation in the inner experiences of a therapist or helper that comes about as a result of empathic engagement with client's trauma material (MacCann & Pearlman, 1990a).

The main symptoms of VT are disturbances in helper's cognitive frame of reference, identity, worldview, spirituality, affect tolerance, fundamental psychological needs, deeply held beliefs about self and others, interpersonal relationships, internal imagery and physical presence in the world (Pearlman & Saakvitne, 1995). Given this theoretical understanding, VT thus adds to further development of the Constructivist Self Development Theory. The Constructivist Self Development Theory (CDST) of trauma in general is still evolving; a fine line still exists between VT, secondary traumatization (compassion fatigue) and burnout. The focus of this study is on vicarious traumatization.

Purpose of the Study

The purpose of this study is to investigate the relationship between vicarious traumatization, the professional quality of life (ProQOL) and purpose in life (PIL) of healthcare providers of cancer patients in Botswana.

Objectives of the Study

1. The first objective is to find out if healthcare providers in Botswana do experience vicarious traumatization as a result of providing care to cancer patients. Literature especially in the Western countries attests to the fact that healthcare providers working with traumatized clients do experience trauma vicariously or secondarily. The objective here is to establish if providers in Botswana share the same experiences

2. The second objective is to establish the relationship between vicarious traumatization and quality of life of the healthcare providers as measured by the Professional Quality of Life scale. Professional quality of life entails whether or not professionals experience compassion satisfaction, job satisfaction or dissatisfaction. Through the interaction of these variables, the strength and direction of the relationship will be established thereby pointing out to the influence vicarious trauma has on healthcare providers and their work.
3. The other objective is to determine the relationship between vicarious traumatization and purpose in life of healthcare providers as measured by the Purpose in Life scale. Purpose in life entails having a meaningful life, set life goals, the use of religion and spirituality for coping and having positive emotions to counter despair and hopelessness. This objective sets out to establish if healthcare providers still find life meaningful in the face of trauma of their cancer patients.
4. Finally, the study seeks to find out if vicarious traumatization can predict the professional quality of life and purpose in life of healthcare providers of cancer patients in Botswana. Predicting trauma among healthcare providers through this study is intended to provide information to policy makers who can restructure the system to alleviate healthcare provider burden.

Research Questions

1. Do healthcare providers of cancer patients in Botswana experience vicarious traumatization as measured by the Trauma Attachment Belief Scale (TABS)?
2. What is the relationship between vicarious traumatization and professional quality of life of healthcare providers of cancers patients as measured by the Professional Quality of Life Scale (ProQOL)?
3. What is the relationship between vicarious traumatization and purpose in life of healthcare providers of cancers patients as measured by Purpose in Life scale (PIL)?
4. Does vicarious traumatization predict quality of life and purpose in life of healthcare providers of cancer patients in Botswana?

Hypotheses

Ho1: Healthcare providers of cancer patients in Botswana experience vicarious traumatization.

Ho2: There is a positive relationship between vicarious traumatization and professional quality of life among healthcare providers of cancer patients in Botswana.

Ho3: There is a positive relationship between vicarious traumatization and purpose in life among healthcare providers of cancer patients in Botswana.

H04: Vicarious traumatization predicts professional quality of life among healthcare providers of cancer patients in Botswana.

H05: Vicarious traumatization predicts purpose in life among healthcare providers of cancer patients in Botswana

Significance of the Study

Botswana once had the highest HIV/AIDS infection rate and cancer related illnesses in the world. This exposes the country to psychological hazards for which mental health needs for healthcare providers have to be in place. Although the Nursing Association of Botswana (NAB) has compiled a working document from conferences and textbooks detailing self care practices of these professionals, research addressing this need is almost non-existent in the country. This study is an attempt to find the relationship between healthcare service provision and trauma in Botswana with the goal to inform healthcare policy makers, counselors, counselor educators and researchers so that they can respond accordingly in a way that will help sustain professional quality of life of healthcare providers. It is hoped that the study will also bridge the gap in the mental health care literature in Botswana. Also, it is envisaged that this study will open an avenue for further exploration of mental health interventions in healthcare, an essential tool for the implementation of clinical practice standards of self care, training in counseling, collegial and external supervision and case load reduction among human service workers in the country (Pross, 2006).

The study could have a greater impact in the country in terms of addressing the mental health counseling audience. The mental health practice service delivery could also be extended beyond a limited number of groups deemed vulnerable by the National Policy on Mental Health in Botswana. Currently, healthcare providers are not considered as a mentally vulnerable group by the National Policy on Mental Health in Botswana.

Limitations of the Study

Although Botswana's economic growth and market has expanded over the past thirty five years, the country still experiences limited resources and personnel with regards to treatment and care for HIV/AIDS (Phirinyane, Kaunda, Salkin, Kaboyakgosi, Thupeng & Batsetswe, 2006) and cancer patients. These limitations are even more confounded by the small number of specialized professionals in the fields of both medical and psycho-oncology. For these reasons, the sample is not random but a criterion based, meaning that participants are chosen on the basis of specific characteristics they have (Dooley, 2001). In this case the choice was specific to those healthcare providers working with cancer patients. Survey research requires a significantly large sampling frame if the results are going to be generalized to the entire population. In this case absence of such a condition imposed limits on the statistical power of the study (Shavelson, 1996).

Data collection was in the form of self reports achieved through the administration of instrument by pencil and paper. Reliance on self-report for the measurement of both dependent and independent variables raises concern about the validity of causal conclusions for a range of reasons. Sometimes there is lack of systematic response among participants because of their intervening personal factors such as inattention due to fatigue, time of the day or lack of interest. This study was not immune to these conditions. The psychometric properties of the questionnaire such as its level of intrusiveness especially that it requires statements on personal trauma may have caused the participants to withhold vital information. It is possible that this factor may lead to social desirability bias, a phenomenon where the participant provides a response that puts him or her in a favorable light (Razavi, 2001).

Definition of Terms

CANCER PATIENTS. Patients suffering from any form of cancer irrespective of the source of the source or place of the tumor in the body.

CARE-GIVING. The process of attending to cancer patients that involves observation, assessment, active listening, praying for, physical support, feeding, dressing, administering medication, radiology and chemotherapy.

CONSTRUCTIVISM. A postmodern philosophy derived from Latin which means to interpret or analyze and places emphasis on an individual's active creation and building of meaning and significance (Sexton, 1997).

MEANING MAKING. A coping mechanism during which professional caregivers engage in thought processes of deciding what makes sense by asking questions such as why cancer occurs, how it occurs, whether their patients deserve to suffer and the reconciliation of their shattered attempts with renewed energy to move forward (Melton & Schelenberg, 2008).

HEALTHCARE PROVIDERS. Physical and mental health care providers involved in the process of observation, assessment, counseling or active listening, praying for, physical support, feeding, dressing, and administering medication, radiology and chemotherapy. Such professionals include but are not limited to nurses, doctors, counselors, psychologists, social workers, radiologists, and hospital based pastors (Sepulveda, et al, 2003).

PURPOSE IN LIFE. a state of having a sense of meaning in life, having goals and a sense of direction, a feeling that there is meaning to life and holding a belief that gives life essence and having aims and objectives for living (MacArthur & MacArthur, 1997).

QUALITY OF LIFE. Stable emotional, cognitive and spiritual functioning (Hugginson & Carr, 2001).

VICARIOUS TRAUMATIZATION. Inner transformation of caregiver's experience resulting from empathic engagement with clients' trauma material (Jenkins & Baird, 2002).

CHAPTER 2 REVIEW OF LITERATURE

An Overview of Botswana's Health Planning and Development Strategies

Botswana is a country in the sub-Saharan Africa with four surrounding neighbors; South Africa in the south, Namibia in the west, Zambia in the north and Zimbabwe in the north east. Diamond mining is the driving force of the economy providing a significant portion of the annual budgets to education and health. Several institutions in Botswana including the health sector are guided by various policy documents such as vision 2016, National Development Plans (NDP 10 started March, 2009) (World Health Organization, 2003). These documents outline the philosophies, mission statements, overall objectives and policy implementation strategies for sectors for which they have been designed. The Ministry of Health (MOH) continues to be guided by the Health Policy, Strategic Framework-2000, Corporate Performance Plan, 2000-2005, National HIV/AIDS policy and the National Policy on Mental Health of 2003 to mention just a few.

Vision 2016 highlights government goals to be achieved by 2016; an educated informed nation; a productive and innovative nation; a just and caring nation; a safe and secure nation; an open democratic and accountable nation; a moral and tolerant nation; and a united and proud nation (Presidential Task Group, 1997). The vision aspires that all Botswana will have access to good quality health care services. The NDP 8 of 1999 -2003 has operationalized part of that vision (World Health Organization, 2007). The National Development Plan 9 of 2004-2008 has addressed the issue of HIV/AIDS campaigns and treatment through various programs.

The Botswana National Health Policy (Ministry of Health, 1996) states that its health care system is based on the principles of Primary Health Care (PHC) which puts health promotion, care and disease prevention as some of its priorities (National Development Plan 9, n.d). PHC

also emphasizes community participation and inter-sectoral collaboration and equity. The PHC has considerations to protect its perceived high risk groups such as children, adolescents, pregnant women, the elderly, disabled persons, and workers whose occupations or professions justify such measures (NDP 9, n.d).

In general, health care promotion and avoidance of ill health through behavior modification services such as health education, health counseling and environmental sanitation are major aspects of health care system in Botswana. Despite policies geared towards a commitment to social justice for all citizens, none of these policies makes a conscious effort to recognize healthcare providers as a part of the population that is at risk. This disconnection becomes more clear when viewed in terms of “the high emphasis on health promotion in the PHC delivery system premised on the government’s concession that Botswana may still be at a level of development where the disease pattern is predominantly determined by poverty, low levels of education and undesirable environmental conditions such as poor sanitation” (Botswana Federation of Trade Unions, 2007, p. 11). Viewed in this light, healthcare providers are less likely to be perceived as experiencing these conditions that the PHC strives to work on.

The Ministry of Health (2003) through the National Policy on Mental Health

seeks to establish a framework for the protection of the rights and civil liberties of all citizens as set out in the constitution of Botswana, Botswana Mental Health Act, and the Botswana National Health Policy. It also seeks to provide mental health services relevant to the needs of special or vulnerable groups and encourage the development of high quality and uniform national standards of care for mental health services, and systems for assessing whether or not services are meeting these standards (p. 5).

From this brief overview, a study on vicarious traumatization of care-givers resonates well with the vision 2016 component which espouses a “just and caring nation” and the mental health policy document which seeks to provide relevant mental health services to vulnerable groups

such as healthcare providers and mental health workers (Ministry of Health, 1996, Ministry of Health, 2003).

Botswana Health System and Healthcare Provider Trauma

The distress faced by healthcare providers in Botswana can best be understood within the context of the country's health crisis. Botswana is faced with a challenging task of providing health care to a nation that is highly traumatized by the HIV/AIDS scourge which in many cases develops into different forms of cancer (World Health Organization, 2007). Until the advent of HIV/AIDS epidemic, the health status of Botswana as a nation had improved, the vital health indicators were among the best in the southern African region (World Health Organization, 2007). The HIV/AIDS pandemic has now taken the center stage; it has become the most important public health challenge for Botswana and its surrounding neighbors in the region. Healthcare providers who are mostly in hospitals are in a crisis situation that requires mental health programs geared towards treating patients and these professionals too. The WHO (2007) country cooperation strategy for Botswana document captures the effect of HIV/AIDS in a succinct manner;

The response to HIV/AIDS epidemic has brought on an extraordinary strain to bear on the people (especially healthcare providers), the health system and the government. Up to 70% of all in patients in medical wards of referral hospitals are HIV related cases. The extra functions that have to be performed by the health system have put great demands on the limited resources of the system. The human resources are especially overstretched... Additional staff is required to provide comprehensive counseling services on a full time basis (p.7).

The magnitude of this shortage of health personnel in the health system of Botswana is further revealed through the doctor- patient and nurse- patient ratios. In the type of health workers and ratio by population survey conducted in 1999 results showed that there was one doctor per 3,440 people, one dentist to 44, 181, one nurse to 410, one pharmacist to 11, 823 and one environmental health officer to 12, four hundred and thirty six people (Health Statistics

Report, 1998). In 2006 the doctor-patient ratio was 1:15 in a private facility and 1:25 per day in government hospitals (World Health Organization, 2006). In all the lists of duties outlined, there is no mention of mental health professionals such as psychologists, counselors, psychiatrists or social workers despite public knowledge that they are employed as part of the Botswana health personnel and were equally burdened.

The healthcare providers' care giving burden manifests itself in the following examples; "nurses are obligated to perform functions of doctors, laboratory technicians, pharmacy technicians and janitors because of shortage of cadres of health professionals (WHO, 2007, p. 18). There have been reports of sick healthcare providers especially among nurses. This has created an acute shortage of health personnel which was further worsened by the migration of Botswana nurses to developed countries such as Britain (National Manpower Plan, 2001). New government interventions on HIV/AIDS such as the Voluntary Counseling and Testing services (VCT) and prevention of mother-to-child transmission (PMTCT) and antiretroviral (ARV) programs resulted in many nurses leaving hospital settings to join these new programs (WHO, 2007; National Aids Coordinating Agency, 2003). The HIV/AIDS crisis still remains a burden in each one of these sectors. Healthcare providers still remained exposed and vulnerable to the trauma and the crisis that their patients experience.

Healthcare Providers' Exposure to Cancer Trauma in Botswana

Each year in the continent of Africa about 2.5 million people die from HIV/AIDS and a combined total of 80, 800 from Botswana, Ethiopia, Tanzania, Uganda and Zimbabwe die from cancer (Sepulveda, et al., 2003). The World Health Organization (WHO, 2003) estimated that by 2020, seventy percent of the new cases of cancer will be in the developing world, Botswana included. In a draft report on the Botswana rapid situation analysis of non-communicable diseases in 2001, the 1600 cancer cases reported in 1996 were more than four times the number

that had been reported previously. Reported cases of mental disorders had also risen from about 100 in 1980 to about 1500 in 1996 (World Health Organization, 2007).

In another study it was found that 21% of Botswana 's population over the age of fifteen that use tobacco products increase cancer cases thus adding to the already existing healthcare provider burden caused by HIV/AIDS (Epping-Jordan et.al, 2004). In a survey carried about the end of life experience in Botswana among nine-two terminally ill patients infected with HIV and some suffering from cancer, one of the most acute problems reported were pain and irregular supply of drugs” (Sepulveda, et al., 2003). These are some of the indicators that point out the extent to which healthcare providers in Botswana are exposed to trauma in their day to day duties of providing care.

Research on Trauma Related Issues of Healthcare Providers

Several studies have documented various conceptualizations of the effect of trauma on professional caregivers in the form of secondary traumatic stress (compassion fatigue), burnout and vicarious traumatization (Bell, et.al, 2003; Buchanan, et.al, 2006; Dutton & Rubinstein, 1995; Figley, 1995, Pearlman & Saakvitne, 1995 & Sabo, 2006). Earlier studies have viewed trauma in terms of an individual witnessing or being involved in actual threat or injury that is detrimental to the physical integrity of the self or other (Dutton & Rubinstein, 1995). However, healthcare providers or trauma workers such as nurses, physicians, mental health workers, lawyers and case managers for the most part may not experience the agent directly causing harm, but are exposed to traumatic stress of their clients who may have witnessed or got involved in the actual threat, injury or death of close associates. According to (Dutton & Rubinstein, 1995) this exposure results in secondary traumatic stress (STS) reactions, also known secondary traumatization; that is “the psychological effects of exposure to the traumatic events through contact with survivors of trauma” (p.83). “It is a natural consequent of behaviors and emotions

resulting from knowing about a traumatizing event experienced by a significant other or the stress resulting from wanting to help a traumatized or suffering person” (Figley, 1995, p. 10).

There is an overlap of the indicators of psychological distress between secondary traumatic stress, burnout and vicarious traumatization due to “exposure to emotionally engaging clients via interpersonally demanding jobs” (Jenkins & Baird, 2002, p. 423). Healthcare providers experiencing secondary traumatic stress have been reported to present with grief, depression, fear and shame; intrusive imagery such as nightmares or flashbacks; addictive or compulsive behaviors and cognitive shifts (Dutton & Rubinstein, 1995). These psychological dysfunctions point out to the risk professional caregivers are facing.

The current body of literature on secondary traumatic stress (STS) (Badger, Royse, & Craig, 2008; Buchanan, et al., 2006; and Jenkins & Baird, 2002) has not generated any new conceptualizations or theoretical framework of this idea but continues to tap directly from the pioneers such as Figley, (1995) and Pearlman and Saakvitne, (1995). Literature on secondary traumatization of health workers or any healthcare providers in Botswana is completely lacking. However, there are several emerging studies on secondary traumatic stress especially among hospital workers helping patients in emergency situations and chronic illness and oncology departments in developed countries where the same theoretical framework is being used. It is noteworthy that a review of literature in the oncology and professional direct service provision presents volumes of information on nursing, but little on other disciplines, including social work and mental health counseling (Simon, Pryce, Roff, & Klemmack, 2005). It is also not yet clear whether or not there is a difference in secondary exposure between mental health and health providers (Robbins, Meltzer, & Zelikovsky, 2008).

The nature of taking care of cancer patients involves chronic loss to both healthcare providers and family members and it requires the professional's presence to manage grief (Simon, et.al, 2005). Providing care also entails pain and symptom control, giving food, emotional and spiritual support, advocacy and sometimes legal help (Harding & Higginson, 2005). All these experiences drain healthcare providers' energy and put them at risk for other complications. For example in a study investigating prevalence and correlates of workplace depression in the National Co- morbidity Survey Replication it was found that a total of 6.4% of employees had major depressive disorder in the past twelve months and an additional 1.1% had major depressive episodes (Kessler, Merikangas & Wang, 2008). Nurses in emergency department also go through similar experiences. Exploratory comparative studies of nurses in different hospitals have revealed that emergency nurses who cared for persons exposed to traumatic events suffered from secondary traumatic stress (STS) or compassion fatigue (CF) with symptoms such as irritability, avoidance and intrusion (Dominguez-Gomez & Rutledge, 2008).

Social workers in hospital settings like any helping professionals exposed to trauma experience secondary trauma -related thoughts and behaviors (Badger, et al., 2008; Bride, 2007) due to emotional work they do with clients. Badger (2008) and others studied factors that contribute to the development of STS in hospital social workers with predictive independent variables being empathy, emotional separation, occupational stress and social support. Empathy is usually considered to be a gateway for emotional vulnerability (Figley, 1995). Findings pointed out that emotional separation from the patient also a component of empathy was associated with professional vulnerability and could lead to the development of STS. On the other end of the continuum emotional separation was also associated with a reduction of STS. Occupational stress or burnout was also found to be a predictor of STS. In a study of frequency

of individual symptoms and frequency with diagnostic criteria for PTSD, findings pointed out that social workers were likely to experience STS and some may meet the criteria for PTSD (Bride, 2007).

In a study of oncology social workers, a Compassion Fatigue and Satisfaction Self Test for Helpers (CFS) was used to measure among other things, STS and burnout and the reliability level for both was .78 (Simons, Pryce, Roff, & Klemmack, 2005). Social workers were found to have experienced STS and burnout. However, satisfaction with work, colleagues and burnout were found to be related to the organization and management. STS and burnout were found to be related in the sense that the more the workers experienced STS the more the likelihood of developing burnout in the process.

In essence it is generally agreed that healthcare providers working with individuals who have been exposed to direct, indirect trauma, injury or life threatening illnesses face the risk of developing secondary traumatic stress/compassion fatigue which may escalate into Posttraumatic Stress Disorder (PTSD) if not monitored (Dutton & Rubinstein, 1995; Pearlman & Saakvitne, 1995; Robins, Meltzer, & Zelinovsky, 2008).

Burnout is another concept related to secondary traumatic stress and vicarious traumatization. This syndrome consists of physical and emotional exhaustion that results from problematic work conditions such as work overload, lack of social support, negative job attitudes which lead to loss of concern for clients (Jenkins & Baird, 2002; Rosenberg & Pace, 2006). Burnout among healthcare providers in Botswana has not been documented in terms of specific research on the construct itself or related areas of study, however there is an abundance of literature on the status of the national health care delivery system that indicates its prevalence (Ndaba-Mbata & Seloilwe, 2000; Seloilwe, 2007. & Sepulveda, et al., 2003). The burden of

lifestyle illnesses, HIV/AIDS and other non communicable diseases such as cancer are some of the poor health indicators leading to burnout among the health professionals in Botswana. For example, “hospitals experience strain on bed numbers that necessitate community based palliative care and sustainability is further weakened by patient’s inability to pay the health costs. The effects of [foreign] aid withdrawal, morbidity and mortality are also high in health workers” (Harding & Higginson, 2005, p. 365). The number of vacancies in the public health sector also accounts to such burnout and this has been aggravated by the migration of Botswana nurses and other health professionals to developed countries (World Health Organization Country Cooperation Strategy, 2007). The doctor patient ratio, nurse patient ratios have also shown to be some of the factors associated with burnout in Botswana.

Literature on burnout in the western world attests that it is a familiar phenomenon in the healthcare system (Pross, 2006). Various disciplines of study have generally centered on symptoms, risk factors as well as prevention of burnout; investigations have also documented burnout as being experienced by psychologists, social workers (Rosenberg & Pace, 2006) and mental health counselors (Buchanan, et al., 2006).

Research on Vicarious Traumatization of Healthcare Providers

Healthcare providers working with cancer patients are usually the physicians, nurses, psychologists and, radiologists, chemotherapy specialists, social workers and mental health counselors. These professionals are vicariously traumatized by various manifestations of the disease ranging from acute and chronic pain to psychological disorders. Theoretically, vicarious traumatization refers to the “inner transformation in the therapist’s or other trauma worker’s inner experience resulting from empathic engagement with clients trauma material” (Pearlman & Saakvitne, 1995, p. 151). Accordingly, these effects accumulate over a long period of time; they become permanently ingrained, and continue to affect the professional caregiver’s professional

and personal life. Vicarious traumatization is therefore an occupational hazard for those who work with trauma survivors (Pearlman & Mac Ian, 1995). Further, vicarious traumatization has implications on the [caregivers] enduring ways of experiencing the self, others and the world (Pearlman, et al, 1995).

Previous studies on vicarious traumatization have explored its impact on specific helping professionals such as social workers (Badgers, et al., 2008; Bride, 2007), emergency nurses (Dominguez-Gomez & Rutledge, 2008), [counselors], psychologists and health science graduates (Iliffe & Steed, 2000) but not as a collective group. The general consensus among these studies is that caregivers exposed to traumatized patients material were more likely to have intrusion; arousal and avoidance symptoms and for the most part their symptoms fit the PTSD profile. For example in a study conducted to investigate the effects of vicarious traumatization amongst sixty two telephone counselors, findings showed “high average to very high levels of disruption in beliefs and 25% of the participants reported at least one symptom of PTSD, non productive coping was related to disruptions in cognitive beliefs while strong supervisory alliance was lower levels of disruption in beliefs” (Dunkley & Whelan, 2006, p. 452).

Although vicarious traumatization has been studied among mental health professionals in Europe and the United States, there still is a lack of literature concerning their experiences in working with cancer patients in hospital settings especially in Botswana. Professionals who take care of cancer patients in hospital settings in Africa include radiologists, chemotherapists, oncology nurses and physician specialists; their experience of vicarious trauma is only stated in implicit terms. While it is widely documented that nurses elsewhere experience work related stress (Sinclair & Hamill, 2007), there is no evidence to confirm the effects of vicarious traumatization on oncology specialists in Botswana.

In the study of other professionals especially in mental health, certain characteristics are thought to influence vicarious traumatization. Characteristics such as personal trauma history, the meaning of traumatic life events to the therapist, psychological style, interpersonal style, professional development and current stressors are attributed to this phenomenon (Pearlman & Mac Ian, 1995). Notwithstanding these characteristics, oncology specialists like other human service workers remain vulnerable and susceptible to trauma. Sinclair & Hamill (2007) observed that “if an individual has been traumatized as a result of a cancer diagnosis and shares this impact with oncology nurses, there could be a risk of vicarious traumatization in this population” (p.348). In the light of the definition of PTSD as expanding to include a diagnosis of a life threatening illness as a traumatic experience, nurses and other professional caregivers in the hospital settings who listen to such diagnoses on a frequent basis are at risk of being vicariously traumatized.

In a qualitative study geared towards providing pro-active social support targeted to caregivers of patients with lung cancer, researchers found that support for care-givers is usually secondary and reactive rather than planned (Ryan, Howell, Jones & Hardy, 2008). In addition nurses do not usually have time to access valuable support from colleagues or to build alliances with other members of the multidisciplinary team. Potentially, this leaves them with negative emotions when they leave work which they may not discuss outside the work setting due to the ethical standard of confidentiality (Sinclair & Hamill, 2007). Previous positivist quantitative studies have fallen short of providing enough evidence due to the exploratory nature of vicarious traumatization in oncology care. However, findings from the qualitative interpretive studies provide enough evidence for this phenomenon (Sabin-Farrell & Turpin, 2003). Whatever the

case, PTSD symptoms are prevalent among cancer populations and healthcare providers working with this group face a high risk due to trauma material of the patients.

Quality of Life of Healthcare Providers of Cancer Patients

The concept of quality of life is broad and sometimes ambiguous as well as multifaceted and multidisciplinary. From the traditional welfare economics standpoint it has been viewed as welfare and 'happiness' that people get from goods or indirectly from the characteristics of those goods (Culyer, 1990). From a non utility perspective, Culyer (1990) notes that quality of life may include but not limited to relative deprivation of commodities, genetic endowment of health, and moral worthiness of an individual or their deservingness of certain privileges. Some proponents of the human development movement understand the quality of life in terms of the basic capabilities, that is, "one's capability of functioning, what one can do, getting around, looking after oneself and others, earning a living and having a discussion about the quality of life" (Megone, 1990, p.29). An aspect of the quality of life may be related to the character of relationships between people, for example, the quality of friendships, community support for the individual when in need, social isolation, or changes of status from marital to non-marital (Culyer, 1990).

In the mental health services discipline, living conditions and social functioning components such as accommodation, employment, leisure and finance are usually viewed as elements of quality of life used as outcome measures to evaluate mental health services (Barry & Zissi, 1997). In modern medicine the traditional way of assessing change and quality of life of patients is to focus on clinical tests and other complex levels of analysis of body functions. While these procedures give important information about the progression or non progression of the disease as a single entity, it is impossible to separate the disease from an individual's personal and social context (Higginson & Carr, 2001). Since professional caregivers of cancer

patients are involved in the clinical assessment of their individual patients, their quality of life can be captured within the personal intra-psychic and social realms.

A considerable amount of research has been done on quality of life in health settings but mainly based on HIV/AIDS and cancer patients (Granda-Cameron, et al., 2008, Ndaba-Mbata & Seloilwe, 2000; Sepulveda, et al., 2003). Literature that deals with quality of life of cancer patients is in abundance in the United States and Europe, but still falls short with regards to health care professionals. The National Consensus Project for Quality Palliative Care (2004) of the United States recommends that a comprehensive interdisciplinary social assessment be conducted when measuring quality of life. “Most quality of life models within the context of patients with cancer have concentrated on the physical, psychological and spiritual domains (Prince-Paul, 2008). However, the fact that the work environment significantly affects the physical, psychological, emotional and spiritual well-being of care givers just like patients is unquestionable (Sabo, 2008). Evidence shows that professional caregivers experience compassion fatigue, which manifests itself through flashbacks of traumatic events, avoidance, persistent arousal and other effects of cumulative stress (Figley, 1995). Nurses experience burnout which is characterized by emotional exhaustion, depersonalization and reduced personal accomplishment. They also go through bouts of vicarious traumatization which manifest itself in the form of “ significant disruptions of an individual’s sense of meaning, connection, identity and worldview, as well as that of an individual’s tolerance, psychological needs, beliefs about self and others , interpersonal relationships, sensory memory and imagination” (Pearlman & Saakvitne, 1995).

The quality of life of healthcare providers can be juxtaposed to those of others in the white collar professions in order to draw parallels. For example, one cross sectional survey study,

associations of psychosocial factors at work, lifestyle and stressful life events on the health and work ability of white collar workers in a commercial setting was conducted. The main outcome variables were work ability, measured by work ability index (WAI) and mental health measured by short form health survey (SF-12). Individual and psychosocial factors at work, stressful life events and lifestyle were assessed through a questionnaire (van der Berg, Alvinia, Bredt, Lindeboom, Elders & Burdorf, 2007). Results of this study showed that there was a strong association between psychosocial factors such as teamwork, stress handling and self development and to a lesser extent, the stressful life events, lack of physical activity and obesity. Determinants of mental health were similar to psychosocial factors and physical health was influenced by lifestyle. While the mental health of professional caregivers of cancer patients is important as a measure of quality of life in the face of vicarious traumatization, from this study is it evident that social, interpersonal and physical factors are equally important in “people work”.

The quality of life with regards to the cancer disease has been measured by the health related quality of life (HRQL) measures. Guyatt (1999) indicates that two basic approaches are used in the measurement of HRQL; generic instrument that includes health profiles, physical functioning, bodily pain and self-esteem. Another form of generic instrument considered to be a utility measure of quality HRQL is derived from economic and decision theory and reflects relative preference for treatment process (Guyatt, 1999). Although HRQL seems to integrate both utility and non utility (people based) aspects of life, Culyer (1990) further emphasizes the importance of value judgments in measuring quality of life because value judgments “trade off, interact and compare” (p.17) with other aspects of quality of life such as health and education which usually do not appear in the exchange of knowledge about quality of life that is not informed by the utility theory. The emphasis on value judgments is further corroborated in a

study documenting the role of health care providers and significant others in the evaluation of patients with chronic disease (Kommer, Sneeuw, Mirjam, Sprangers, Neil, & Aaronson, 2002). “Judgments are made by significant others and health care providers about several aspects of patient’s HRQL are reasonably accurate” (p.1130).

The area of quality of life of the caregivers in Africa and in particular, Botswana still requires more research. Like in the western countries, studies about QOL in Botswana mainly reports on the general population or the chronically ill patients. It is noteworthy to point out that the concept of QOL has been ill defined in previous literature; it was often used interchangeably with concepts like “standard of living”, “welfare” and “well-being” (Akinsola & Popovich, 2002). Other theorists believe that a more appropriate definition of quality of life in African countries is “one that emphasizes function and capability; the ability to stay health, avoid hunger and live longer” (Akinsola & Popovich, 2002, p. 763).

In other previous studies about Botswana QOL included in its definition and measurement; income distribution, employment and unemployment, poverty datum line (PDL), human development index (HDI), HIV/AIDS status, access to food, income, sanitation disposal; freedom from illness or health risk behaviors and access to housing which is more cumbersome in towns where some professionals commute (Akinsola & Popovich, 2002; Hudson & Isaksen, 1998).

It is evident from the literature gap that the quality of life among professional caregivers of cancer patients still needs further investigation in Botswana. Studies have also shown that QOL in Botswana is perceived in terms of both utility and non utility indicators and efforts are made to integrate economic welfare and health related models to cater for the basic needs of the people. One QOL indicator that permeates across all demographic divides is the HIV/AIDS

status; it affects professional caregivers both at professional and personal levels. Because of these unique and varied factors about Botswana situation, this study concentrates on QOL of professional caregivers from a psychological standpoint. In this case professional quality of life which addresses compassion satisfaction, burnout and compassion fatigue will be the focus of study in relation to vicarious traumatization.

Purpose in Life Research on Healthcare Providers of Cancer Patients

Psychological concepts such as purpose in life and meaning of life were developed from Viktor Frankl's writings based on his suffering experiences as prisoner in the squalid concentration camps during World War II (Boeree, 2006; MacArthur & MacArthur, 1999). Frankl observed that life has meaning in all conditions and that it is psychologically damaging when a person's search for meaning is blocked. Lack of meaning in life has been found to be associated with psychopathology while positive life meaning was associated with strong religious beliefs, membership in groups, and dedication to a cause, life values and clear goals (MacArthur & MacArthur, 1999).

Meaning making and questions about one's purpose in life are major themes and concerns for people suffering from terminal illnesses such as cancer. Meaning making is characterized by a distressing but necessary confrontation with loss. If followed by a plan to fulfill a purpose of life, it can lead to improved psychological well being (Lee, Cohen, Edgar, Laizner, Gagnon, 2006b). When a diagnosis of cancer is announced, patients experience existential distress; "a state of powerlessness that arises from one's confrontation with one's own death and results in feelings of disappointment, futility and remorse that disrupts one's engagement with purpose of life" (Lee, Cohen, Edgar, Laizner, Gagnon, 2006b, p.3133). This is a traumatic experience for patients.

The Diagnostic Statistical Manual of Mental Disorders (DSM- IV-TR®, 2000) adds that trauma also involves learning about one's exposure to a noxious agent that causes death or harm to another (Dutton, et al, 1995). Since healthcare providers working in oncology are exposed to listening to patients' diagnosis and witnessing some of the patients die, their sense of achievement in the workplace is put to test. They also start to question their own mortality and foundation for their lives since the sense of purpose in life is shaken.

Just like their patients, it is evident that healthcare providers need specific mental health counseling in order to understand and cope with their situations. Because dealing with a life threatening illness like cancer brings out questions about meaning and purpose of life; meaning making clinical interventions (Lee, et al., 2006), therapy work, cultivation of positive well being (Linley & Joseph, 2007) and stress reduction programs (Swartz, et al., 2007) have been suggested as some of the ways through which healthcare providers could deal with provider terminal care for their patients. Meaning making interventions entail supportive, expressive, cognitive-behavioral and other psycho-educational intervention (Lee, et al., 2006). Some of the mental health interventions include personal therapy, supervision, therapeutic training and orientation (Linley, et al., 2007) and body-mind techniques (2007).

CHAPTER 3 METHODOLOGY

The purpose of this study was to investigate the relationship between vicarious traumatization, the quality of life and purpose in life of healthcare providers of cancer patients in Botswana. The study sought to firstly find out if vicarious traumatization affects these professionals and also establish relationships between vicarious traumatization and professional quality of life; or between vicarious traumatization and purpose in life.

A correlation research design was chosen for this study because it is used to describe and measure the degree of association or relationships between two or more variables (Cresswell, 2002). This was line with the objectives of establishing the relationship between vicarious traumatization and professional quality of life and purpose in life and also finding out if vicarious traumatization can predict the two dependent variables. For this reason correlation design is both an explanatory and also a prediction design suitable for the study's hypotheses. Variables in correlation studies naturally occur; therefore there was no experimentation or manipulation of variables (Dooley, 2001).

The Setting of the Study

The study was carried out in Botswana, in southern Africa. Sites for the study included hospices which are day care centers for HIV/AIDS and cancer patients. It also covered government, missionary supported, private and referral hospitals. In Gaborone, sites that participated in the study were Princess Marina Hospital, Gaborone Private Hospital, Bokamoso Private Hospital, and Holy Cross Hospice. Other participating sites in the peri-urban areas were Bamalete Lutheran Hospital in Ramotswa, Scottish Livingstone Molepolole, and Deborah Retief Memorial in Mochudi. Nyangabwe Referral Hospital in the city of Francistown and Tutume Primary Hospital in Tutume village in northern Botswana also participated.

Sampling Procedures

A non probability sampling method known as criterion sampling was used. In criterion sampling, individuals, groups or settings that meet unique characteristics specific to the study are selected (Onwuegbuzie, Jiao & Bostick, 2004). In this study healthcare providers who are responsible for treating cancer patients in hospitals and hospices by providing palliative care, chemotherapy, radiological services, counseling were used to ensure that the respondents represent this particular desired group. Because of a limited number of qualified specialists in the area of oncology, participants taking care of cancer patients were not available in ubiquitous amounts, thus ruling out the expectation of a random sample. Thus, all individual professionals treating or helping cancer patients in the stated sites were asked to participate.

Sample Size

The issue of how many participants are needed in a specific study is a controversial one and there is still no agreed upon number for specific types of research. Even professional journals still use too few participants to have statistical power to detect powerful effects (Cone, & Forster, 2006). There are several things to deal with for one to establish relationship between sample size and accuracy of the study in survey research. For a population in which most people will answer a question in the same or similar way, a small sample will do (De Vaus, 2002). In this study, a criterion sampled group of healthcare providers treating or helping cancer patients was deemed adequate.

In determining sample size, an example of another study attempting to determine the number of subjects required to do a regression analysis (Green, 1991) was followed. In the study, an alpha of .05 and a power of .80 were used to calculate effect sizes and also assign them to subjective levels of small, medium and large. The sample sizes based on power analysis were compared to sample sizes based on the rule-of-thumb where one independent or predictor

variable is represented by $(N=50) + m$ which represents dependent variables. Given that a regression analysis was used in this study which has one predictor variable and two dependent variables, this makes the sample size of one independent variable $(N=50) +$ two dependent variables $(50 + 2m) = 52$ participants which was able to detect medium effects in other studies (Green, 1991). Despite this sample size, nine-seventy (97) participants were recruited and eighty-five (85) (87.6%) returned the questionnaires. Two participants did not fill out the eight-four (84) items for the Trauma and Attachment Belief Scale (TABS); they were taken out of the study, leaving only eighty-three (83) questionnaires for analysis.

Description of Participants in the Study

A total of eighty-three (83) healthcare providers participated in the study. The participants were radiologists, chemotherapists, nurses and doctors in the oncology units, hospital social workers, psychologists, para-professional counselors, counselors, nurse aids, oncology clerks and human resource personnel. Family caregivers were not included in this study because they were not within the planned sampling frame. Participants were recruited from sites stated above. They comprised of Botswana citizens (74.7%) and foreign nationals (25.3%) (Table 3-1). Foreign nationals came from other parts of Africa, U.S.A, Europe, the Caribbean and China for the provision of health care services. Other demographic characteristics that add to the diversity of the group were considered. These included age, marital status, and area of treatment specialization, qualifications and length of time in treating cancer. In terms of gender (Table 3-2) women comprised (63.9%) and men (36.1%). Of the participants, (42.2%) reported being married while (47%) were single and the rest being divorced, widowed or separated (Table 3-4). About (61.4%) of the healthcare providers were nurses, (12%) doctors the rest were in other health professions. Only (13.3%) reported being oncology specialists while the others worked as experienced generalists (Table 3-7). In terms of frequency of contact with cancer patients,

(72.3%) reported daily contact, (8.4%) reported weekly encounters while (16.9%) treated cancer on monthly basis as displayed in Table 3-11.

Design and Ethical Issues

Getting access to the participants required several steps. The process started with obtaining approval from the Institutional Review Board of the University at Florida (Appendix A). The next step involved the University of Botswana, the funder of the project so that the researcher could travel around the country since telephone and mail methods are not viable in Botswana. The university approved the study (Appendix G). The proposal was then submitted to the Ministry of Health which deals directly with hospitals and health issues to determine if the study presents any ethical issues or potential to harm the participants. The research permit was approved after forty-five days (7 weeks) (Appendix I). In Botswana each hospital has its own institutional review board independent of the Ministry of Health even though they can only start their own review after receiving the main approval from the ministry. After receiving the research permit from the Ministry of Health, applications were made to all the participating hospitals (see Appendices J, K, L and M). Other sites such as Holy Cross Hospice, Gaborone Private, Scottish Livingstone, Bokamoso Private and Tutume Primary Hospitals reviewed the proposal package and gave verbal permission. Once these sites approved the study, recruitment meetings were held with various heads of departments, medical teams, wards and shift managers in order for self introduction, explaining the study, rapport creation and distribution of flyers.

Flyers were put on notice boards in the wards (Appendix H). Letters were distributed to potential participants (Appendix A). In the recruitment letter three basic ethical principles were emphasized namely; respect for persons, beneficence and justice (Dell, Shmidt, & Meara, 2006). According to these authors, for persons involved in the study there is need for informed consent to be stated in terms of what will happen or will not happen to them. This involves possible

benefits, risks, alternative procedures if treatment is involved, and the option to drop out of the study and what the data will be used for. This recruitment tool was stated in such a way that the participants felt a sense of voluntariness rather than coercion to participate. The issue of justice underscores the importance of not taking advantage of ethnic minorities, ill or incapacitated “persons whose vulnerability may make them more subjected to manipulation” (p.177).

The questionnaire was administered through a simple pen and paper procedure. The identity of the participants was not to be revealed since they received the questionnaires in sealed envelopes. Participants filled out the questionnaire booklets and then re-sealed envelopes without indicating their identities. For this reason, participants’ identity was not traceable. Because this survey used psychological instruments that included sensitive material, participants who felt that their past traumatic moments could resurface in the process were provided with an avenue to talk briefly with the researcher. Participants were also provided with an option of a referral to professional counselors at the University of Botswana counseling center either in person or by phone. Arrangements to cater for such circumstances were made with the center through a formal letter to the center and to the participants in the consent letter (Appendix A).

Variables

Vicarious Traumatization

Vicarious traumatization refers to “transformation of inner experience of the therapist [or professional caregiver] that comes as a result of empathic engagement with client’s trauma material and the effects accumulate across time and other helping relationships (Pearlman & Mac Ian, 1995). Since the symptoms of vicarious traumatization include disturbance in the helper’s cognitive frame of reference, identity, worldview, spirituality, affect and belief system (Pearlman & Saakvitne, 1995), the experience of the trauma is a solitary experience that can only be almost accurately captured through a self report measure from the participant in the study. For this

reason, this independent variable was subjected to measurement through participants' responses only and not manipulation or scientific experimentation.

The purpose of this study was to determine relationship between vicarious traumatization and professional quality of life and purpose in life among professional caregivers of cancer patients in Botswana. In the study it was hypothesized that the independent variable would positively correlate and predict professional quality of life and purpose in life of healthcare providers. It was assumed that a strong relationship with dependent variables was going to show.

Professional Quality of Life (ProQOL)

Professional quality of life is one of the dependent variables in the study. As a concept, quality of life (QOL) has been written about in various disciplines and it has elicited multiple and dissimilar definitions (Baldwin, Godfrey & Propper, 1990). In health related disciplines "no consensus exists about what quality of life is or how it should be measured" (Anderson & Burckhardt, 1999), but it is perceived as an important outcome of health care intervention. Viewed in health terms and consistent with the World Health Organization's definition, it is a state of complete physical, mental and social well being and not merely the absence of disease and infirmity (Anderson & Burckhardt, 1999). The health related quality of life perspective (HRQL) "represents a multidimensional concept that refers to a person's total well being. Most people agree that it represents physical, social, emotional and other dimensions such as cognitive, intimacy and sexual functioning depending on the nature of the trial and its intervention" (Furberg & Furberg, 2007, p.57). These measures have been limited to patients and not professionals for the most part. For this reason, the Professional Quality of Life scale which captures compassion satisfaction, burnout and compassion fatigue was used for data collection.

Purpose in Life

The existential theory posits that individuals need to find meaning and sense in everyday life and that overall existence is basic to health and well being (Marsh, Smith, Piek, 2003, Capuzzi & Gross, 2007; Archer & McCarthy, 2007). In hospital settings, especially in oncology units, cancer patients and healthcare providers struggle to adjust to the disease; this process brings existential distress where both may feel a sense of confrontation with their own death. Also both patients and healthcare providers deal with feelings of powerlessness, disappointment, futility, meaninglessness, remorse, death anxiety and see no purpose or meaning in life (Kissane, 2000). Earlier studies do concur that there is a relationship between poor meaning in life and mental health problems as well as high meaning of life and psychological well being (Marsh, Smith, Piek, 2003).

The concept of purpose in life is seen as having critical functional elements such as having a “sense of clear aims in life, a sense of achieving life goals, a belief that one’s daily activities are worthwhile and meaningful, a sense that one’s life has coherence and meaning, and enthusiasm and excitement about life (Marsh, Smith, Piek, 2003). The idea of purpose and meaning in life is associated with the philosophical writings of Viktor Frankl’s existentialism and logotherapy. This notion has been applied to mental health as a representation of positive psychological functioning (MacArthur & MacArthur, 1997). According to Victor Frankl life has meaning under all conditions and that it is psychologically damaging when a purposeful search for meaning is blocked. For this reason, meaning making or seeking purpose in life for professional caregivers of cancer patients is vital to their well being as well as enhancing their enthusiasm in providing care.

Instrumentation

Trauma and Attachment Belief Scale (TABS).

The Trauma and Attachment Belief Scale (TABS) (Appendix D), formerly known as the Traumatic Stress Institute Belief Scale (TSI-BSL) was used in this study to measure vicarious traumatization. The TSI Belief Scale was designed to measure disruptions in beliefs about self and others (that is, cognitive schemas such as safety, trust, esteem, control and intimacy) which resulted from psychological trauma or from vicarious exposure to trauma material through psychotherapy or other helping relationships. The scale was designed to assess the possibility of a trauma history in clients, as well as to indicate specific psychological need areas requiring attention during psychotherapy (McCann & Pearlman, 1990a). Also it was intended to be used in conjunction with other measures, to diagnose the existence of vicarious trauma (McCann & Pearlman, 1990b; Pearlman & Saakvitne, 2003) in helpers. This scale is also consistent with the theoretical conceptualization of vicarious traumatization (Zimmering, Munroe, & Gulliver, 2003) which includes a profile of symptoms such as “disruptions to one’s sense of meaning, connection, identity, and world view, psychological needs, belief about self and others, interpersonal relationships, sensory memory and imagery” (Pearlman & Saakvitne, 1995, p. 151).

In its current form just like the former the TSI-BSL, TABS still assesses the five areas of safety, trust, esteem, intimacy and control that are highly affected by trauma. It assesses long term impact of trauma and can be used to help counselors to design effective individualized treatment plans. Its norms were based on a sample of 1, 743 adults and 1,242 youths in the United States ranging in age from 9 to 18. The TABS is a self report pencil and paper test composed of 84 items that yield ten subscale scores and a total score (Pearlman, 2003). The higher the scores, the greater the disruption in the beliefs. On the interpretation table, a range of

70 and above (T-scores) indicates an extreme level of trauma or disruption of cognitive schemas, 60-69 is very high, 56-60 is high average, 45-55 is average, 40-45 is low average and a range of 0-29T denotes extremely low disruption or trauma (Pearlman, 2003). The items are scored on a six point Likert scale ranging from 1 representing; strongly disagree, 2 disagree, 3 disagree somewhat, 5 agree and 6 representing strongly agree.

This instrument is estimated to have an internal consistency of 0.96 and a test-retest correlation of 0.75 for the total score (Pearlman, 2003). Different forms of validity like the face, construct and criterion were reported to be high. For example, hundred items were collected from statements made by trauma survivor clients that were reflective of six areas originally identified by Constructivist Self Development Theory (Pearlman, 2003). In the earlier version of the TABS some aspects of construct validity such as concurrent and discriminant validity for non clinical and clinical samples were found to be convincingly available (Stalker, Palmer, Wright & Gebotys (2005).

Another benefit for this instrument is that its items do not pathologize participants (Pearlman, 2003), it is brief, 15 minutes for administration, it is easy to read and highly sensitive to specific effects of traumatic experience. The researcher is quite aware that this instrument was designed for application to mental health care providers, however, healthcare providers such as nurses, doctors and other support staff like radiologists and chemotherapists is in daily contact and taking care of cancer patients. Their empathic emotional investment in the welfare of the patients undoubtedly exposes them to the risk of vicarious traumatization as supported by literature. For these reasons, the instrument was used to measure the independent variable. Modifications were made on its demographic section (Appendices C and D) owing to its application to a different cultural and professional setting from which it was originally normed.

Professional Quality of Life Scale (ProQOL R-V)

Various instruments have been used for measuring quality of life in health settings dealing with cancer patients. For example, the Cancer Quality of Life Questionnaire (QLQ-C30) (McLachlan, Devins & Goodwin, 1997), and the Quality of Life Index (QL-I) (Moinpour, Lyons, Schmidt, Chansky & Patchell, 2000). In this study, the Professional Quality of Life –Revision V (ProQOL R-V, 2009) was used. The ProQOL R-V is the latest version (Appendix E) of the old Compassion Fatigue Self Test (CFST) (Figley, 1995). It addresses three constructs namely; Compassion Satisfaction, Burnout and Compassion Fatigue/ Secondary Trauma (Stamm, 2009). Stamm (2009) also notes that Compassion Satisfaction deals with the feeling of satisfaction or pleasure that professionals derive from the work place, their colleagues and their contribution to society in general. Compassion Satisfaction is represented by items 3, 6, 12, 16, 18, 20, 22, 24, 27 and 30 on the scale. The second subscale, Burnout echoes feelings of hopelessness among professionals due to a non-supportive work environment or the burden of the amount of work that one carries. The Burnout subscale is represented by items; 1, 4, 8, 10, 15, 17, 19, 21, 26 and 29. Lastly, Compassion Fatigue deals with secondary exposure to highly stressful events, situations or conversations that may result in images or flashbacks of the upsetting event interfering with the professional's life (Felton, 1998; Maslach, et al, 2001). Compassion Fatigue is represented by items 2, 5, 7, 9, 11, 13, 14, 23, 25, and 28 on the scale.

The instrument was normed on 1000 participants and it can be applied to professionals across several human services disciplines. The reliabilities of this instrument have risen significantly since its modification from the first version which had 66 items. The current version which has 30 items has Compassion Satisfaction alpha of .87, Burnout alpha .90 and Compassion Fatigue alpha of .87 (Stamm, 2005). In the manual developed by Stamm (2005) the author claimed evidence of construct validity were proved through reports on multiple articles in

peer reviewed literature addressing these constructs especially with regards to complementarity between Purpose in Life (PIL) and Seeking of Noetic Goals (SONG) scales. In addition, the author provides reports that there are minimal inter scale correlations between these three constructs, thus further attesting to the validity of the instrument.

Purpose in Life Scale (PIL)

Various instruments designed to measure meaning and purpose in life do exist but they “meet many obstacles including pragmatic concerns such as measuring subjective experiences and theoretical objections often offered by humanistic psychologists” (Melton & Schulenberg, 2008, p. 31). Despite different viewpoints owing to the subjectivity and abstraction of the concept, mental health counselors seek scientific basis for counseling to guide mental health services (Wampold, 2001). Some of the assessment tools used to measure meaning include Purpose in Life test (PIL), the Life Purpose Questionnaire (LPQ), the Seeking of Noetic Goals test (SONG), the Meaning in Suffering Test (MIST) and the Life Attitude Profile-Revised (LAP-R) (Melton & Schulenberg, 2008).

In this study the Purpose in Life (PIL) instrument (Appendix F) was used to measure a sense of purpose for healthcare providers of cancer patients in Botswana. Earlier studies have shown that high scores in meaning of life measures are correlated with low levels of psychological distress and high levels of happiness and self esteem. The findings indicate that those with meaningful lives are more emotionally stable (Melton & Schulenberg, 2008). In terms of disposition, relationships and attitudes, Melton & Schulenberg, (2008) reported that people who score high on the PIL view themselves as in control of their circumstances and have positive attitude towards life. Related to the issues of death and purpose in life is that “ participants who experienced loss of a loved one reported greater happiness, more purpose in life and fewer grief reactions when they indicated that they had accepted death (Robak & Griffin,

2000). High levels of meaning in life as measured by the PIL are associated with minimum levels of proneness to boredom (Melton & Schulenberg, 2007).

The PIL is a 20 item self report attitude scale that measures the extent to which people perceive their lives to have purpose or meaning (Marsh, et al, 2003). Items are scored by a dichotomous Likert scale ranging from 1 (low purpose) to 7 (high purpose) with 4 being the neutral point (MacArthur & MacArthur, 1997). Specific descriptors between 1 through 7 vary from item to item. Total scores are achieved by adding the 20 items which may range from 20 to 140 (De Witz, 2002). For a long time the structure of PIL has been assumed to be a uni-dimensional measure. However, some researchers have shown that the scale is comprised of one to six factors (Marsh, et al, 2003). The two major factors reported were existence and death. Although it is perceived to be measuring different constructs such as life meaning or purpose, life satisfaction, freedom, fear of death and how one values their existence, it is generally agreed that it is a uni-dimensional assessment tool based on existential theory and the logotherapy technique in particular.

With regards to the reliability of this scale, previous studies in the 1980's have reported an alpha level of .86 to .97; .77 to .85 on the split half reliabilities which have been corrected to .87 and .92 respectively. The test- retest reliabilities have been recorded at .66 to .82 on 1, 6, 8 and 12 weeks intervals (MacArthur & MacArthur, 1997; Melton & Schulenberg, 2008). The validity of the PIL seems convincing since others have reported significant differences among various groups with and without mental illness. Positive associations have been reported between PIL and Viktor Frankl's Questionnaire.

Data Collection

Data for this study were collected through a survey questionnaire. Data were collected by administering the Trauma Attachment Belief Scale (TABS), Professional Quality of Life Scale-Revised version (ProQOL R-V) and the Purpose in Life (PIL) all in one sitting. All these instruments were self report scales that required paper and pencil resources during administration. Data collection in this study presented a unique situation in which the usual conventional survey methods of mail (post and internet) or phone commonly used in the United States were not used in the strict sense. This is because data were collected in Botswana; a developing country that still struggles to keep pace with equitable distribution of electronic communication and efficient paper mail system that uses physical addresses.

Although survey can be distributed via mail, internet, telephone, (Dillman, 2000; Czaja & Blair, 2005), in this study face to face method, was used. Once the protocol with various gatekeepers was cleared and flyers distributed, the researcher appeared in person with questionnaire packages to explain the purpose of the visit to participants. The packet included three instruments, consent letter, University of Florida protocol and a pen. All these were hand delivered to each participant. The majority of participants filled out the questionnaires in one sitting and finished, while others preferred to fill them out in the privacy of their homes after work without the interference of co-workers. Completed questionnaires were returned in sealed envelopes to the researcher in person while in some instances envelopes were deposited at a central area at the work place where the researcher could pick them.

Data Analyses

The data of this survey were analyzed using Statistical Package for Social Science (SPSS) version 13. The analyses applied both descriptive and inferential statistics. Firstly, demographic information such as nationality, gender, age, educational level (Burns, 2004), area of

specialization, years of treatment in the area of cancer treatment and frequency of contact with cancer patients were presented to show the nature of the populations. Descriptive statistics were shown to help provide a clear picture of categories that have more cases, the typicality of central tendency, whether cases were concentrated on few categories or spread fairly or skewed (De Vaus, 2002). Descriptive statistics were also ideal for summarizing data and checking statistical assumptions (Dickter, 2006) and discover patterns and processes (De Vaus, 2002). As part of descriptive statistics, frequency tables were used to present categories of variables, percentages of the whole sample. Means and standard deviations provided important information about the representative scores and amount of variation in the data (Dickter, 2006).

One of the challenges in the data analyses stage was the discovery of missing data. Resolving this issue is important because missing data has the potential to reduce effective sample size which may result in loss of statistical power. Missing data also make it difficult to measure effect (O'Rourke, 2003). In this study when data were explored by running frequencies, listwise deletion showed that only 64 out of 83 cases were valid. The 21 cases that had some missing responses in the questionnaire were retained. Listwise was not used to solve the problem of missing data. Pairwise was also not used to avoid complications of alternating analysis for one variable that had all responses and avoiding one that did not. To resolve the issue of missing data, average values for the entire sample were used to represent missing sample. This method is deemed more appropriate especially that the sample for this study had a normal distribution; there was no skewness (O'Rourke, 2003; Schafer & Graham, 2002).

In establishing relationships, correlations are used to measure variables in order to determine the size, direction and degree (Tabachnick & Fidell, 2001) strength of the relationships. Bivariate correlations were used in the study because they measure associations

with no distinctions necessary between independent and dependent variables (Tabachnick & Fidell, 2001). Thus, running bivariate correlations helped to establish the associations between each pair of the three variables in the study.

Additionally, through bivariate correlations, non-causal descriptive patterns of correlation could be identified to determine if there were any relationships between any two pairs of the variables stated. For example, in the first step vicarious traumatization was correlated with quality of life and purpose in life to find out if there were any reciprocal, indirect or interactive causation (De Vaus, 2002). However performing correlation of any two variables runs the risk of missing out additional variables that may have the causal effect (Dooley, 2001). This notion attests that observing a correlation does not necessarily imply causal connections. This is the limitation of this form of analysis.

In the second step, multinomial logistic regression analysis was performed to predict if there was a direct relationship among variables. Multinomial logistic regression is a multiple regression approach but with an outcome variable that is categorical and a predictor variable that is continuous or categorical (Field, 2009). Linear regression was not used in the study because with linear regression, the assumption is that the relationship between variables is linear. When the outcome variable is categorical or (ordinal) the assumption of linearity is violated, which was the case in this study. Thus the multinomial logistic type regression is more suitable for this study because it has one predictor variable and two outcome variables, hence the best fit since the variables are ordinal.

In summary, research questions and null hypotheses were addressed by performing the following analyses;

Research question 1. Do healthcare providers of cancer patients in Botswana experience vicarious traumatization as measured by the Trauma Attachment Belief Scale (TABS)?

Hypothesis 1. Healthcare providers of cancer patients in Botswana experience vicarious traumatization

Descriptive statistics were run to reflect the minimum, maximum figures and standard deviations showing the ten subscales of Trauma and Attachment Belief Scale.

Research question 2. What is the relationship between vicarious traumatization and professional quality of life of healthcare providers of cancers patients as measured by the Professional Quality of Life Scale (ProQOL).

Hypothesis 2. There is a positive relationship between vicarious traumatization and professional quality of life among healthcare providers of cancer patients in Botswana.

Bivariate correlations were run between vicarious traumatization and professional quality of life while controlling for purpose in life.

Research question 3. What is the relationship between vicarious traumatization and purpose in life of healthcare providers of cancers patients as measured by Purpose in Life scale (PIL)?

Hypothesis 3. There is a positive relationship between vicarious traumatization and purpose in life among healthcare providers of cancer patients in Botswana.

Bivariate correlations were performed between vicarious traumatization and purpose in life while controlling for professional quality of life.

- **Research question 4.** Does vicarious traumatization predict quality of life and purpose in life of healthcare providers of cancer patients in Botswana?
- **Hypothesis 4.** Vicarious traumatization predicts professional quality of life among healthcare providers of cancer patients in Botswana

Multinomial logistic regression analyses were performed to find out if vicarious traumatization predicted professional quality of life of healthcare providers of cancer patients in Botswana.

Hypothesis 5. Vicarious traumatization predicts purpose in life among healthcare providers of cancer patients in Botswana

Multinomial logistic regression analyses were performed to find out if vicarious traumatization predicted purpose in life among healthcare providers of cancer patients in Botswana.

Limitations of the Methods

Survey research relies on samples that are at a particular place at a particular time (De Vaus, 2002) and it targets the events happening during a specific period. For this reason, true replication of results may be difficult to achieve depending on the volume of cancer patients admission, severity of symptoms and healthcare provider cognitive capacities at specific times. Also, depending on factors such as a small sample size, the chosen ever evolving multinomial logistic regression analysis method, the results may be affected. In addition regression analyses reveal relationships between variables and but it do not assume causality. Causality is an experimental rather than a statistical issue (Tabachnick, et al, 2001). Thus, the results of the study may not be reported in terms of cause and effect.

CHAPTER 4 DATA ANALYSES AND RESULTS

Demographic Overview

The purpose of this study was to determine the relationship between vicarious traumatization, professional quality of life and purpose in life of healthcare providers of cancer patients in Botswana. The population of study, the healthcare providers, was recruited from eight hospitals and one hospice in Botswana. The total number of participants was eighty-three (83). In the healthcare provider population, 10 were medical doctors (12%), nurses 51 (61.4%), nurse assistants 5 (6%) and 7 radiation oncologists (8.4%). There was 1 psychologist (1.2%), 5 social workers (6%), 1 oncology clerk (1.2%), 1 human resource specialist (1.2%), 1 youth officer (1.2%), and 1 lay counselor (1.2%) (Table 3-5).

Regarding other demographic variables, 62 participants were Botswana nationals (74.7%) while 21 (25.3%) were foreign nationals (Table 3-1). The number of male participants was 30 (36.1%) while that of females was 53 (63.9%) (Table 3-2). Age was another demographic variable considered in varying age brackets. For ages 18-24 there were 10 participants (12%), for 25-30 there were 26 participants (31.3%), for ages 31-36 there were 17 participants (20.5%), the 37-42 age bracket had 15 participants (18.1%), 43-48 had 5 participants (6%), the 49-54 group had 6 participants (7.2%) while the oldest 55-60 bracket had 4 participants (4.8%) (Table 3-3).

Participants' marital status was also considered. Thirty-nine (39) participants (47%) stated that they were single, 35 were married (42.2%), 3 were separated (3.6%), 3 were divorced (3.6%) and 3 were widowed (3.6%) (Table 3-4). Regarding the number of years that healthcare providers have been treating cancer, 22 participants (26.5%) had one year experience, 15 participants (18.1%) had 2 years experience, 11 participants (13.3%) had three years, 4 participants (4.8%) had four years, 3 participants (3.6%) had five years, 3 participants (3.6%)

had six years, 4 participants (4.8%) had seven years, 6 participants (7.2%) had ten years, 2 participants (2.4%) had 15 years while the remaining 8 participants each accounting for (1.2%) had 16, 17, 19, 20, 21, 22, 26 and 31 years of experience in treating cancer (Table 3-10). The last crucial variable for this population was their frequency of contact with cancer patients. Of the 83 participants, 60 of them (72.3%) reported having daily contact with cancer patients, 7 participants (8.4%) had contact with cancer patients at least once a week, 14 participants (16.9%) reported a contact of at least once a months with cancer patients and 2 participants (2.4%) reported contact with patients at least once a year (Table 3-11).

Variables

There are three variables for this study. The independent variable is vicarious traumatization and the two dependent variables are professional quality of life and purpose in life. Vicarious traumatization describes the inner experiences of helpers or healthcare providers of cancer patients that are a result of empathic care for the patient who is traumatized. The constructivist self development theory maintains that helpers who have been vicariously traumatized experience disturbances in their cognitive frame of reference, identity, world view, spirituality, affect and belief system (Pearlman & Mac Ian (1995, Pearlman & Saakvitne, 1995). Professional quality of life is a dependent variable in this study describing healthcare providers' levels of compassion satisfaction with their work, the burnout they experience as well as the fatigue they experience as a result of engaging with patients (Stamm, 2005). The other dependent variable in the study, purpose in life is derived from the existential theoretical framework especially the logotherapy perspective. It explains and individual's ability to set and achieve goals for their life, to believe that one's daily activities are meaningful and purposeful (Marsh, Smith & Piek, 2003).

Statistical Methods

In this study, three main statistical methods were used. Descriptive statistics were used for data exploration and visualization. Descriptive statistics also helped in determining the minimum, maximum, means and standard deviations for variables being measured. The Pearson coefficient bivariate correlation was used to find out the relationship between vicarious traumatization and professional quality of life and also between vicarious traumatization and purpose in life. Bivariate correlation determines the strength and direction of any two variables regardless of whether they are independent or dependent (Fields, 2009). The other statistical method that was applied to the study was the multinomial logistic regression and it was used to find out if vicarious traumatization predicted professional quality of life and purpose in life among the healthcare providers of cancer patients in Botswana.

Descriptive Statistics

This section displays an overview of the descriptive statistics for the variables in the study. Vicarious traumatization was measured by the Trauma and Attachment Belief Scale (TABS), a ten (10) subscales measure with eighty-four items. The interpretation table for this scale indicates that T-scores of <29 are extremely low and show very little trauma or disruption. Scores of 30-39 are very low, 40-44 is low average, 45-55 is average, 56-59 is high average, 60-69 is very high while >70 is extremely high and indicates substantial disruption. After applying the descriptive statistics, the ten subscales showed the following levels of trauma or disruptions among the healthcare providers. Self-Safety showed a minimum t- score of 34, a maximum of 73 and mean score of 54.72 indicating that some individuals in sample were extremely affected by trauma to the extent that they did not feel safe on the job. The Other-Safety subscale scored a minimum of 13, a maximum of 80 and an average score of 55.14. Despite the lowest reported minimum of 13 in the whole sample, the results to the other extreme reflect a highly disrupted section of

healthcare providers indicating that they either concerned about the safety of the people they are helping, they are traumatized themselves and therefore worry about the safety of loved ones (Pearlman 2003).

The Self-Trust subscale recorded a minimum of 31 (very low disruption), a maximum of 80 (extreme disruption) and a mean score of 51 (average). While on average the sample may show a moderate level of disruption, there is proof from scores that some individuals experience high levels of trauma in this area. Individuals with high scores in this area may be struggling to trust their own judgment and decision making abilities and for the most part may depend on the assistance of others (Pearlman, 2003). The Other-Trust subscale on the other hand had a minimum t-score of 25 (low disruption), a maximum of 69 (very high disruption) and a mean t-score of 54.45 for the whole sample which is considered average level disruption. Individuals who attained high scores on this subscale are regarded to be most likely cautious and not ready to form trusting relationships with others or rely on them.

The Self-Esteem subscale scored a minimum t-scores of 32 (very low disruption) and a maximum of 68 (very high disruption) indicating a low level of self worth for individuals with high scores. The mean t-score for the whole sample was 48.61 indicating an average level of disruption. The Other-Esteem subscale had a minimum of 27 (very little disruption) and a maximum of 79 (extremely high disruption or trauma). Respondents with elevated Other-Esteem scores view others with disdain and disrespect (Pearlman, 2003), a phenomenon that may be a result of their childhood maltreatment. There is a high possibility that their schemas about other people have been imprinted negatively. The workplace is analogous to a family system (Everstine & Everstine, 2006), an authority figure who is perceived by an employee as not

meeting the expectations or neglectful may fall a victim of disrespect or rebellion from the employee, hence the elevated t-scores for this subscale.

In the Self –Intimacy subscale the mean score for the whole sample was 55.25 representing the highest mean score for all ten subscales. However, a score of 55 is considered an average level of disruption. The minimum t-score was 24 (very little disruption) while the maximum was 72 (extremely high disruption). Pearlman & McCann (1990) assert that people who have had their intimacy schemas disrupted experience feelings of loneliness and being alienated. For individuals with a high score of Self-Intimacy as shown here may reflect a certain degree of current or childhood trauma that has disrupted a true experience of their inner self. This means that individuals in the sample of healthcare providers may find time alone challenging and may avoid it altogether and use dissociation as a means of coping and avoiding self reflection (Pearlman, 2003). The Other-Intimacy scale had a minimum of 33 (very low disruption), maximum of 62 (very high disruption) and a mean score of 50.28 (average). In this category, individuals who have high scores may be isolated and disconnected from others emotionally and interpersonally (Pearlman, 2003) thus having implications on healthcare providers ability to connect with their co-workers or the clientele they are serve.

The last set of subscales for the Trauma and Attachment Belief Scale are Self-Control and Other-Control. The minimum t-score recorded for the Self-Control subscale was 24 (extremely low disruption), a maximum of 74 (extremely high disruption) and a mean score of 50(average). The Pearlman (2003) interpretation table states that individuals with high scores on self control may have some anxiety over losing control of their emotions or behaviors under certain circumstances and may use dissociation as a coping mechanism. The Other-Control subscale scored a minimum of 25 (very little disruption), a maximum of 66 (very high disruption) and a

mean score of 48.53 indicating an average level of vicarious traumatization for all the study participants.

Analyses Results Reporting

This section deals with the reporting of the findings of the study in relation to hypotheses formulated.

Hypothesis 1

Ho1: Healthcare providers of cancer patients in Botswana experience vicarious traumatization. The first hypothesis posits that healthcare providers of cancer patients in Botswana experience vicarious traumatization. The research question related to this hypothesis was posed;

Research Question: Do healthcare providers of cancer patients in Botswana experience vicarious traumatization as measured by the Trauma Attachment and Belief Scale (TABS)?

The TABS was used to gather the information in order to answer the question and to verify the hypothesis statement. The TABS instrument has ten subscales of Self- Safety, Other-Safety, Self -Trust, Other- Trust, Self -Esteem, Other- Esteem, Self -Intimacy, Other- Intimacy, Self-Control and Other -Control. In order to determine the overall level of vicarious traumatization and that of each subscale, an interpretation of table of trauma scores was used as outlined in the TABS T-Score Ranges table. Pearlman, (2003) presents the table as follows; T-scores of <29 are extremely low and indicate very little trauma or disruption. Scores of 30-39 are very low, 40-44 is low average, 45-55 is average, 56-59 is high average, 60-69 is very high while >70 is extremely high and indicates substantial disruption.

Across the ten subscales (Table 4-1), the minimum score recorded was 13 (other safety) followed by 24 (self intimacy) and 24 (self control) indicating minimal disruption in these areas. The maximum or highest t-scores recorded were 80 (other trust), 80 (self trust), 79 (other esteem), 74 (self control), 73 (self safety) and 72 (self intimacy), indicating that these were areas

where there was an extremely high level of disruption in the sample. However, the mean scores recorded from each subscale in the sample yielded minimum scores of 48.53 (other control) and 48.61 (self esteem) indicating an overall average level of disruption or vicarious trauma. The remaining eight subscale mean scores range from low to mid fifties with the highest being 55.25 (self intimacy) and 55.14 (other safety) indicating an average level of disruption according to the TABS interpretation table. This is supported by the one sample t- test that yielded (t value= .000, $p > .05$), indicating significant statistical outcome.

The result of this analysis supports the hypothesis that healthcare providers of cancer patients in Botswana experience vicarious traumatization. In the ten subscales, results show that a portion of the sample scored Extremely High levels of trauma for Self-Safety, Other-Safety, Self-Trust, Other-Esteem, Self-Intimacy and Self-Control while Very High levels of trauma for Other-Trust, Self –Esteem, Other-Intimacy and Other-Control. While the level of trauma may be average for the general sample, it does not suggest that trauma among healthcare providers of cancer patients in Botswana is minimal. The impact and gravity of vicarious traumatization has been noted to affect the victims’ frame of reference, self capacities, ego resources, psychological needs, cognitive schemas and imagery (Pearlman & Saakvitne, 1995; Sinclair & Hamill, 2007). When an individual’ frame of reference is disturbed, their sense of identity and worldview and spirituality are disrupted and become murky. There is a sense of demoralization, pessimism and hopelessness (Mc Cann & Pearlman, 1990); it may not be far fetched to consider healthcare providers whose scores reflect extreme disruption to be experiencing an equally disrupted frame of reference.

Individuals who have experienced trauma also have their self capacities disrupted, tend to be intolerant of strong emotions, may find calming themselves down a problem (Pearlman &

Saakvitne, 1995; Sinclair & Hamill, 2007) and experience interpersonal difficulties (Trippany, White Kress & Wilcoxon, 2004). This assertion is corroborated by a score of 79 (extremely high trauma) on the Other-Esteem subscale in this study, showing that respondents with such scores view others with disdain and disrespect which may be a result of previous or childhood maltreatment (Pearlman, 2003).

Hypothesis 2

Ho2: There is a positive relationship between vicarious traumatization and professional quality of life among healthcare providers of cancer patients in Botswana.

Research Question: What is the relationship between vicarious traumatization and professional quality of life among healthcare providers of cancer patients in Botswana?

The second hypothesis stated that there is a positive relationship between vicarious traumatization and professional quality of life among healthcare providers of cancer patients in Botswana. For testing this hypothesis, a bivariate correlation set for Pearson correlation coefficient (r) was performed (Table 4-7). A bivariate correlation is used to show the relationship between any two variables (Field, 2009). A bivariate correlation also reflects the direction and strength of the relationship between two variables (De Vaus, 2002). In this study there was a relationship between vicarious traumatization and professional quality of life, $r = -.11$, thus indicating a negative relationship which is almost close to a zero (no relationship). The significance value was $.956, p$ (two tailed) $> .05$. That means the relationship between vicarious traumatization and professional quality of life for the research group is not significant because the significance value was more than $.05$). Reliability test for this sample was conducted and it yielded a $.74$ Cronbach's Alpha.

The relationship between vicarious traumatization and professional quality of life for this sample is a negative one. This is so for various reasons. Vicarious traumatization focuses on the negative impact of working with individuals who have been traumatized and does not

acknowledge the many positive aspects of trauma work such as professional development and satisfaction derived from client or patient care (Cropley & Millward Purvis, 2004; Sinclair & Hamill, 2007). That is, it is geared towards examining the impact of the trauma on the victim or the person interacting with the victim. However, professional quality of life on the other hand is a more robust concept whose scale has constructs such as Compassion Satisfaction (CS), Burnout (BO) and Compassion Fatigue (CF) which intersect with some of the aspect of vicarious trauma although not a large extent. An outline of individual subscales of ProQOL sheds some light on aspects that contributed to the negative and minimal relationship between TABS and ProQOL.

The Compassion Satisfaction subscale which has ten (10) items is more health and positive sounding than the Trauma and Attachment Belief Scale. The CS subscale has values ranging from a minimum 1= never, 2= rarely, 3= sometimes, 4= often and 5=very often being the maximum. In a sample size of N=83, item Q3b had a mean score of 4.40 out of a possible maximum of 5 (highest satisfaction rate). The subsequent mean scores on the CS were, 3.27, 4.24, 4.13, 3.41, 3.87, 4.09, 4.30, 3.65 and 3.90 respectively out of a possible 5. All these mean scores indicate a high level of satisfaction exhibited by healthcare providers despite the reported high levels of vicarious trauma for some cases. Based on this observation, it is possible to build an argument that healthcare providers may experience vicarious trauma and compassion satisfaction at the same time making the two mutually exclusive as evidenced in the correlation coefficient.

The second subscale of Professional Quality of Life is Burnout (BO). Burnout is viewed as exhaustion of physical or emotional strength as a result of prolonged stress or frustration (Felton, 1998), difficult clients (Trippany, Kress & Allen Wilcoxon, 2004) or work overload (Pross,

2006). It is also viewed as prolonged response to chronic emotional and interpersonal stressors on the job and is defined by three dimensions of exhaustion, cynicism and inefficacy (Maslach, Schaufeli & Leiter, 2001). The BO subscale has ten (10) items with the same values ranging from 1 to 5 just like the CS. The sum of mean scores derived from each item is 40.7 out of a possible 50 (Table 4-3). This means that there is 80% burnout prevalence in the sample, making this phenomenon as well as VT high among healthcare providers of cancer patients in Botswana if the results are generalized.

The definitions of these concepts however, bring out fundamental differences between vicarious trauma and burnout. While VT deals with complexity and chronicity of clients/patients problems, BO deals more with work overload. While VT may deal with issues of trust, self control, intimacy which may change ones' identity and worldview, BO deals with emotional and behavioral symptoms that are work related (Trippany, Kress & Allen Wilcoxon, 2004). Based on the conceptual differences in the literature, the relationship between BO as an aspect of professional quality of life and vicarious traumatization is minimal if there is any at all. Like in the case of VT and CS, it is possible that professionals who work with traumatized populations experience both BO and VT at the same time (Trippany, Kress & Allen Wilcoxon, 2004) but without either one influencing the other, hence the non significant correlation between TABS and ProQOL $r = -.01$ ($p > .05$) = .956 (2- tailed).

The last subscale in the Professional Quality of Life scale is the Compassion Fatigue (CF). CF also has ten (10) items with values ranging from 1 to 5 like its previous counterparts. The recorded overall mean score for the items in this subscale is 33.01 out of a possible 50, making it 66% prevalence in the sample studied. On the whole CF in this group is lower than CS (78%) and BO (80%). Conceptually, CF denotes negative experience just like vicarious trauma or

trauma in general. CF has been defined as a natural consequence of behaviors and emotions resulting from knowing about a traumatizing event experienced by a significant other- the stress resulting from helping or wanting to help a traumatized or suffering person (Sabo, 2008; Figley, 1995). VT reactions are also related to specific client traumatic experiences. Compassion fatigue deals more with the advanced empathy and care that professionals invest on their client, while vicarious trauma is more about client's complexity of specific problems which may not be associated with professional workload. From a content validity stand point, the relationship between vicarious trauma and compassion fatigue is minimal if there is any at all, and it does not amount to statistically significant correlation for the sample studied here.

Hypothesis 3

- **H₀₃** There is a positive relationship between vicarious traumatization and purpose in life among healthcare providers of cancer patients in Botswana.
- **Research Question:** What is the relationship between vicarious traumatization and purpose in life among healthcare providers of cancer patients in Botswana?

The third hypothesis stated that there is a positive relationship between vicarious traumatization and purpose in life among healthcare providers of cancer patients in Botswana. A bivariate correlation analysis was also performed (Table 4-8) and set for Pearson correlation coefficient (r). The results show that there was a relationship between vicarious traumatization and purpose in life, $r = -.28$, also indicating a negative relationship. The alpha level was set at .05 (two tailed) but yielded significant value of .010 at the 0.01 level (two tailed). The result is significant.

The finding of a negative relationship between vicarious trauma and purpose in life is consistent with assessment assumptions of the constructivist self development theory (CSDT) of

trauma. This theory posits that when cognitive schemas of reference are disrupted, the affected individuals tend to believe that the world is no longer meaningful or coherent. They also experience a sense of demoralization, pessimism and hopelessness (McCann & Pearlman, 1990). Conversely, when individuals' frame of reference schemas are not disrupted, this worldview may not be represented in their responses as discovered in the results of this study. For example, the mean scores for the purpose in life scale (PIL) for items Q3c, Q4c, Q11c and Q12c that represent this construct are 6.27, 6.13, 6.30, and 5.61 out of a maximum of 7 on the scale. The scores show that on average, participants did not have disruptions with regard to their meaning making, worldview or purpose in life. The finding is also consistent with results from studies conducted to test relationship between posttraumatic growth, religion and cognitive processing. The study found correlation coefficient of $-.25$ between posttraumatic growth and religious participation (Calhoun, Cann, Tedeshi & McMillan, 2000), indicating that religious participation which is associated with purpose in life was negatively related to trauma; that is, people who participate in religious practices tend to be more resilient because they have discovered a sense of purpose in life than people who do not.

Hypothesis 4

Ho4: Vicarious traumatization predicts professional quality of life among healthcare providers of cancer patients in Botswana.

Research Question: Does vicarious traumatization predict professional quality of life of healthcare providers of cancer patients in Botswana?

This hypothesis stated that vicarious traumatization predicts professional quality of life among healthcare providers of cancer patients in Botswana. A multinomial logistic regression was used to analyze instead of the simple linear or multiple regression for various reasons. Firstly the ProQOL scale is ordinal and it can only work logistically with Ordinal Logistic Regression, Multinomial Regression (Murat Kayri* and Ömay Çokluk, 2010) or a mixed model

of the two. Secondly, the assumptions of linearity (Figures 4-9 & 4-10) and homoscedasticity (Figures 4-7 & 4-8) were violated. In the model used, the following were entered; main effects, chi-square statistics, pseudo square, likelihood ratios and goodness of fit. The recorded chi-square was 198.74 under the likelihood ratio test. High chi square values indicate a low probability that the observed unusual figures are due to random chance. When the chi square value results in a p-value that is less than 0.05, it is considered statistically significant. In this case the significance value was 1.000 (Table 4-13) indicating that the result is not statistically significant. The Pseudo R-Square yielded a Cox and Snell of .909 (90.9 %), Nagelkerke of .909 (90.9%) and a McFadden of .332 (33.2%). The R-square “is an extremely useful measure of the substantive importance of an effect” (Field, 2009, p.179). This means that the effect of vicarious trauma is only accounted for by 9.1%, 9.1% and 62.8% respectively. This is an indication that vicarious trauma did not predict professional quality of life for the healthcare providers of cancer patients in Botswana.

Hypothesis 5

H₀₅: Vicarious traumatization predicts purpose in life among healthcare providers of cancer patients in Botswana.

The fifth hypothesis states that vicarious traumatization predicts purpose in life among healthcare providers of cancer patients in Botswana. A multinomial logistic regression analysis was used to detect prediction. As conducted for the previous hypothesis, the components entered into the model were; model fitting information, goodness of fit, Pseudo R- Square and likelihood ratio tests. Chi-square, degrees of freedom and significant values did not yield anything for the likelihood ratio tests and goodness of it, indicating absence of relationships. The Pseudo R-square spewed a Cox and Snell of .986 (98.6 %), Nagelkerke of .987 (98.7%) and a McFadden of .582 (58.2%). This means that the effect of trauma is only accounted for by 1.4%, 1.3% and

41.8% respectively. These low percentages also show the small effect that vicarious trauma has on purpose in life of healthcare providers in Botswana.

Summary

This chapter dealt with procedures for analyzing data and reporting the results. Under analyses of procedures, hypothesis 1 was dealt with using the procedures stipulated in the Trauma and Attachment Belief Scale (TABS) manual in order to get the level of trauma of the healthcare providers of cancer patients in Botswana. A test statistic was also conducted to determine the significance level which was found to be significant. For hypotheses 2 and 3, bivariate correlation methods were used to establish relationships between vicarious traumatization and professional quality of life and purpose in life among the healthcare providers of cancer patients in Botswana. The results for Hypothesis 1 were statistically significant. The outcome for Hypothesis 2 was not significant while Hypothesis 3 yielded a significant p-value. For hypotheses 4 and 5 multinomial logistic regression was used to establish if vicarious traumatization predicts professional quality of life and purpose in life. In both cases it was found that vicarious traumatization does not have the predictive power, hence the decision to reject both null hypotheses because the results were not statistically significant (Table 4-21).

CHAPTER 5
DISCUSSION, RECOMMENDATIONS AND CONCLUSION

Overview of the Chapter

This chapter deals with discussion of the results of statistical procedures performed to test the hypotheses stated, that is, what the results mean or imply about the population studied. The chapter also discusses recommendations for counseling practitioners and counselor educators by highlighting how they might intervene in their attempts to help the population under study. Lastly, the chapter seeks to make recommendations for future research on the basis of statistical outcomes presented. The results of for each hypothesis were as follows;

Ho1 Healthcare providers of cancer patients in Botswana experience vicarious traumatization.

Results: Significant.

Ho2 There is a positive relationship between vicarious traumatization and professional quality of life among healthcare providers of cancer patients in Botswana.

Results: Not significant.

Ho3 There is a positive relationship between vicarious traumatization and purpose in life among healthcare providers of cancer patients in Botswana.

Results: Significant.

Ho4 Vicarious traumatization predicts professional quality of life among healthcare providers of cancer patients in Botswana.

Results: Not significant.

Ho5 Vicarious traumatization predicts purpose in life among healthcare providers of cancer patients in Botswana.

Results: Not significant.

Significance of Results

As a precursor to reporting the significance or implications of results, it is important to note that statistical significance is usually the main determinant of the importance of outcomes in various research studies. However, (Thompson, 2002) argues that counselors should not only consider statistical significance, but should also report on practical and clinical significance. Practical significance emphasizes importance of effect sizes which in this study are reported in the form of correlations between variables. The general principle is to also provide enough information to assess the magnitude of the observed effect or relationship (Gliner, Leech & Morgan, 2002). Clinical significance on the other hand may be guided by score cut-off points [if assessment and data collection instruments used] or diagnostic criteria (Thompson, 2002). Therefore, the significance of the results will be based on these three types of significance.

Research Question 1: Do Healthcare Providers of Cancer Patients in Botswana Experience Vicarious Traumatization?

The statistical significance of results obtained in Hypothesis 1 (t value = .000, $p > .05$) confirm the assumption initially made about healthcare providers of cancer patients as experiencing vicarious traumatization. This means that the assumption was a close estimate of what is actually happening among healthcare providers in Botswana. However, statistical significance alone does not evaluate the importance of results (Thompson, 2002), but practical significance which is concerned with whether the result is useful in the real world (Kirk, 1996) is also useful. What proves useful and practical in answering this research question is the data that also supports the hypothesis. For example, all the ten subscales of Trauma and Attachment Belief Scale indicate maximum values tagged at Very high and Extremely high levels of trauma or disruption among the healthcare providers of cancer patients in Botswana (Table 4-1). What this means in the real world is that this group of people provides critical and end-of-life care which

negatively impacts on their cognitive schemas with the potential to develop psychological behaviors that work at cross purposes with their mandate, providing care. These behaviors strain coping capacities, narrow or dull attention, reduce learning capacity and affect organization of thought and experience (Litz & Gary, 2004). This assertion is also consistent with the constructivist self development theory of trauma that posits that individuals experiencing trauma tend have their self esteem, ego capacities and frame of reference altered (McCann & Pearlman, 1990).

It is also important to note that the data, rather than just the statistical significance helps to bring into play the concept of clinical significance. For example, the cut-off points in the TABS interpretation table are clinically significant in pointing out the extent to which the population under study is experiencing vicarious trauma. To further illustrate, a t-score of 70 or above is critical and it may not be ignored by any clinician because it represents extreme trauma among certain individuals in the sample as reflected in the Self-Safety, Other-Safety, Self-Trust, Other-Esteem, Self- Intimacy and Self-Control subscales. In this case what is more important is the clinical significant rather than the statistical or practical significance, and mental counselors should pay more attention to it when working with healthcare providers of cancer patients in Botswana.

Research Question 2: What is the Relationship between Vicarious Traumatization and Professional Quality of Life among Healthcare Providers of Cancer Patients in Botswana?

The statistical results for the hypothesis addressing this question reflect a “not significant” outcome. This means that the significance value was larger than the p-value, indicating a less than conventional 95% confidence in the results. The problem with this statistical result is that it does not indicate the strength of the relationship between variables because p-values do not provide information about the size or strength of the effect (Gliner, Leech & Morgan, 2002). For

this reason, the statistical significance results alone may not be meaningful to mental health counselors especially that a “not significant” result sounds negligible. Gliner et al., (2002) maintain that the best practice is to report effect size which reflects the strength of the relationship between the independent and the dependent variable. In this case the result for this question is $-.11$ which is far removed from a perfect negative relationship of -1 . This means a weak negative relationship between vicarious traumatization and professional quality of life. This also means that there is no practical significance between the two variables.

The results to this research question are also supported by the conceptual disparities reflected by the theory. The constructivist self development theory of trauma focuses on the negative effects of trauma on individuals (McCann & Pearlman, 1990) in which the sense of safety, self esteem, trust, intimacy and control are compromised. On the other hand professional quality of life focuses on some positive aspects such compassion satisfaction (Stamm, 2009), but also on some negative aspects such as burnout which is a work related impairment comprising of emotional exhaustion, depersonalization and reduced personal efficacy (Awa, Plaumann & Walter, 2008). Burnout does not lead to changes in trust, safety concerns or intimacy, although it is possible for a population working with traumatized clients to experience both vicarious traumatization and burnout simultaneously (Trippany, Kress & Wilcoxon, 2004). Practically, what is significant for counselors to note with regards to this question is to assess whether healthcare providers of cancer patients in Botswana experience both vicarious traumatization, burnout or compassion satisfaction and intervene appropriately according to the needs at group and individuals levels (Stamm, 2009). For example, score for vicarious traumatization subscales are high, professional quality of life subscales indicate a mean of 39.26 out of a possible 50 for compassion satisfaction (very high) while burnout and compassion fatigue score 40.7 and 33.01

respectively. This means that both trauma and burnout occur at the same time in the same group but are mutually exclusive, hence the weak negative correlation between variables. The results are also clinically significant because the cut-off points to determine whether an individual is experiencing a high level of burnout prompt mental health counselors to make categorical decisions as to whether there should be an intervention or not.

Research Question 3: What is the Relationship between Vicarious Traumatization and Purpose in Life among Healthcare Providers of Cancer Patients in Botswana as Measured by the Purpose in Life Scale?

The hypothesis test results addressing this question state a “significant” statistical outcome. This means that the significance value (.010) was less than the p-value (.05) indicating that there was indeed a relationship between vicarious traumatization and purpose in life among healthcare providers of cancer patients in Botswana. The effect size of -.28 obtained from the correlation of the two variables means that there is a weak negative relationship. Practically this means vicarious traumatization does not affect purpose in life of the healthcare providers in the sample. This result is consistent with the findings from studies conducted to test the relationship between posttraumatic growth, growth and cognitive processing. The study found a correlation of -.25 between posttraumatic growth and religious participation (Calhoun, Cann, Tedeshi & McMillan, 2000), indicating that religious participation which is associated with purpose in life was negatively related to trauma. People who have a high sense of purpose in life are less likely to be affected by trauma. For this study, the high scores in the purpose in life scale and a weak negative correlation confirm the little impact that trauma has people with a high purpose in life. On a clinical significance level based on this study, mental health counselors may have to pay more attention to facilitating exercises that promote spirituality among healthcare providers as a buffer against vicarious trauma.

Research Question 4: Does Vicarious Traumatization Predict Professional Quality of Life among Healthcare Providers of Cancer Patients in Botswana?

Statistical results providing an answer to this question indicate a “not significant” outcome with a significance value of 1.000, meaning that vicarious traumatization does not predict whether or not there will be improved or diminished professional quality of life. Practically, the R-Square which is a substantive measure of effects (Field, 2009) has not yielded any substantial or high figures to warrant any major effects of vicarious trauma on professional quality of life of healthcare providers.

Literature on whether stressful or negative events such as trauma predict positive or negative professional quality of life is not readily available. However, a major question that still lurks among traumatologists that mental health counselors should also be asking themselves is whether “positive changes or a mix of positive and negative changes are associated with optimal adjustment following stressful events” (Updegraff & Taylor, 2000; p.7). In a study of cancer patients’ positive social relationships, priorities and activities were reported, but changes in their views about themselves and the world were mixed (Updegraff & Taylor, 2000), thus corroborating the constructivist self development theory on cognitive assessment findings on traumatized individuals (McCann & Pearlman, 1990). Updegraff & Taylor, (2000) further report a positive quality of life for cancer patients in a study where they were compared to a sample without cancer. West-Olatunji & Goodman (2008) also state that in resiliency theory individuals face challenges and also develop coping mechanisms that allow them to overcome challenges. Based on these results of other studies, it is not surprising that finding benefits in traumatic events may be associated with better psychological adjustment to those events. It is equally not surprising that vicarious trauma had a minimal predictive value and a negative correlation with professional quality of life for healthcare providers of cancer patients in Botswana. What the

statistical results to this question mean is that mental health counselors may need to find out about other factors that predict professional quality of life since vicarious traumatization does not. The need to find out more about these factors is even more valid given that the high scores of burnout reflected on the data and the literature reporting unfavorable working conditions of healthcare providers in Botswana (World Health Organization, 2007).

Research Question 5: Does Vicarious Traumatization Predict Purpose in Life among Healthcare Providers of Cancer Patients in Botswana?

For this research question, the statistical hypothesis results indicated a “not significant” outcome; meaning that the significance value of 1.000 was greater than .05 (Tables 4-17 to 4-20). The Pseudo R-Square reflects minor effects of vicarious trauma on purpose in life of healthcare providers through its Cox and Snell, Nagelkerke and McFadden on table 4-19. The results present a contradictory view to the picture painted by constructivist self development theory of trauma and to the data on the Trauma and Attachment Belief Scale (TABS). According to the constructivist self development theory, individuals who have had encounters with trauma (directly or vicariously), experience a disturbed frame of reference in which they start to believe that the world is no longer meaningful, or coherent, they believe the world is unpredictable, dangerous and incoherent and uncontrollable and have an overwhelming sense of demoralization, pessimism and hopelessness (McCann & Pearlman, 1990). The data of the purpose in life scale show no proof that those healthcare providers of cancer patients in Botswana experience any disrupted sense of purpose. Out of a possible 140 the mean score for the sample for the purpose in life test was 112.37 representing an 80% of the sample having a high sense of purpose in their lives (Table 4-5). Also on the contrary, the data on the TABS reflects a highly traumatized team of healthcare providers in some areas of the subscale (Table 4-1). Does it mean trauma does or does not influence purpose in life? Sigmund (2003) states that

trauma evokes existential questions and exploration of trauma related existential conflicts in individuals are essential.

As a way of mitigating the contradictory findings for the last question, it is essential to note that although the constructivist self development theory of trauma posits that individuals who are being affected by major stressful events such as taking care of cancer patients alters the caretaker's meaning, purpose and view of the world in a negative manner, Taylor's cognitive adaptation theory on the other hand states that people are motivated to restore their self-esteem and sense of meaning and mastery by the production of self-enhancing cognitions (Updegraff & Taylor, 2000).

The cognitive adaptation theory further states that positive interpretation; selective focus and evaluation are mechanisms by which individuals restore their views of themselves and the world. Based on the assumption that Taylor's theory focuses on the production and maintenance of people's positive beliefs about themselves and their situations; a "not significant" statistical significance result may be suggesting active and intentional personal growth on the part of healthcare providers. In view of this thought, this can help deconstruct the victim and helplessness perspective usually presumed about individuals experiencing traumatic events. This can also help mental health counselors to conduct individual and group spiritual assessment before intervening on the basis of the literature from different contexts or setting.

Recommendations

Research Question 1

The results of study of the first research question show average mean scores for all ten subscales of the Trauma and Attachment Belief Scale, indicating a generally moderate level of vicarious trauma among healthcare providers of cancer patients in Botswana. However, the maximum scores indicate extremely high or substantial disruptions for a significant number of individuals

in the sample in the areas of Self-Safety, Other-Safety, Self-Trust, Other-Esteem, Self-Intimacy and Self-Control. These results are clinically significant and therefore call for some action from mental health counselor practitioners, counselor educators and healthcare policy makers.

One of the interventions recommended for counselors to use for a population experiencing trauma and grief the loss of people close to them is the Trauma Focused- Cognitive Behavior Therapy (TF-CBT). The TF-CBT is a hybrid counseling approach that integrates cognitive behavioral techniques, attachment issues, client empowerment and some humanistic approaches (Cohen, Mannarino, & Deblinger, 2006; Werth & Crow, 2009). This intervention can be used for both individual and group counseling sessions to help clients to process their traumatic experiences through cognitive rehearsals, disputing faulty beliefs, journaling and guided discovery. These same techniques can be used to help the healthcare providers to detach emotionally from patients they have lost through cancer. International counseling bodies such as the American Counseling Association also advocate inclusion of standards for disaster, trauma and crisis counseling in graduate counselor training programs (Webber & Mascari, 2009). An adoption of such standards in Botswana counselor preparation programs will also go a long way in addressing issues of psychological trauma and crisis in the healthcare system and other sectors.

The clinical significance of the results also calls for the health legislators and policy makers to advocate and implement mental health policies that are inclusive of all healthcare providers. The Botswana government runs a National Strategic Framework (NSF) for combating HIV/AIDS, a responsive health program to the scourge in the country. A mental health responsive program that runs parallel with the NSF is critical to address healthcare providers psychological needs because the current National Policy on Mental Health excludes healthcare

professionals despite literature attesting to poor mental health outcomes for cancer patients caregivers ((Buss, et al., 2007; Swartz & Keir, 2007).

Research Question 2

The finding to this question shows a negative correlation between vicarious trauma and professional quality of life, a result which is practically not significant but clinically significant when viewed in terms of high scores on the vicarious trauma scale and the burnout subscale. It is therefore important to note that many professionals working with traumatized populations generally experience both burnout and vicarious trauma (Trippany, Kress & Wilcoxon, 2004). While quantitative studies have relied more on the data from the research instruments, proponents of the wellness model encourage mental health counselors to conduct a qualitative assessment of clients as an additional critical step to intervention (Roscoe, 2009). Other recommended individual level intervention strategies that could follow include Trauma Focused -Cognitive Behavioral Therapy aimed at alleviating vicarious trauma, burnout and compassion fatigue (Cohen, Mannarino, & Deblinger, 2006) and empowerment of clients by encouraging them to shed the role of expert, expressing feelings openly about the job and obtaining social support, setting boundaries and separating work from private lives (Rosenberg & Pace, 2006).

One important intervention at group level for healthcare providers is to provide psycho-educational sessions aimed at personal growth in the form communication or interaction with patients, team building (Felton, 1998), knowing job descriptions and individual roles in relation to the whole employment establishment. At organizational level, consultations are recommended. Two general models, mental health consultation and systemic –organizational consultation (Moe & Pereira-Diltz, 2009) are appropriate for counselors to engage as consultants for the healthcare provider organizations in Botswana. In addition to providing counseling related services under the mental health model, in the systemic-organizational model, the

consultant identifies aspects of the organization that impede the organization from achieving its intended workforce wellness goal. Counselor education programs also need to expand the counselor preparation program to include courses in consultation in order to respond empathically to the current and contextual needs of Botswana.

Research Question 3

The statistical result addressing this question show that there is a significant negative relationship between vicarious traumatization and purpose in life among healthcare providers of cancer patients in Botswana. Clinical significance of the answer to this question can be gleaned from the data which shows high levels of both trauma and purpose in life. What this means for counselors is that a group of people affected by trauma can still have a high sense of purpose in their lives. While many counselors do not have training in religious and spiritual issues, the same obtains for the clergy who do not have training in mental health counseling yet both groups deal with the same issues in their practice. A collaborative relationship is recommended between mental health counselors and the clergy is recommended. Mental health counselors should invite the clergy to address issues pertaining to religion and spirituality in the work place when the need arises; referrals are also in order for individual cases (Weaver, Flannelly, Flannelly & Oppenheimer, 2003). This model seems suitable because for a long time Botswana has been regarded as a “religious/Christian country”, although there are other emerging religions. Workshops, conferences and research projects addressing these issues are recommended. Sigmund (2003) recommends cross professional mental health training and the clergy. The counselor education curriculum in Botswana should consider a pastoral counseling specialization in the current wake of daunting cancer and HIV/AIDS and the upsurge of various religious domains in the country.

Research Questions 4

Vicarious traumatization does not predict professional quality of life and purpose in life among healthcare providers of cancer patients in Botswana. Besides conducting a survey or qualitative assessment it would be difficult to know what factors affect the professional quality of life and purpose in life for this population. For this reason a holistic wellness model is recommended when working with healthcare providers in Botswana. There are various wellness models but most include life tasks of spiritual, physical, social, emotional, intellectual, occupational wellness, friendship and love (Roscoe, 2009). The systems perspective posits that all these elements within the environment contribute to a large whole (the healthcare provider). Viewed in this way, mental health counselors can promote psychological well being by centering their treatment on the core dimensions of wellness and also structure their therapy around wellness themes (Roscoe, 2009).

Limitations of the Study

The study is a survey self report which is known to have limitations inherent in the design. Both theory and research indicate that self report measures are a product of psychological, sociological, linguistic, contextual and experiential variables which sometimes have little to do with the construct measured (Razavi, 2001). The author believes that because of these issues, it is never clear what is measured. In this case, my study was conducted in Botswana and the instrument was normed basing on a population in the United States where the stated demographic variables are totally different for the population under study in Botswana.

The setting in which the research is conducted has also been known to be a threat to internal validity in survey research (Wallen & Fraenkel, 2001). This study was conducted among healthcare providers in hospitals in Botswana. The administration was carried out in these hospital settings during working hours for easy access to the participants; however, responding to

the question in such an environment might have influenced the responses. Razavi (2001) corroborates this argument with participants' social desirability. According to Razavi (2001), participants' belief about the purpose of the research may influence the way they respond. Since the research was intrusive and required their responses regarding their level of trauma, compassion satisfaction, burnout and compassion fatigue, it is possible that their responses were intentionally patterned to sound pro-establishment and also to not present them as dysfunctional professionals. Additionally, organizational research is prone to deliberate misrepresentation as participants may feel that their responses will have a bearing on the promotion either positively or negatively.

One of the limitations of this study is that there was one predictor variable. In multiple regression analysis partial regression is usually performed between a dependent variable and one independent variable while holding other independent variables constant so that only the effect on this one variable in the model is determined. In this study, one variable was used without other explanatory variables thereby limiting the view of other intervening factors. Thus TABS as a single measure, does not expand the breadth of the study to provide a picture of other factors at play in the population under investigation.

Future Research

In this study one predictor variable (vicarious traumatization) was used to find out if it has any association with professional quality of life and purpose in life among healthcare providers of cancer patients in Botswana. The results on the Trauma and Attachment Belief Scale show high levels of trauma in some study participants but it is not clear what other factors are associated with the high levels of disruption. In order to expand this study, future research will use more than one predictor variable by incorporating some elements of the demographics (Tables 3-1 to 3-11) such as level of training, length of experience in treating cancer patients,

frequency of contact with patients, marital status and others. This study is cross sectional, in future if resources permit, it will be ideal to conduct longitudinal studies in order to identify patterns over trauma of healthcare providers overtime, mediating factors as well as comparing groups in various health settings. Providing resources for longitudinal research is also consistent with the projections of the World Health Organization (2007). Predictions of the World Health Organization indicate a growth of 400% in the next 50 years especially in the developing countries. Mental health intervention in the form of education, consultation and counseling and research is critical as a sustainable means to reducing healthcare provider burden. Future research should also be conceptual, defining accurately but contextually issues of mental health, vulnerable groups, inclusion and exclusion. In that way such research attempts could start a dialogue with policy makers, educators, researchers and healthcare providers on the importance of an all inclusive mental health service provision rather than the limited one targeting few specific groups listed in the National Mental Health Policy (2003).

Future research should also focus on more structured studies addressing issues of compassion satisfaction, burnout and compassion fatigue as separate entities affecting healthcare providers of cancer patients in Botswana rather than as a broad conceptual framework. Rather than focusing on the negative impact that trauma has on healthcare providers, research on the different aspects of professional quality of life will bring more redirect attention to the issues of wellness in the work place, a research domain still unexplored in Botswana.

The clergy have been known to function as mental health workers for a long time. Various studies conducted over 40 years in the United States also provide that evidence (Weaver, Flannelly, Flannelly & Oppenheimer, 2003). In Botswana the clergy also play a pivotal role in alleviating mental anguish of their congregants and the public in general. Future research on

issues of religion, spirituality and mental health in Botswana is essential. A substantial amount of qualitative data in this area can be collected during cross training workshops and conferences between the clergy and professional counselors. Also, structured qualitative research in this area can be helpful bearing in mind that this study was conducted through quantitative survey, with theoretical frameworks based in European and North American settings; it will be ideal to conduct qualitative research in future to grasp Botswana nationals' perspective of trauma from their interpretive and phenomenological view points.

Summary

This chapter focused on the discussion of the results, recommendations emanating from a study of the relationship between vicarious traumatization and professional quality of life and purpose in life among healthcare providers of cancer patients in Botswana. Recommendations for mental health counselors and counselor educators in the form of trauma focused counseling, consultation, education in crisis and disaster and collaboration with, the clergy and policy makers were outlined as implications for the study. An outline of relevant areas for future studies was laid out. In general, the findings of the study point to presence of vicarious trauma among healthcare providers but to the extent that it does not predict burnout, compassion fatigue and compassion satisfaction. However, there is an abundance of evidence from other studies, clinical significance and data that vicarious traumatization can occur simultaneously with these outlined factors as has been the case in this study.

Table 3-1. Nationality of Healthcare Providers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Botswana	62	74.7	74.7	74.7
	Foreign	21	25.3	25.3	100.0
	Total	83	100.0	100.0	

Table 3-2. Gender of Healthcare Providers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	30	36.1	36.1	36.1
	Female	53	63.9	63.9	100.0
	Total	83	100.0	100.0	

Table 3-3. Age groups of Healthcare Providers

Age group in years	Frequency	Percent	Valid Percent	Cumulative Percent
18-24	10	12.0	12.0	12.0
25-30	26	31.3	31.3	43.4
31-36	17	20.5	20.5	63.9
37-42	15	18.1	18.1	81.9
43-48	5	6.0	6.0	88.0
49-54	6	7.2	7.2	95.2
55-60	4	4.8	4.8	97.6
Total	83	100.0	100.0	

Table 3-4. Marital Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Married	35	42.2	42.7	42.7
Separated	3	3.6	3.7	46.3
Divorced	3	3.6	3.7	50.0
Widowed	3	2.4	2.4	52.4
Single	39	47.0	47.6	100.0
Total	83	100.0	100.0	

Table 3-5. Occupation of Healthcare Providers

	Frequency	Percent	Valid Percent	Cumulative Percent
Medical doc	10	12.0	12.0	12.0
Nurse	51	61.4	61.4	73.5
Nurse assistant	5	6.0	6.0	79.5
Radiation Therapist	7	8.4	8.4	88.0
Psychologist	1	1.2	1.2	89.2
Social Worker	5	6.0	6.0	95.2
Oncology Clerk	1	1.2	1.2	96.4
Human Resource	1	1.2	1.2	97.6
Youth Officer	1	1.2	1.2	98.8
Lay Counselor	1	1.2	1.2	100.0
Total	83	100.0	100.0	

Table 3-6. Qualifications of Providers in Various Healthcare Disciplines

Discipline	Frequency	Percent	Valid Percent	Cumulative Percent
Nursing Diploma	35	42.2	42.7	42.7
Nursing Degree	17	20.5	20.7	63.4
Med. Radiation. Oncology	1	1.2	1.2	64.6
Diploma Secretarial	1	1.2	1.2	65.9
Oncology BA Admin.	2	2.4	2.4	68.3
MSc Radiation	2	2.4	2.4	70.7
MBBS/ BMBch	2	2.4	2.4	73.2
BSc Radiology	2	2.4	2.4	75.6
Dip. Radio-graphy	1	1.2	1.2	76.8
DCRT	4	4.8	4.9	81.7
CPUHW	5	6.0	6.1	87.8
BSc Physics	1	1.2	1.2	89.0
BSW	1	1.2	1.2	90.2
MSc Nursing	3	3.6	3.7	93.9
COSC	2	2.4	2.4	96.3
MBchB	1	1.2	1.2	97.6
MSc Medicine	1	1.2	1.2	98.8
BSc Counseling	2	1.2	1.2	100.0
Total	83	100.0	100.0	

Table 3-7. Area of Specialization in Healthcare

	Frequency	Percent	Valid Percent	Cumulative Percent
Nurse Generalist	38	45.8	45.8	45.8
Gen.Med. Practitioner	4	4.8	4.8	50.6
Oncology	11	13.3	13.3	63.9
Radiology	6	7.2	7.2	71.1
Psychology	2	2.4	2.4	73.5
Social Work	4	4.8	4.8	78.3
Clerical Oncology	1	1.2	1.2	79.5
Human Resource	1	1.2	1.2	80.7
None	8	9.6	9.6	90.4
Surgery	4	4.8	4.8	95.2
ENT	1	1.2	1.2	96.4
Internal Medicine	1	1.2	1.2	97.6
Public Health	1	1.2	1.2	98.8
Counseling	1	1.2	1.2	100.0
Total	83	100.0	100.0	

Table 3-8. Organizations Healthcare Providers Work for

	Frequency	Percent	Valid Percent	Cumulative Percent
Princess Marina Hospital	19	22.9	22.9	22.9
Gaborone Private Hospital	15	18.1	18.1	41.0
Bokamoso Private Hospital	1	1.2	1.2	42.2
Holy Cross Hospice	5	6.0	6.0	48.2
Deborah Retief Memorial Hospital	6	7.2	7.2	55.4
Scottish Livingstone Hospital	1	1.2	1.2	56.6
Bamalete L. Hospital	6	7.2	7.2	63.9
Nyangabwe Referral Hospital	25	30.1	30.1	94.0
Tutume Primary Hospital	5	6.0	6.0	100.0
Total	83	100.0	100.0	

Table 3-9. Years of Experience as a Healthcare Provider

Cases	Frequency	Percent	Valid Percent	Cumulative Percent
1	10	12.0	12.0	12.0
2	6	7.2	7.2	19.3
3	13	15.7	15.7	34.9
4	1	1.2	1.2	36.1
5	6	7.2	7.2	43.4
6	3	3.6	3.6	47.0
7	4	4.8	4.8	51.8
8	4	4.8	4.8	56.6
9	2	2.4	2.4	59.0
10	7	8.4	8.4	67.5
13	2	2.4	2.4	69.9
14	3	3.6	3.6	73.5
15	2	2.4	2.4	75.9
16	1	1.2	1.2	77.1
17	6	7.2	7.2	84.3
18	4	4.8	4.8	89.2
19	2	2.4	2.4	91.6
20	1	1.2	1.2	92.8
25	2	2.4	2.4	95.2
30	3	3.6	3.6	98.8
31	1	1.2	1.2	100.0
Total	83	100.0	100.0	

Table 3-10. Years of Experience with Cancer Treatment

	Frequency	Percent	Valid Percent	Cumulative Percent
1.0	22	26.5	26.5	26.5
2.0	15	18.1	18.1	44.6
3.0	11	13.3	13.3	57.8
3.5	1	1.2	1.2	59.0
4.0	4	4.8	4.8	63.9
5.0	3	3.6	3.6	67.5
6.0	3	3.6	3.6	71.1
7.0	4	4.8	4.8	75.9
8.0	1	1.2	1.2	77.1
9.0	1	1.2	1.2	78.3
10.0	6	7.2	7.2	85.5
11.0	1	1.2	1.2	86.7
13.0	1	1.2	1.2	88.0
15.0	2	2.4	2.4	90.4
16.0	1	1.2	1.2	91.6
17.0	1	1.2	1.2	92.8
19.0	1	1.2	1.2	94.0
20.0	1	1.2	1.2	95.2
21.0	1	1.2	1.2	96.4
22.0	1	1.2	1.2	97.6
26.0	1	1.2	1.2	98.8
31.0	1	1.2	1.2	100.0
Total	83	100.0	100.0	

Table 3-11. Healthcare Provider Frequency of Contact with Cancer Patients

	Frequency	Percent	Valid Percent	Cumulative Percent
Daily	60	72.3	72.3	72.3
Weekly	7	8.4	8.4	80.7
Monthly	14	16.9	16.9	97.6
Yearly	2	2.4	2.4	100.0
Total	83	100.0	100.0	

Table 4-1. Descriptive Statistics for survey response on TABS subscales

	N	Minimum	Maximum	Mean	Std. Deviation
Self Safety	83	34.00	73.00	54.7229	9.11487
Other Safety	83	13.00	80.00	55.1446	14.61634
Self Trust	83	31.00	80.00	51.6265	10.21203
Other Trust	83	25.00	69.00	54.4578	9.45890
Self Esteem	83	32.00	68.00	48.6145	8.57937
Other Esteem	83	27.00	79.00	54.6988	10.85911
Self Intimacy	83	24.00	72.00	55.2530	9.79901
Other Intimacy	83	33.00	62.00	50.2892	7.06853
Self Control	83	24.00	74.00	50.0120	10.59394
Other Control	83	25.00	66.00	48.5301	9.98821

Table 4-2. Descriptive Statistics for Compassion Satisfaction Subscale

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Q3b	83	3	5	365	4.40	.748
Q6b	83	1	5	265	3.27	1.173
Q12b	83	1	5	352	4.24	.983
Q16b	83	1	5	343	4.13	.960
Q18b	83	1	5	283	3.41	1.137
Q20b	83	1	5	322	3.87	.927
Q22b	83	2	5	340	4.09	.918
Q24b	83	1	5	357	4.30	.907
Q27b	83	1	5	303	3.65	1.029
Q30b	83	1	5	324	3.90	1.276

Table 4-3. Descriptive Statistics for Burnout Subscale

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Q1b	83	1	5	299	3.65	1.104
Q4b	83	2	5	330	3.98	.796
Q8b	83	1	5	176	2.15	1.090
Q10b	83	1	5	214	2.58	1.298
Q15b	83	1	5	324	3.90	1.196
Q17b	83	1	5	322	3.88	1.162
Q19b	83	1	5	228	2.78	1.144
Q21b	83	1	5	272	3.28	1.281
Q26b	83	1	5	244	3.01	1.156
Q29b	83	1	5	383	4.61	.659

Table 4-4. Descriptive Statistics for the Compassion Fatigue Subscale

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Q2b	83	1	5	316	3.80	.904
Q5b	83	1	5	193	2.33	1.049
Q7b	83	1	5	239	2.91	1.269
Q9b	83	1	5	228	2.75	1.238
Q11b	83	1	5	223	2.68	1.260
Q13b	83	1	5	255	3.07	.960
Q14b	83	1	5	241	2.90	1.165
Q23b	83	1	5	201	2.42	1.354
Q25b	83	1	5	196	2.36	1.265
Q28b	83	1	5	181	2.18	.965

Table 4-5. Descriptive Statistics for the Purpose In Life scale

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Q1c	83	1	7	385	4.63	1.349
Q2c	83	1	7	366	4.41	1.570
Q3c	83	4	7	520	6.27	.813
Q4c	83	2	7	509	6.13	1.045
Q5c	83	1	7	434	5.23	1.525
Q6c	83	3	7	496	5.98	1.082
Q7c	83	4	7	526	6.34	.873
Q8c	83	1	7	414	4.99	1.311
Q9c	83	1	7	419	5.04	1.247
Q10c	83	2	7	481	5.80	1.166
Q11c	83	3	7	523	6.30	.880
Q12c	83	2	7	466	5.61	1.057
Q13c	83	4	7	540	6.51	.722
Q14c	83	1	7	441	5.31	1.697
Q15c	83	1	7	358	4.42	1.974
Q16c	83	1	7	525	6.56	1.089
Q17c	83	4	7	499	6.01	.901
Q18c	83	4	7	483	5.81	.914
Q19c	83	1	7	444	5.35	1.457
Q20c	83	3	7	471	5.67	1.040

Table 4-6. Descriptive Statistics of Sample on Each Instrument

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
TABS	83	1.1667	3.9167	232.9850	2.807048	.4524541
ProQOL	83	2.4000	4.5667	279.1424	3.363162	.3596724
PIL	83	4.0	6.8	469.1	5.652	.7096

Table 4-7. Bivariate Correlations: Vicarious Trauma and Professional Quality of Life

		Trauma	ProQOL
Trauma	Pearson Correlation	1	-.107
	Sig. (2-tailed)		.956
	N	83	83
ProQOL	Pearson Correlation	-.107	1
	Sig. (2-tailed)	.956	
	N	83	83

Table 4-8. Bivariate Correlations: Vicarious Trauma and Purpose in Life

		Trauma	PIL
Trauma	Pearson Correlation	1	-.282(**)
	Sig. (2-tailed)		.010
	N	83	83
PIL	Pearson Correlation	-.282(**)	1
	Sig. (2-tailed)	.010	
	N	83	83

** Correlation is significant at the 0.01 level (2-tailed).

Table 4-9. Bivariate Correlations: Purpose in Life and Professional Quality of Life

		PIL	ProQOL
PIL	Pearson Correlation	1	.116
	Sig. (2-tailed)		.298
	N	83	83
ProQOL	Pearson Correlation	.116	1
	Sig. (2-tailed)	.298	
	N	83	83

Table 4-10. Reliability Test for the Trauma and Attachment Belief Scale

Cronbach's Alpha	N of Items
.911	84

Table 4-11. Reliability Test for the Professional Quality of Life Scale

Cronbach's Alpha	N of Items
.736	30

Table 4-12. Reliability Test for the Purpose in Life Scale

Cronbach's Alpha	N of Items
.897	20

Table 4-13. Model Fitting Information

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	578.208			
Final	379.461	198.747	3060	1.000

Table 4-14. Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	.000	0	.
Deviance	.000	0	.

Table 4-15. Pseudo R-Square

Cox and Snell	.909
Nagelkerke	.909
McFadden	.332

Table 4-16. Likelihood Ratio Tests

Effect	Model Fitting Criteria -2 Log Likelihood of Reduced Model	Likelihood Ratio Tests		
	Model	Chi-Square	df	Sig.
Intercept	379.461(a)	.000	0	.
Trauma	578.208	198.747	3060	1.000

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.
 a This reduced model is equivalent to the final model because omitting the effect does not increase the degrees of freedom.

Table 4-17. Multinomial Logistic Regression for Trauma (TABS) and PIL: Model Fitting Information

Model	Model Fitting Criteria -2 Log Likelihood	Likelihood Ratio Tests		
	Model	Chi-Square	df	Sig.
Intercept Only	591.168			
Final	234.138	357.030	3196	1.000

Table 4-18. Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	.000	0	.
Deviance	.000	0	.

Table 4-19. Pseudo R-Square

Cox and Snell	.986
Nagelkerke	.987
McFadden	.582

Table 4-20. Likelihood Ratio Tests

Effect	Model Fitting Criteria -2 Log Likelihood of Reduced Model	Likelihood Ratio Tests		
	Model	Chi-Square	df	Sig.
Intercept	234.138(a)	.000	0	.
Trauma	591.168	357.030	3196	1.000

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

Table 4-21. Results of Hypothesis Testing

Hypothesis	Result
Ho1	Significant
Ho2	Not significant
Ho3	Significant
Ho4	Not significant
Ho5	Not significant

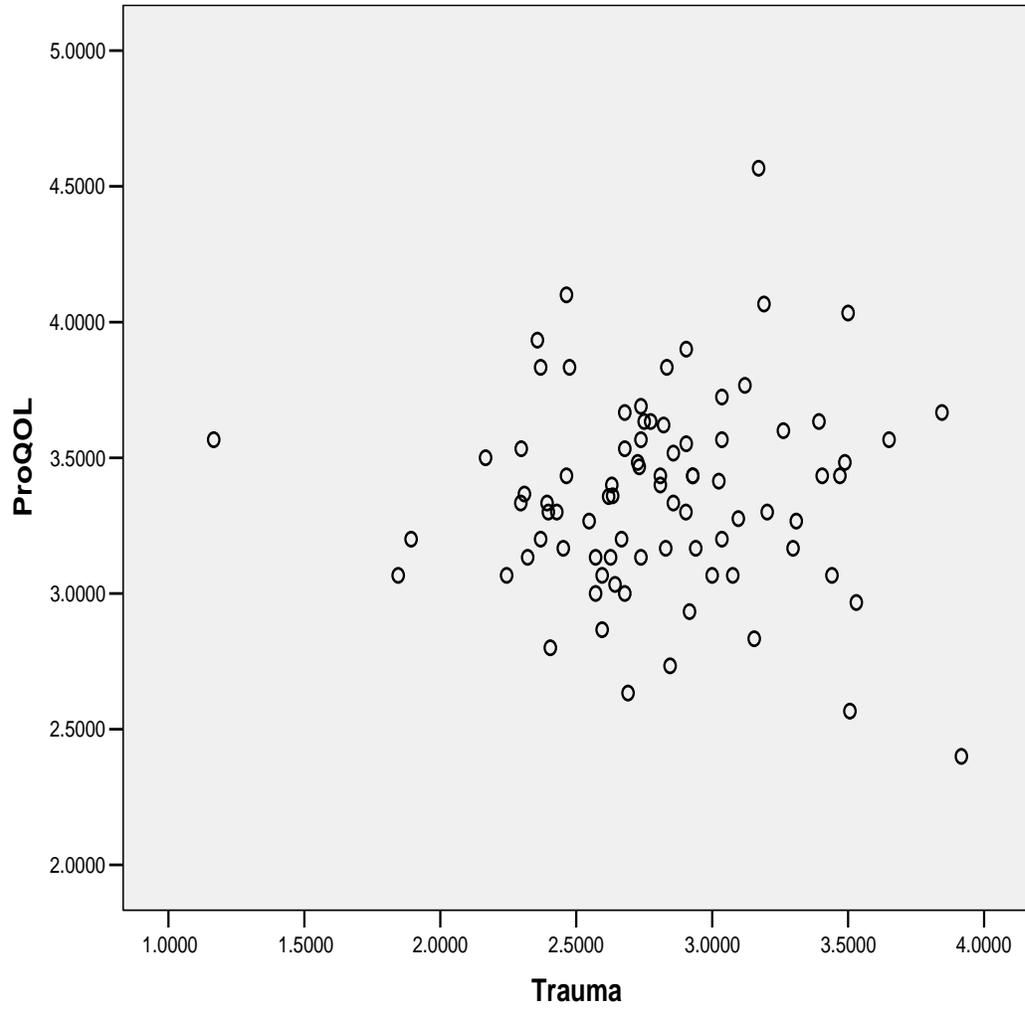


Figure 4-1. Scatterplot: Vicarious Trauma and Professional Quality of Life

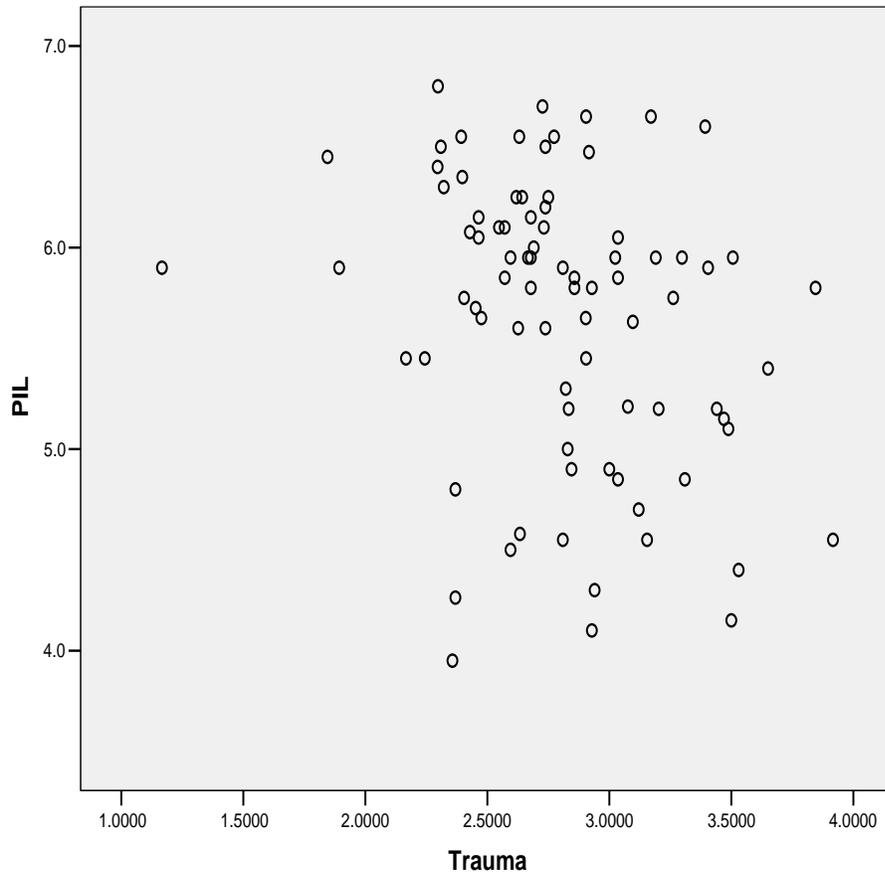


Figure 4-2. Scatter Plot: Vicarious Trauma and Purpose in Life

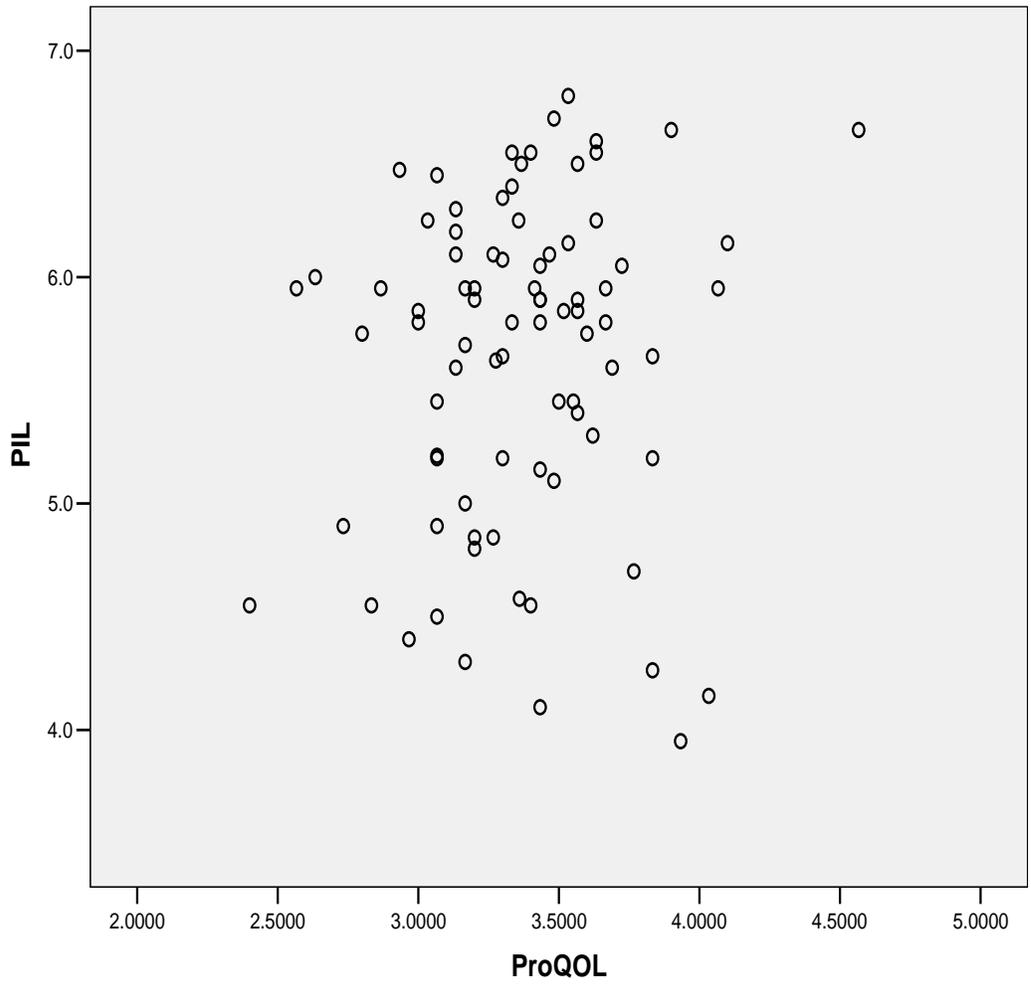


Figure 4-3. Scatter Plot: Purpose in Life and Professional Quality of Life

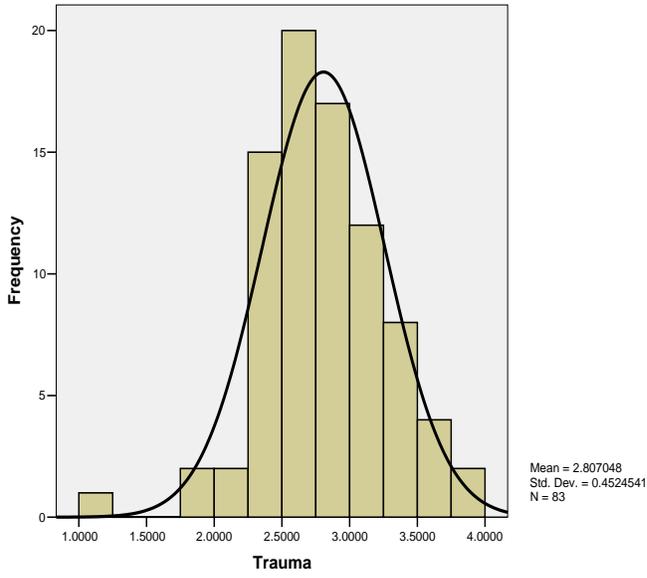


Figure 4-4. Histogram of Normal Distribution of Trauma

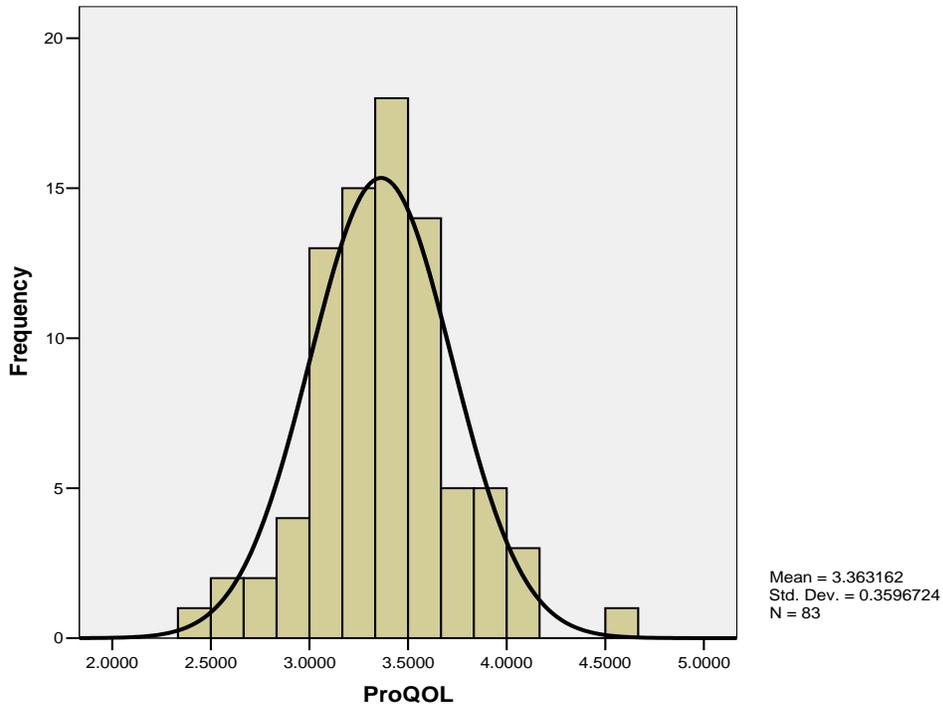


Figure 4-5. Histogram: Normal Distribution of Professional Quality of Life Data

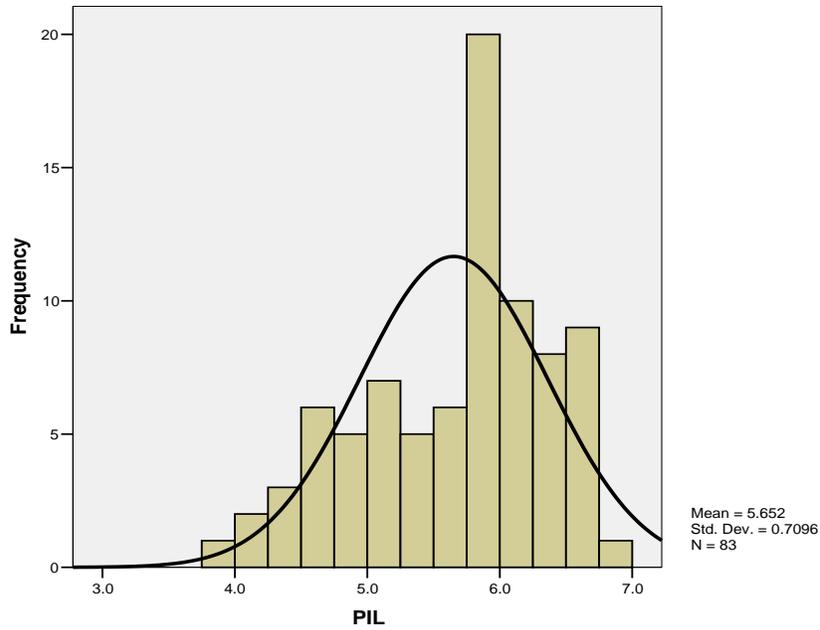


Figure 4-6. Histogram: Normal Distribution of Purpose in Life Data

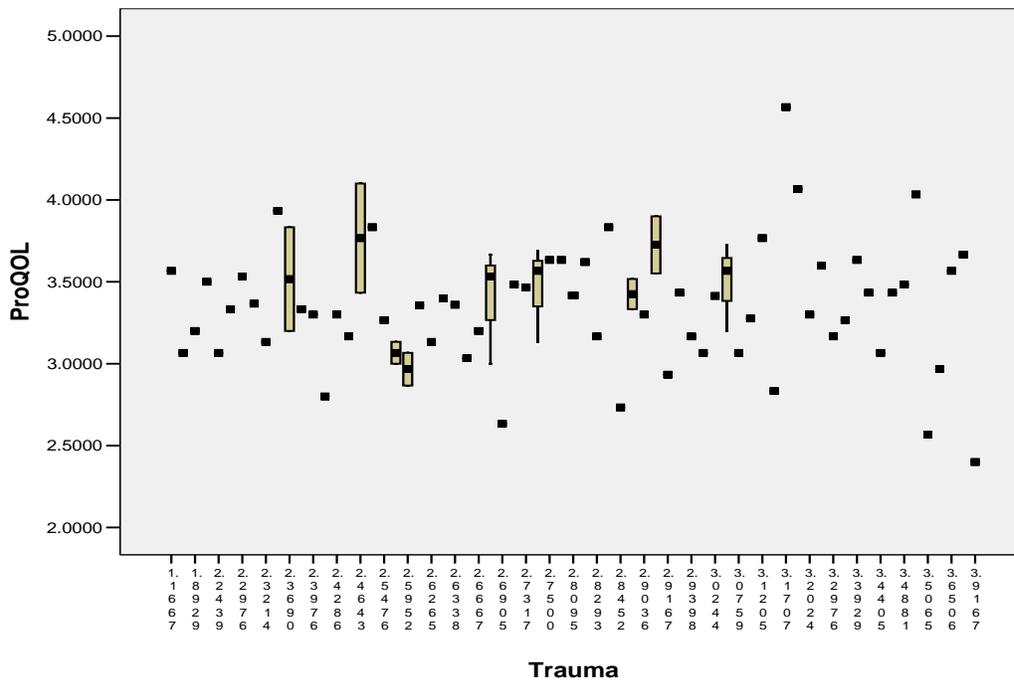


Figure 4-7. Scatter Plot: Levene's Test Results for Homoscedasticity (TABS and ProQOL)

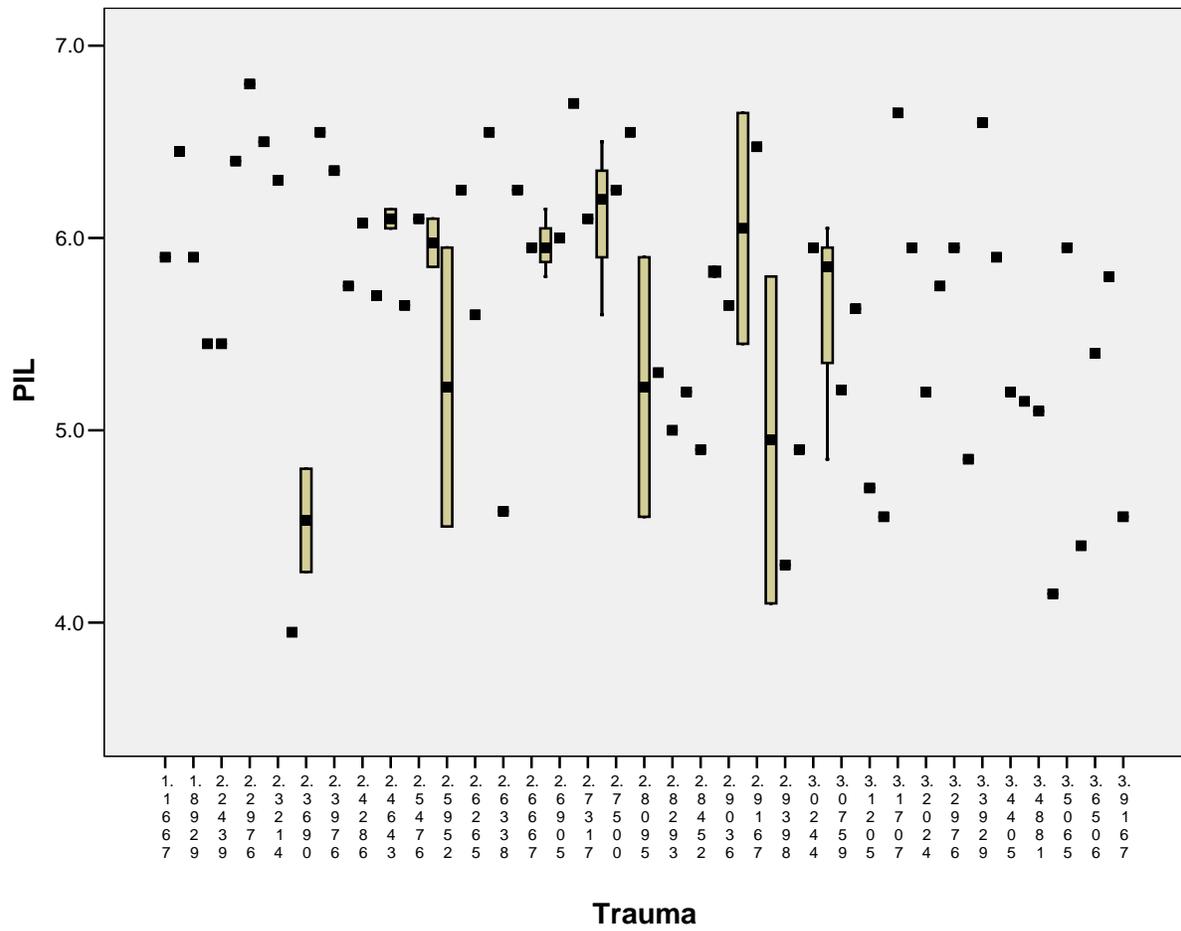


Figure 4-8. Scatter Plot: Levene's Test Results for Homoscedasticity (TABS and PIL)

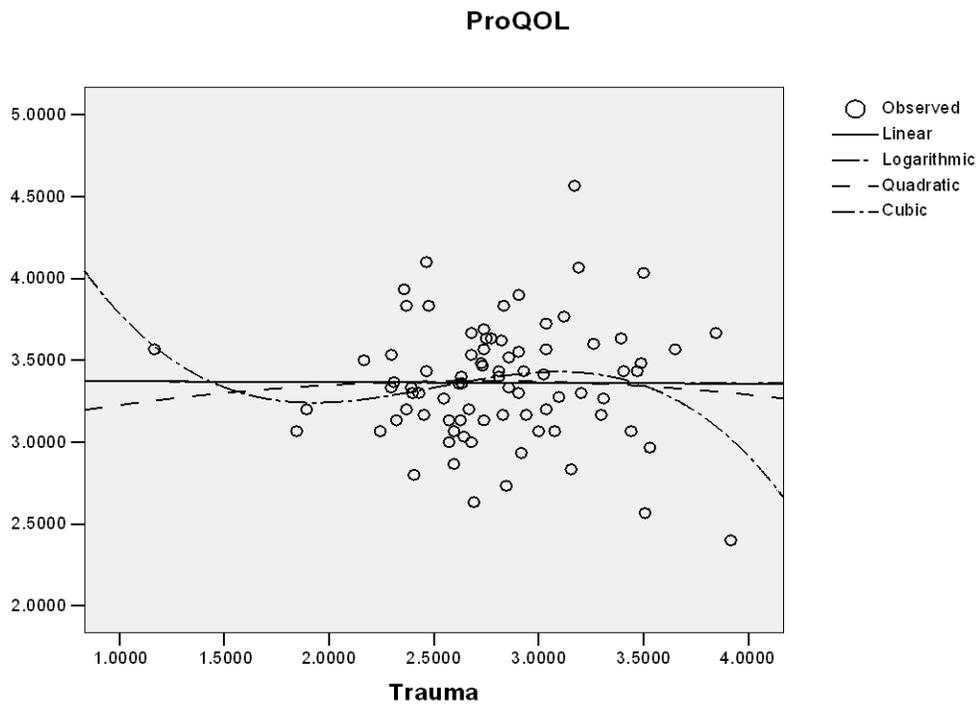


Figure 4-9. Curve Fit Scatterplot for TABS and ProQOL

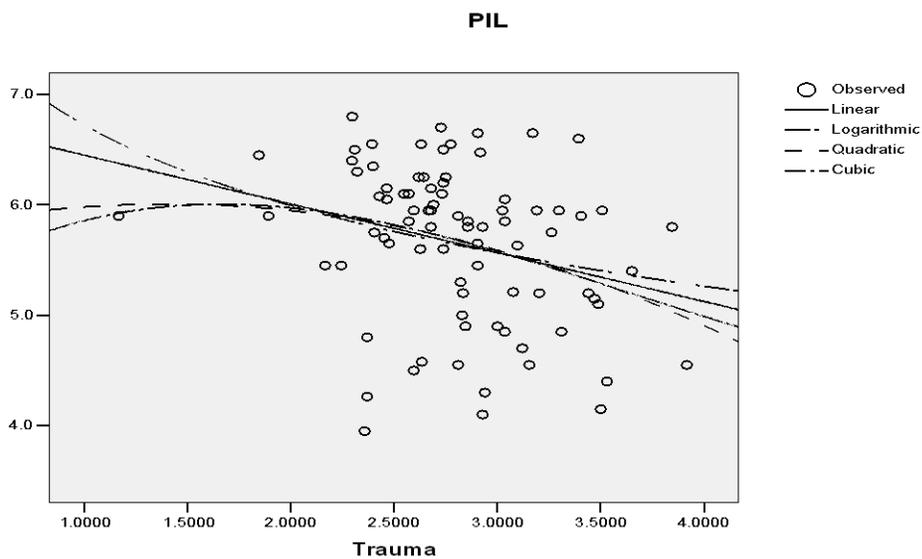


Figure 4-10. Curve Fit Scatter Plot for TABS and PIL

APPENDIX A
UFIRB APPROVAL OF PROTOCOL FOR THE STUDY

UF Institutional Review Board
UNIVERSITY of FLORIDA

PO Box 112250
Gainesville, FL 32611-2250
352-392-0433 (Phone)
352-392-9234 (Fax)
irb2@ufl.edu

DATE: December 16, 2009

TO: Aaron R. Majuta
PO Box 117046
Campus

FROM: Ira S. Fischler, PhD; Chair *ISF*
University of Florida
Institutional Review Board 02

SUBJECT: Approval of Protocol #2009-U-1253
The Relationship between Vicarious Traumatization and Quality of Life and
Purpose in Life of Healthcare Providers of Cancer Patients in Botswana

SPONSOR: None

I am pleased to advise you that the University of Florida Institutional Review Board has recommended approval of this protocol. Based on its review, the UFIRB determined that this research presents no more than minimal risk to participants. Your protocol was approved as an expedited study under category 7: *Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.*

Given this status, it is essential that you obtain signed documentation of informed consent from each participant. Enclosed is the dated, IRB-approved informed consent to be used when recruiting participants for the research. If you wish to make any changes to this protocol, including the need to increase the number of participants authorized, you must disclose your plans before you implement them so that the Board can assess their impact on your protocol. In addition, you must report to the Board any unexpected complications that affect your participants.

It is essential that each of your participants sign a copy of your approved informed consent that bears the IRB approval stamp and expiration date.

Your approval is valid through **December 15, 2010**. If you have not completed the protocol by this date, please telephone our office (392-0433), and we will discuss the renewal process with you. It is important that you keep your Department Chair informed about the status of this research protocol.

ISF:dl

An Equal Opportunity Institution

Figure A-1. UFRIB approval of protocol for the study.

INFORMED CONSENT

Dear Participant,

My name is Aaron Majuta, a doctoral student in mental health counseling in the Department of Counselor Education at the University of Florida. Please read this document carefully before you decide to participate in the study. I am conducting research on **The Relationship between Vicarious Traumatization and Quality of Life and Purpose in Life of Healthcare Providers of Cancer Patients in Botswana**. The purpose of the study is to find out if healthcare providers for cancer patients in Botswana experience negative intense feelings and also to determine if there is a relationship between these feelings, the quality of life (QOL) and purpose in life (PIL) of healthcare providers of cancer patients in Botswana. Your participation in this study are completely voluntary. There is no penalty for not participating and there are no risks for participating in the study. There is no monetary compensation but participants will benefit from a free four hours workshop on Burnout in Healthcare hosted by the researcher at a time to be scheduled. If you choose to participate, you will answer items on a confidential three parts questionnaire that will take about 30-45 minutes to complete. Please avoid writing your name on the questionnaire booklet to protect your identity.

You will complete the questionnaire using pencils. Although the questionnaires will be coded for the purposes of helping the researcher analyze data at a later time, there will be no name on the surveys and we will not be able to link any of your response to your name. In addition, you will seal the completed questionnaire in the envelope provided and return it to Aaron Majuta or the designated questionnaire administrator. You can stop participating in the study without penalty. The results of this study will be published in a PhD dissertation made available to the public. The questionnaires will be shredded after publishing the study. In the event that you need to talk about your thoughts and feelings as a result of participating in the survey, contact professionals at the University of Botswana Careers and Counseling Center located at Block 244H, Phone # (267) 355-2290/2291. The center is open from 8.30 am to 4pm.

If you want to learn more about this study please contact me at +267 355 2408 at the University of Botswana, Department of Educational Foundations, Private Bag 00702, Gaborone or by email at amajuta@ufl.edu. You may also contact my supervisor Dr Edil Torres Rivera at the University of Florida in the School of Human Development & Organizational Studies in Education, 1215 Norman Hall, P. O. Box 117046, Gainesville, FL 32611-7046, Phone: 352-273-4325, email; edi10001@ufl.edu. For questions regarding your rights as a research participant, you contact UF IRB office, Box 112250, University of Florida, Gainesville, FL 23611-2250, phone: +1 352 392 0433, email: irb2@ufl.edu.

Thank you for your time. If you choose to participate, please read the statement below and sign your name.

Approved by
University of Florida
Institutional Review Board 02
Protocol # 2009-U-1253
For Use Through 12-15-2010

Figure A-1. Continued

APPENDIX B PERMISSION LETTER FROM WESTERN PSYCHOLOGICAL SERVICES

wps[®]
Western Psychological Services
A Division of Manson Western Corporation
12031 Wilshire Boulevard
Los Angeles, CA 90025-1251
www.wpspublish.com

Dear Graduate Student:

Thank you for contacting Western Psychological Services for permission to reprint copyrighted test material within an appendix of your dissertation. When widely-distributed commercially produced tests are used, guidelines at most research universities do not call for inclusion of full instruments in thesis or dissertation volumes. In such cases, university policies are generally sensitive to the threat to commercial copyright and proprietary interests that is implicit in such copying or redistributing materials. The inclusion of instruments is generally limited to use of materials that are original to the dissertation author or that are otherwise unpublished and so might be considered difficult for subsequent readers to obtain.

As a publisher of formally developed test materials, WPS policy in such matters is to not authorize reprinting of our tests, subtests, or scales in their entirety, unless there is a committee requirement or other research-based reason that (1) requires you to reprint a test, subtest or scale in its entirety, and that (2) prevents the inclusion in your dissertation of original test forms. We can, as an alternative, readily provide authorization the reproduction of up to five representative sample items from the instrument upon receipt of your written request to that effect, including the specific item numbers desired for reprint. Also, if you need to reprint any other material from the test, including and not limited to material from the instrument's manual, please provide details by page, figure, table numbers, etc., for our consideration in authorizing inclusion of that material within your work.

If you need to pursue reprinting of the instrument in its entirety, please write again to WPS Rights and Permissions: Provide us with the reason you must reprint the subtests in their entirety (as opposed to selecting representative sample items); explain specifically why you are required to reproduce the original subtest (as opposed to binding an original protocol); and arrange for a supervising faculty member to co-sign the request. For expedience, please note that you may fax the letter to my attention at 310/478-7838, or have your professor e-mail it to me through his/her university e-mail address. For your additional reference in the event that your dissertation will be microfilmed, WPS will not authorize reproduction of our tests by microfilm, due to the public availability of the medium. While we regret any inconvenience our position may cause, we hope you appreciate our concern with ethical considerations.

We appreciate your interest in our material, as well as your consideration for its copyright. Please contact me if you have any questions.

Sincerely yours,

SusanW

Digitally signed by SusanW
DN: cn=SusanW, o=WPS,
ou=Admin,
email=sdw@wpspublish.com,
c=US,
Date: 2007.10.22 10:34:55 -0700

Susan Dunn Weinberg
Assistant to the President
WPS Rights and Permissions
e-mail: weinberg@wpspublish.com

SDW:se

Figure B-1. Permission letter from Western Psychological Services

APPENDIX C
DEMOGRAPHIC INFORMATION FOR SURVEY

Title of study: The Relationship between Vicarious Traumatization and Quality of Life and Purpose in Life of Healthcare Providers of Cancer Patients in Botswana.

Instruction: Please complete information about yourself below.

Nationality _____ Gender (M/F) _____ Age _____

Marital status (single/married/separated/divorced/ widowed) _____

Occupation _____ Qualifications (e.g., B.A, Psy.D) _____ Area
of specialization _____

Organization you work for _____

Years of experience _____

Experience with cancer treatment (e.g. one month, one year) _____

Frequency of contact with cancer patients (e.g., everyday, weekly, month, yearly) _____

APPENDIX D
TRAUMA AND ATTACHMENT BELIEF SCALE
VERSION ALLOWED AS APPENDIX

Table 5
Items That Contribute to Each TABS Score

<p>Self-Safety (Items reflect the need to feel <i>secure and</i> reasonably invulnerable to harm inflicted by oneself or others)</p> <p>1. I believe I am safe.* 11. I feel like people are <i>hurting</i> me all the time. 17. When I am alone, I don't feel safe. 27. I would never hurt myself.* 32. The world is dangerous. 38. I can keep myself safe.* 43. I worry about what other people will do to me. 47. Even if I think about hurting myself, I won't do it.* 54. I feel threatened by others. 60. I am afraid of what I might do to myself. 65. I feel safe when I am alone.* 71. I believe that someone is going to hurt me. 81. I am afraid I will harm myself.</p> <p>Other-Safety (Items reflect the need to feel that distressed others are reasonably protected <i>from harm</i> inflicted by oneself or others)</p> <p>6. I never think anyone is safe from danger. 16. I could do serious damage to someone. 24. I can't stop worrying about others' safety. 29. I can control whether I harm others.* 37. The important people in my life are in danger. 63. When people I love aren't with me, I believe they are in danger. 72. I do things that put other people in danger. 80. I have physically hurt people.</p> <p>Self-Trust (Items reflect the need to have confidence in one's own perceptions and judgment)</p> <p>7. I can trust my own judgment.* 19. I don't trust my instincts. 34. I have a hard time making decisions. 49. I have good judgment.* 58. I can make good decisions.* 67. I often doubt myself. 77. I can usually figure out what's going on with people.*</p> <p>Other-Trust (Items reflect the need to depend or rely on others)</p> <p>2. You can't trust anyone. 12. If I need them, people will come through for me.* 26. Trusting people is not smart. 31. I don't believe what people tell me. 41. People shouldn't trust their friends. 52. People don't keep their promises. 61. People who trust others are stupid. 70. My friends are there when I need them.*</p> <p>Self-Esteem (Items reflect the need to feel valuable and worthy of respect)</p> <p>3. I don't feel like I deserve much. 13. I have had feelings about myself. 21. I feel good about myself most days.* 30. I'm not worth much. 42. I deserve to have good things happen to me.* 51. I am a good person.* 64. Bad things happen to me because I am a bad person. 73. There is an evil force inside of me. 83. If people really knew me, they wouldn't like me.</p>	<p>Other-Esteem (Items reflect the need to value and respect others)</p> <p>8. People are wonderful.* 18. Most people ruin what <i>they care about</i>. 28. I often think the worst of others. 39. People are no good. 44. I like people.* 57. The world is full of people with <i>mental problems</i>. 68. Most people are good at heart.* 76. I don't respect the people I know best.</p> <p>Self-Intimacy (Items reflect the need to feel connected to one's own experience)</p> <p>9. When my feelings are hurt, I can make myself feel better.* 23. I feel hollow inside when I am alone. 40. I keep busy to avoid my feelings. 53. I hate to be alone. 62. I am my own best friend.* 75. When I am alone, it's as if there's no one there, not even me. 84. I look forward to time I spend alone.*</p> <p>Other-Intimacy (Items reflect the need to feel connected to others)</p> <p>4. Even when I am with friends and family, I don't feel like I belong. 14. Some of my happiest times are with other people.* 20. I feel close to lots of people.* 25. I feel cut off from people. 48. I don't feel much love from anyone. 55. When I am with people, I feel alone. 74. No one really knows me. 82. I feel left out everywhere.</p> <p>Self-Control (Items reflect the need to manage one's feelings and behaviors)</p> <p>5. I can't be myself around people. 15. I feel like I can't control myself. 25. I wish I didn't have feelings. 36. I feel jealous of people who are always in control. 45. I must be in control of myself. 50. Strong people don't need to ask for help. 56. I have problems with self control. 69. I feel bad about myself when I need help. 79. I can't relax.</p> <p>Other-Control (Items reflect the need to manage interpersonal situations)</p> <p>10. I am uncomfortable when someone else is the leader. 22. My friends don't listen to my opinion. 33. I am often in conflicts with other people. 46. I feel helpless around <i>adults</i>. 59. I often feel people are trying to control me. 66. To feel okay, I need to be in charge. 78. I can't do good work unless I am the leader.</p> <p><i>Note: Asterisk denotes a reverse-scored item.</i></p>
---	---

Figure D-1. Trauma and Attachment Belief Scale, version allowed as appendix

APPENDIX E
PROFESSIONAL QUALITY OF LIFE SCALE

PROFESSIONAL QUALITY OF LIFE SCALE (PROQOL)

**Compassion Satisfaction and Fatigue
(ProQOL) Version 5 (2009)**

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 [helper]. 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

- _____ 1. I am happy.
- _____ 2. I am preoccupied with more than one person I [help].
- _____ 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 [help].
- _____ 7. I find it difficult to separate my personal life from my life as a [helper].
- _____ 8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I [help].
- _____ 9. I think that I might have been affected by the traumatic stress of those I [help].
- _____ 10. I feel trapped by my job as a [helper].
- _____ 11. Because of my [helping], I have felt "on edge" about various things.
- _____ 12. I like my work as a [helper].
- _____ 13. I feel depressed because of the traumatic experiences of the people I [help].
- _____ 14. I feel as though I am experiencing the trauma of someone I have [helped].
- _____ 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 [helper].
- _____ 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 [help].
- _____ 24. I am proud of what I can do to [help].
- _____ 25. As a result of my [helping], I have intrusive, frightening thoughts.
- _____ 26. I feel "bogged down" by the system.
- _____ 27. I have thoughts that I am a "success" as a [helper].
- _____ 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.

© B. Hudnall Stamm, 2009. *Professional Quality of Life: Compassion Satisfaction and Fatigue Version 5 (ProQOL)*.
/www.isu.edu/~bhstamm or www.proqol.org. This test may be freely copied as long as (a) author is credited, (b) no changes are made, and (c) it is not sold.

Figure E-1. Professional quality of life scale

APPENDIX F PURPOSE -IN- LIFE TEST

PURPOSE-IN-LIFE TEST

Please indicate your opinion by circling a number from 1 to 7 on the scale provided for each statement.

1. I am usually:

<i>completely bored</i>	1	2	3	4	5	6	<i>exuberant, enthusiastic</i>
-------------------------	---	---	---	---	---	---	--------------------------------

2. Life to me seems:

<i>completely routine</i>	1	2	3	4	5	6	<i>always exciting</i>
---------------------------	---	---	---	---	---	---	------------------------

3. In life I have:

<i>no goals or aims at all</i>	1	2	3	4	5	6	<i>very clear goals and aims</i>
--------------------------------	---	---	---	---	---	---	----------------------------------

4. My personal existence is:

<i>utterly meaningless, without purpose</i>	1	2	3	4	5	6	<i>very purposeful and meaningful</i>
---	---	---	---	---	---	---	---------------------------------------

5. Every day is:

<i>exactly the same</i>	1	2	3	4	5	6	<i>constantly new and different</i>
-------------------------	---	---	---	---	---	---	-------------------------------------

Figure F-1. Purpose in life test

6. If I could choose, I would:
prefer never to have been born 1 2 3 4 5 6 7 *like nine more lives just like this one*
7. After retiring, I would:
loaf completely the rest of my life 1 2 3 4 5 6 7 *do some of the exciting things I've always wanted to*
8. In achieving life goals I have:
made no progress whatever 1 2 3 4 5 6 7 *progressed to complete fulfillment*
9. My life is:
empty, filled only with despair 1 2 3 4 5 6 7 *ruming over with exciting good things*
10. If I should die today, I would feel that my life had been:
completely worthless 1 2 3 4 5 6 7 *very worthwhile*
11. In thinking of my life I:
often wonder why I exist 1 2 3 4 5 6 7 *always see a reason for my being here*
12. As I view the world in relation to my life, the world:
completely confuses me 1 2 3 4 5 6 7 *fits meaningfully with my life*
13. I am a:
very irresponsible person 1 2 3 4 5 6 7 *very responsible person*

Figure F-1. Continued

14. Concerning man's freedom to make his own choices, I believe man is:
- | | | | | | | | | |
|--|---|---|---|---|---|---|--|---|
| <i>completely bound by limitations of heredity and environment</i> | | | | | | | | <i>absolutely free to make all life choices</i> |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | |
15. With regards to death, I am:
- | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|--|------------------------------|
| <i>unprepared and frightened</i> | | | | | | | | <i>prepared and unafraid</i> |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | |
16. With regards to suicide, I have:
- | | | | | | | | | |
|---|---|---|---|---|---|---|--|--|
| <i>thought of it seriously as a way out</i> | | | | | | | | <i>never given it a second thought</i> |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | |
17. I regard my ability to find a meaning, a purpose, or mission in life as:
- | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|--|-------------------|
| <i>practically none</i> | | | | | | | | <i>very great</i> |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | |
18. My life is:
- | | | | | | | | | |
|---|---|---|---|---|---|---|--|--|
| <i>out of my hands and controlled by external factors</i> | | | | | | | | <i>in my hands and I am in control of it</i> |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | |
19. Facing my daily tasks is:
- | | | | | | | | | |
|--|---|---|---|---|---|---|--|--|
| <i>a painful and boring experience</i> | | | | | | | | <i>a source of pleasure and satisfaction</i> |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | |
20. I have discovered:
- | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|--|--|
| <i>no mission or purpose in life</i> | | | | | | | | <i>clear-cut goals and a satisfying life purpose</i> |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | |

Figure F-1. Continued

APPENDIX G RESEARCH GRANT LETTER



Office of the Deputy Vice Chancellor (Finance & Administration)
Department of Human Resources

Corner of Motwane and Mabusela Road,
Gaborone, Botswana

P.M. Bag 0022
Gaborone,
Botswana

Tel: [267] 355 2782
Fax: [267] 397 4796

MEMORANDUM

Reference: UBP/2314

To: Aaron Ronnie Majuta, Educational Foundations
From: Manager, Staff Training and Development
Date: 12th January 2010
Subject: Request for Research Project Fund

I am pleased to authorise the Director, Financial Services by copy here of, to disburse funds not exceeding the sum of **twenty five thousand pula only (P25 000.00)** to support your Ph.D. Research entitled – **"Vicarious Traumatization of Healthcare Providers in Botswana"**.

Kindly note that the grant will be administered by the office of the Director, Financial Services. You are accordingly advised to seek the assistance of the Director, Financial Services office for details regarding the administration of your budget.

I wish to take this opportunity to wish you a successful period of data gathering, which should adequately prepare you for the final stage of writing and defending your thesis. Please keep this office informed about the progress of your work. A copy of the thesis should be submitted to the Training and Development office.

Thank you.

Handwritten signature of P. G. Morapedi.

P. G. Morapedi
Manager, Staff Training and Development

cc: Director, Financial Services
Deputy Director, Staff Training and Development
Head, Department of Educational Foundations
Human Resources Officer, Training and Development

/bm

Figure G-1. Research grant letter

TRAUMA STUDY

March -April, 2010

Are you a healthcare provider who works in a hospital or hospice setting and treat or provide any form of care for cancer patients?

If you answered **YES** to the above question you qualify for participation in this study. You are cordially invited to participate by filling out a 45 minutes questionnaire in a study entitled:

“THE RELATIONSHIP BETWEEN VICARIOUS TRAUMATIZATION AND QUALITY OF LIFE AND PURPOSE IN LIFE OF HEALTHCARE PROVIDERS OF CANCER PATIENTS IN BOTSWANA”

Ministry of Health Approved, Protocol # HRDC 00549

GOAL: It is expected that this study will bring to the awareness of educators, researchers and policy makers some of the traumatic experiences that healthcare providers experience during caregiving and thus intervene through provision of counseling and other support services.

For details contact Principal Investigator:

Aaron Ronnie Majuta
Phone: 355 4174 (office)
Email: amajuta@ufl.edu

APPENDIX I
RESEARCH PERMISSION FROM THE MINISTRY OF HEALTH

Telephone: (267) 363200
FAX (267) 353100
TELEGRAMS: RABONGAKA
TELEX: 2818 CARE BD



MINISTRY OF HEALTH
PRIVATE BAG 0038
GABORONE

REPUBLIC OF BOTSWANA

REF NO: PPME-13/18/1 Vol V (254)

22 February 2010

Health Research and Development Division

Notification of IRB Review: New application

Aaron Ronnie Majuta
328 SW 34th Street, Apt #55
Gainesville, FL, 32607
USA

Protocol Title: THE RELATIONSHIP BETWEEN VICARIOUS
TRAUMATIZATION AND QUALITY OF LIFE AND
PURPOSE IN LIFE OF HEALTHCARE PROVIDERS
OF CANCER PATIENTS IN BOTSWANA

SPONSOR: University of Botswana

HRDC Protocol Number: HRDC 00549
HRDC Review Date: 4 February 2010
HRDC Expiration Date: 3 February 2011
HRDC Review Type: Full Board HRDC
HRDC Review Determination: Approved
Risk Determination: Minimal risk

Dear Mr Majuta

Thank you for submitting a new application for the above referenced study. This approval includes the following:

1. Application Form
2. Proposal
3. Data collection tools

This permit does not however give you authority to collect data from the selected sites without prior approval from the management. Consent from the identified individuals should be obtained at all times.

Figure I-1. Research permission from the Ministry of Health

The research should be conducted as outlined in the approved proposal. Any changes to the approved proposal must be submitted to the Health Research and Development Division in the Ministry of Health for consideration and approval.

Furthermore, you are requested to submit at least one hardcopy and an electronic copy of the report to the Health Research, Ministry of Health within 3 months of completion of the study. Copies should also be submitted to all other relevant authorities.

If you have any questions please do not hesitate to contact Mr. P. Khulumani at pkhulumani@gov.bw, Tel +267-3914467 or Mary Kasule at mkasule@gov.bw or marykasule@gmail.com Tel: +267-3632466

Continuing Review

In order to continue work on this study (including data analysis) beyond the expiry date, submit a Continuing Review Form for Approval at least three (3) months prior to the protocol's expiration date. The Continuing Review Form can be obtained from the Health Research Division Office (HRDD), Office No. 9A 10 or Ministry of Health website: www.moh.gov.bw or can be requested via e-mail from Mr. Kgomotso Motlhanka, e-mail address: kgmmotlhanka@gov.bw. As a courtesy, the HRDD will send you a reminder email about eight (8) weeks before the lapse date, but failure to receive it does not affect your responsibility to submit a timely Continuing Report form.

Amendments

During the approval period, if you propose any change to the protocol such as its funding source, recruiting materials, or consent documents, you must seek HRDC approval before implementing it. Please summarize the proposed change and the rationale for it in the amendment form available from the Health Research Division Office (HRDD), Office No. 9A 11 or Ministry of Health website: www.moh.gov.bw or can be requested via e-mail from Mr. Kgomotso Motlhanka, e-mail address: kgmmotlhanka@gov.bw. In addition submit three copies of an updated version of your original protocol application showing all proposed changes in bold or "track changes".

Reporting

Other events which must be reported promptly in writing to the HRDC include:

- Suspension or termination of the protocol by you or the grantor
- Unexpected problems involving risk to subjects or others
- Adverse events, including unanticipated or anticipated but severe physical harm to subjects.

Do not hesitate to contact us if you have any questions. Thank you for your cooperation and your commitment to the protection of human subjects in research.

Yours sincerely



P. Khulumani
For Permanent Secretary

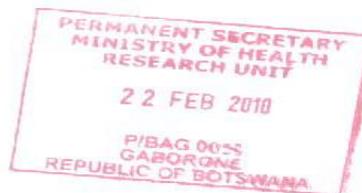
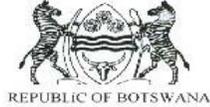


Figure I-1. Continued

APPENDIX J
RESEARCH PERMISSION FROM PRINCESS MARINA HOSPITAL

Princess Marina Hospital
P.O. Box 258
Gaborone Botswana



Tel: 3621400
Fax: 3973776
Email: yaurcis@gov.bw (chairman)
boisa2002@yahoo.com. (Secretary)

PRINCESS MARINA HOSPITAL INSTITUTIONAL REVIEW BOARD

Our Ref: PMH2/09-074

Date: 11 March 2010

Mr Aaron Majuta
University of Florida
USA

Dear Mr Majuta

RE: The relationship between vicarious traumatisation and quality of life and purpose in life of healthcare providers of cancer patients in Botswana.

Reference is made to the above titled study submitted to the Research and Ethics Committee of Princess Marina Hospital. Following a review, the study has been approved on condition that the researcher:

- Seeks permission from the head of the institution/department in which the study will be conducted.
- Resubmit for approval should any changes be made to the protocol.
- Provide both a hard and an electronic copy of the report when the study is finished.

The study permit is still valid for a period of one year, from the date of this letter.

The Committee would like to communicate its support in this very important endeavour. Your continued communication and update is greatly appreciated.

Yours sincerely,


Boitumelo Mokgatla-Moipolai
Secretary
Contacts: 362 1778 (Office) or 71543980
Email: Boisa2002@yahoo.com

Figure J-1. Research permission from Princess Marina Hospital

APPENDIX K
RESEARCH PERMISSION FROM DEBORAH RETIEF MEMORIAL HOSPITAL

TELEPHONE: 5777333
FAX: 5777336



DRM HOSPITAL,
P.O. BOX 24,
MOCHUDI

REPUBLIC OF BOTSWANA

REFERENCE: DRM 3/1/14 I

17 March 2010

Mr Majuta Aaron Ronnie
Counseling and Human Services Unit
Department of Educational Foundations
University of Botswana
GABORONE

Dear Sir

**STUDY ON THE RELAIOSHIP BETWEEN VICARIOUS TRAUMATIZATION
AND QUALITY OF LIF AND PURPOSE IN LIFE OF HEALTH PROVIDERS OF
CANCER PATIENTS IN BOTSWANA**

Your request to conduct a research on the above mentioned study in DRM Hospital is accepted.

You are however requested to work with hospital staffs in a way that will cause minimal disruption to the hospital activities.

I wish you good luck.

Thank you.

Yours faithfully

A handwritten signature in black ink, appearing to read 'C.O. Onyach'.

Dr C.O Onyach
Hospital Superintendent

Figure K-1. Research permission from Deborah Retief Memorial Hospital

APPENDIX L
RESEARCH PERMISSION FROM BAMALETE LUTHERAN HOSPITAL



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BAMALETE LUTHERAN HOSPITAL

P.O. BOX V6
RAMOTSWA
BOTSWANA

12 April, 2010

Mr. Aaron Majuta
Educational Foundations Department
University of Botswana
Private Bag 00702
GABORON E

Dear Sir:

**RE: STUDY ENTITLED THE RELATIONSHIP BETWEEN VICARIOUS
TRAUMATIZATION AND QUALITY OF LIFE AND PURPOSE IN LIFE OF
HEALTHCARE PROVIDERS OF CANCER PATIENTS IN BOTSWANA**

Your request to conduct the *above mentioned study* at Bamalete Lutheran Hospital has been discussed by Management.

The request is granted.

You are asked to make *prior arrangements* so that the study does not interrupt patient's services. Furthermore you are requested to provide a copy of the study findings and report to the Chief Medical Office.

Thank you.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'S. Ostmann', is written over a horizontal line.

Dr. Sabine Ostmann
CHIEF MEDICAL OFFICER

Figure L-1. Research permission from Bamalete Lutheran Hospital

APPENDIX M
RESEARCH PERMISSION FROM NYANGABWE REFERRAL HOSPITAL

Ethical review of proposed study: "The relationship between vicarious traumatization and quality of life and purpose in life of healthcare providers of cancer patients in Botswana"

Name of applicant: A. Majuta (Being a University of Florida PhD candidate)

Name of site: Nyangabgwe Referral Hospital (hereafter NRH)

Reviewers: Dr Selemogo, Ms Modiakgotla, Ms Mbai

Decision: **Approved**

Date of decision: 14/04/2010

The above named study protocol fulfills all the necessary ethical requirements to give it a go ahead to be carried out at NRH.

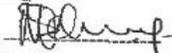
- According to the Ministry of Health's Guidelines for good practice in the conduct of clinical trials in human subjects in Botswana (2008), the study protocol may be classified "No more than minimal risk research". It seeks to interview health-workers (a non-vulnerable population), involves no patient participation and is a non therapeutic research that does not involve the use of procedures or devices about which there is limited knowledge.
- The protocol displays the desired sensitivity to the main ethical issues which it evokes; namely that of respecting the autonomy of the participants through its adequate informed consent procedures and that of safeguarding confidential participant information.
- Further strengthening its ethical validity is the scientific value of the knowledge it seeks to generate; information which will give important insights into the psychological impact on healthcare workers, of caring for oncology patients.

Follow-up requirements

The following standard requirements as pertain to the responsibilities of the researcher during the conduct of the study should noted:

1. The need to notify the committee in cases of protocol amendments (other than amendments involving only logistical or administrative aspects of the study).
2. The need to notify the committee in the case of amendments to the recruitment material, the potential research participant information, or the informed consent form.
3. The need to report to the HS any serious and unexpected adverse events related to the conduct of the study.
4. In case of a premature suspension/termination of the study, the applicant should notify the committee of the reasons for such suspension/termination.
5. NRH should receive notification from the applicant at the time of the completion of a study.
6. NRH should receive a copy of the final report of the study.

Signed:



Dr Selemogo (Chair- Research & Ethics Committee)

Figure M-1. Research permission from Nyangabwe Referral Hospital

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BIOGRAPHICAL SKETCH

Born in 1965 in Nshakazhogwe village, Botswana, Aaron Majuta is Balindi Maphoto's sixth son and the third and last child to his adoptive mother Florence Majuta. He graduated from the University of Botswana with a bachelor's degree in history and English and a post graduate diploma in secondary education. He taught social studies, English and guidance counseling in community junior secondary school for five years before he went and earned another post graduate diploma in counseling education. After this qualification he taught history and guidance counseling in a senior secondary school for one year.

In 1998 Aaron was recruited for the position of staff development fellow to teach guidance and counseling at a three year teachers training college, a post he retained for two years before he enrolled for a Master of Arts in community agency counseling degree with the University of Alabama at Birmingham, U.S.A. Upon completion Aaron went back to Botswana and taught for one year at the teachers college before he joined the University of Botswana in 2003 as faculty.

In the fall of 2007 Aaron was admitted into the doctoral program in the Department of Counselor Education at the University of Florida, U.S.A. While studying there he was recognized for "Academic Excellence" in 2008 by the University of Florida International Center and by the Office of the Dean in the College of Education.